

Q.19 Manufacturing industries in India primarily belong to which of the following sectors?

- Ans
- ☐ 1. Quaternary
 - ☒ 2. Secondary
 - ☐ 3. Tertiary
 - ☐ 4. Primary

Q.20 The Deccan Plateau is largely composed of which of the following?

- Ans
- ☐ 1. Sandstone
 - ☒ 2. Basaltic lava
 - ☐ 3. Alluvial soil
 - ☐ 4. Granite only

Section : Arithmetical and Numerical Ability

Q.1 A vendor buys 500 oranges at a price of ₹3 per orange. He sells 300 of these oranges at ₹6 each but is forced to sell the remaining 200 at ₹1.50 each due to spoilage. Determine the overall profit percentage.

- Ans
- ☐ 1. 42%
 - ☐ 2. 38%
 - ☒ 3. 40%
 - ☐ 4. 36%

Q.2 The salary of a man is first increased by 15% and then decreased by 20%. If his original salary was ₹ 40,000, find his final salary.

- Ans
- ☐ 1. ₹ 36,100
 - ☐ 2. ₹ 37,500
 - ☐ 3. ₹ 35,400
 - ☒ 4. ₹ 36,800

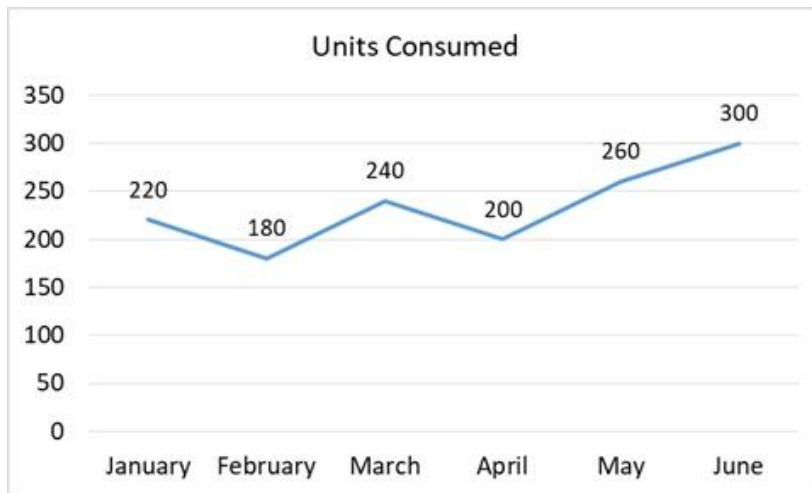
Q.3 Simplify: $\frac{15}{2} - \left[\frac{9}{4} + \left\{ 1\frac{1}{4} - \frac{1}{2} \left(1\frac{1}{2} - \frac{1}{3} - \frac{1}{6} \right) \right\} \right]$

- Ans
- ☐ 1. $5\frac{1}{2}$
 - ☐ 2. $\frac{2}{9}$
 - ☐ 3. $7\frac{1}{2}$
 - ☒ 4. $4\frac{1}{2}$

Q.4 A principal of ₹6,500, after 2 years compounded annually, the rate of interest being 8% per annum during the first year and 15% per annum during the second year, will amount to:

- Ans
- ☐ 1. ₹7,995
 - ☒ 2. ₹8,073
 - ☐ 3. ₹8,253
 - ☐ 4. ₹8,145

- Q.5 The following line graph shows the monthly electricity consumption (in units) of a household from January to June.



If each unit costs ₹6, then what is the total combined bill for April and May?

- Ans
- ☐ 1. ₹3,360
 - ☐ 2. ₹2,460
 - ☐ 3. ₹3,060
 - ☒ 4. ₹2,760

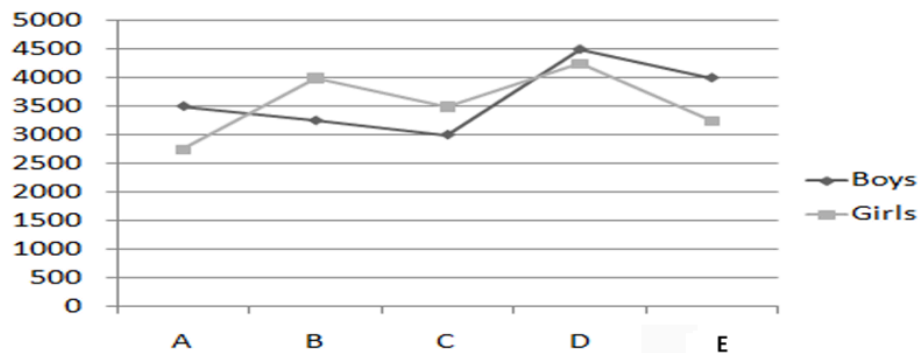
Q.6 Simplify: $1.2 + \frac{3}{5} - 0.4$

- Ans
- ☒ 1. 1.4
 - ☐ 2. 1.6
 - ☐ 3. 2.0
 - ☐ 4. 1.0

- Q.7 Nidhi went to the market to buy markers. The cost of 7 markers is ₹420. Find the cost (in ₹) of 5 such markers bought by Nidhi.

- Ans
- ☐ 1. 225
 - ☒ 2. 300
 - ☐ 3. 275
 - ☐ 4. 250

- Q.8 The graph below shows the the number of boys and girls who enrolled in computer science branch in five colleges i.e. A, B, C, D and E. Assume all numbers are multiple of 250. Study the graph and answer the question.



Find the ratio of total number of boys from colleges B and C to the total number of girls from colleges C and D.

- Ans
- ☐ 1. 31 : 25
 - ☒ 2. 25 : 31
 - ☐ 3. 20 : 23
 - ☐ 4. 23 : 20

- Q.9 The price of an item is first increased by 10% and then reduced by 5%. What is the net percentage change in the price of the item due to both changes?

- Ans
- ☐ 1. 5% increase
 - ☒ 2. 4.5% increase
 - ☐ 3. 4.75% decrease
 - ☐ 4. 5.5% decrease

- Q.10 A vendor sells 24 chocolates for one rupee and makes a profit of 50%. How many chocolates did he originally purchase for one rupee?

- Ans
- ☐ 1. 38
 - ☐ 2. 40
 - ☒ 3. 36
 - ☐ 4. 42

- Q.11 The length of a rectangle is increased by 25% and its breadth is decreased by 20%. What is the net percentage change in its area?

- Ans
- ☐ 1. 5% increase
 - ☐ 2. 5% decrease
 - ☐ 3. 2.5% increase
 - ☒ 4. No change

- Q.12 Simplify: $5 - 4 \times \left[6 \div \{ 3 - (5 - 8) \} + 2 \text{ of } \left(4 - \frac{5}{2} \right) \right]$

- Ans
- ☐ 1. 7
 - ☐ 2. 11
 - ☒ 3. - 11
 - ☐ 4. - 7

Q.13 The price of a car is ₹5,00,000. The value of the car depreciates by 10% at the end of the first year and after that it depreciates by 20% every year. What will be the price of the car after 3 years?

- Ans
- ☐ 1. ₹3,60,000
 - ☒ 2. ₹2,88,000
 - ☐ 3. ₹3,90,000
 - ☐ 4. ₹4,10,000

Q.14 In what ratio must a grocer mix two varieties of rice costing him ₹75 and ₹65 per kg so as to get a mixture worth ₹68 per kg?

- Ans
- ☒ 1. 3 : 7
 - ☐ 2. 3 : 5
 - ☐ 3. 5 : 3
 - ☐ 4. 7 : 3

Q.15 The average age of 6 men is 42 years. The average age of 6 women is 40 years. The average age of their 6 children is 14 years. What is the average age (in years) of the family?

- Ans
- ☐ 1. 36
 - ☐ 2. 34
 - ☐ 3. 38
 - ☒ 4. 32

Q.16 In what duration (in years) will ₹3,600 fetch a simple interest of ₹1,080 at 6% per annum rate of interest?

- Ans
- ☐ 1. 10
 - ☐ 2. 6
 - ☐ 3. 4
 - ☒ 4. 5

Q.17 A student's marks were incorrectly entered as 31 instead of 58. Due to this, the average marks of the class got decreased by $\frac{9}{7}$. What is the number of students in the class?

- Ans
- ☐ 1. 27
 - ☐ 2. 28
 - ☐ 3. 20
 - ☒ 4. 21

Q.18 Navjot deposited a sum of ₹73,450 at 20% rate of interest per annum, compounded annually. The total amount received by Navjot after 2 years is:

- Ans
- ☐ 1. ₹1,05,704
 - ☐ 2. ₹1,05,615
 - ☒ 3. ₹1,05,768
 - ☐ 4. ₹1,05,763

Q.19 A person who spends 80% of his monthly income is able to save ₹3,954 per month. His monthly expenses (in ₹) are:

- Ans
- ☐ 1. 15,772
 - ☒ 2. 15,816
 - ☐ 3. 15,840
 - ☐ 4. 15,776

Q.20 A shopkeeper mixes three types of wheat flour A, B and C in the ratio $x : 5 : 4x$ and sells the mixed flour at ₹ 66 per kg, thereby earning a 10% profit. The costs of types A, B and C flour are ₹70, ₹62 and ₹ 56.25 per kg, respectively. Find the quantity (in kg) of type B flour mixed if 16 kg of type C flour is mixed.

- Ans**
- ☒ 1. 20
 - ☒ 2. 12
 - ☒ 3. 8
 - ☒ 4. 10

Section : Arithmetical and Numerical Ability1

Q.1 Pipe A can fill a water tank in 12 hours, and pipe B can empty it in 20 hours. If both are opened together, in how much time will the tank be filled (in hours)?

- Ans**
- ☒ 1. 30
 - ☒ 2. 28
 - ☒ 3. 27
 - ☒ 4. 25

Q.2 If 8 men or 12 women can build a wall in 10 days, how many days will 8 men and 12 women take to do this work?

- Ans**
- ☒ 1. 5 days
 - ☒ 2. 1 days
 - ☒ 3. 6 days
 - ☒ 4. 10 days

Q.3 Find the total surface area of a cylindrical vessel whose radius is 5.6 cm and height is 8 cm. (Use $\pi = 22/7$.)

- Ans**
- ☒ 1. 478.72 cm²
 - ☒ 2. 475 cm²
 - ☒ 3. 480.5 cm²
 - ☒ 4. 478 cm²

Q.4 By selling an article at $\frac{2}{5}$ of its original list price, Aman incurs a loss of 40%. If he sells it at 78% of its original list price, then the profit percentage is _____

- Ans**
- ☒ 1. 44.3%
 - ☒ 2. 44.2%
 - ☒ 3. 44.9%
 - ☒ 4. 46.7%

Q.5 Find the surface area of a sphere whose diameter is 26.6 m.

$\left(\text{Use } \pi = \frac{22}{7} \right)$

- Ans**
- ☒ 1. 2332.76 m²
 - ☒ 2. 2321.76 m²
 - ☒ 3. 2322.76 m²
 - ☒ 4. 2223.76 m²

Q.6 Three friends A, B, and C invest in a business. A invests ₹60,000 for 10 months, B invests ₹75,000 for 8 months, and C joins later with ₹90,000 for a certain number of months. At the end of the venture, A's portion of the profit amounts to one-fourth of the total earnings. For what duration did C invest?

- Ans
- ☐ 1. $13\frac{2}{3}$ months
 - ☐ 2. $12\frac{1}{3}$ months
 - ☒ 3. $13\frac{1}{3}$ months
 - ☐ 4. $12\frac{2}{3}$ months

Q.7 A man travels from Lonavala to Talegaon at 40 km/hr for 80 minutes, and from Talegaon to Pune at 50 km/hr for 240 minutes. Find the average speed for the entire journey.

- Ans
- ☐ 1. 43.5 km/hr
 - ☐ 2. 45.5 km/hr
 - ☐ 3. 42.5 km/hr
 - ☒ 4. 47.5 km/hr

Q.8 The sides of a triangle are 26 cm, 28 cm, and 30 cm. Find the area of the triangle.

- Ans
- ☒ 1. 336 cm²
 - ☐ 2. 342 cm²
 - ☐ 3. 362 cm²
 - ☐ 4. 316 cm²

Q.9 By selling an article at $\frac{3}{10}$ of its original list price, Akash incurs a loss

If he sells it at 69% of its original list price, then the profit percentage is



- Ans
- ☐ 1. 86.2%
 - ☐ 2. 89.7%
 - ☒ 3. 86.3%
 - ☐ 4. 87.3%

Q.10 Two trains of lengths 250 m and 150 m run on parallel tracks. When they travel in opposite directions they completely cross each other in 12 seconds. When they travel in the same direction (the faster one overtakes the slower), they completely cross each other in 30 seconds. What is the speed of the faster train (in km/h)?

- Ans
- ☐ 1. 80 km/h
 - ☐ 2. 78 km/h
 - ☐ 3. 90 km/h
 - ☒ 4. 84 km/h

Q.11 A jacket has marked price ₹ 2400. It is sold with two successive discounts: first 10% and then x%. If the jacket is sold for ₹ 1728, find x.

- Ans
- ☐ 1. 18.5
 - ☐ 2. 17.5
 - ☐ 3. 15
 - ☒ 4. 20

Q.12 Aman and Babu are partners in a business. At the beginning of the year, Aman invested ₹80,000 and Babu invested ₹40,000. During the year, Aman withdrew ₹20,000 from his capital after 6 months. The total profit for the year is ₹66,000. What will be the profit share of Aman at the end of the year?⁵⁴³⁷

- Ans
- ☐ 1. ₹36,000
 - ☐ 2. ₹35,000
 - ☐ 3. ₹38,000
 - ☒ 4. ₹42,000

Q.13 Pipe A can fill a tank in 5 hours, Pipe B can fill it in 6 hours, but Pipe C can empty it in 3 hours. If all three pipes are opened together, how long will it take to fill the tank?

- Ans
- ☐ 1. 40 hours
 - ☐ 2. 25 hours
 - ☐ 3. 20 hours
 - ☒ 4. 30 hours

Q.14 A and B together can complete a task in 12 days, B and C together can complete it in 20 days. If A, B and C work together, how long will they take to complete the task?

- Ans
-
- ☐ 1. 9
 - ☐ 2. 8
 - ☒ 3. 10
 - ☐ 4. 5

Q.15 If 8, 12, and 20 are three numbers, find the fourth proportional to them.

- Ans
- ☐ 1. 20
 - ☐ 2. 10
 - ☒ 3. 30
 - ☐ 4. 50

Q.16 Two trains moving towards each other at speeds 60 km/h and 40 km/h are 200 km apart. After how much time will they meet?

- Ans
- ☐ 1. 5 hours
 - ☒ 2. 2 hours
 - ☐ 3. 1 hour
 - ☐ 4. 4 hours

Q.17 A train 120 m long running at 60 km/h crosses a platform 180 m long. How much time does it take to cross the platform?

- Ans
- ☐ 1. 15 seconds
 - ☐ 2. 16 seconds
 - ☐ 3. 8 seconds
 - ☒ 4. 18 seconds

Q.18 If three numbers are in the ratio 2:3:5 and their sum is 200, then find the numbers.

- Ans
-
- ☒ 1. 40
 - ☐ 2. 60
 - ☐ 3. 20
 - ☐ 4. 80

Q.20 Match the following with the right symptoms and select the correct option.

A. Scurvy	1. Soft bones
B. Anemia	2. Glands in neck swells-up
C. Goiter	3. Low iron
D. Rickets	4. Bleeding gums

Ans ☒ 1. A-3, B-2, C-4, D-1
☒ 2. A-4, B-3, C-2, D-1
☒ 3. A-3, B-1, C-2, D-4
☒ 4. A-1, B-3, C-2, D-4

Section : Arithmetical and Numerical Ability

Q.1 Simplify $\sqrt{100} + \sqrt{441}$

Ans ☒ 1. 13
☒ 2. 15
☒ 3. 11
☒ 4. 10

Q.2 The marked price of a watch is ₹3,500. The shopkeeper gives successive discounts of 15% and x% on its marked price. If a customer pays ₹2,558.50 for the watch, find the value of x.

Ans ☒ 1. 15
☒ 2. 14
☒ 3. 16
☒ 4. 13

Q.3 If 8% of x = 156, then x is equal to:90

Ans ☒ 1. 4000
☒ 2. 2050
☒ 3. 1950
☒ 4. 3900

Q.4 David's salary was first reduced by 30% and subsequently increased by 19%. By what percentage is his final salary lower than his initial salary?

Ans ☒ 1. 15.7%
☒ 2. 16.7%
☒ 3. 19%
☒ 4. 13%

Q.5 The cost price of an article is ₹3,600. If the profit is 40% of the selling price, find the actual profit (in ₹).

Ans ☒ 1. 3,600
☒ 2. 3,200
☒ 3. 2,400
☒ 4. 2,800

Q.6 In what duration (in years) will ₹4,800 fetch a simple interest of ₹360 at 6% per annum rate of interest?

Ans ☒ 1. 1.25

☐ 2. 0.25

☐ 3. 2.5

☐ 4. 2.25

Q.7 How many prime numbers are there between 40 and 60?

Ans ☒ 1. 5

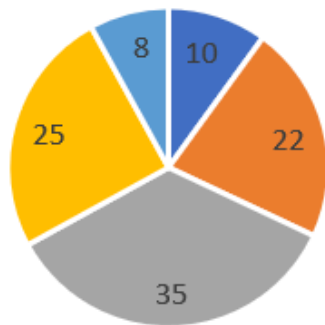
☐ 2. 4

☐ 3. 3

☐ 4. 6

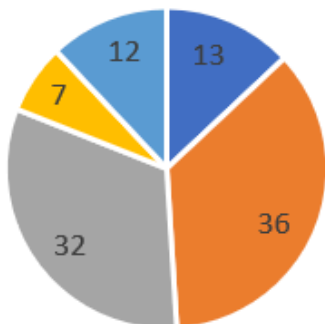
- Q.8 Study the following Pie Charts and answer the question given below. For Alpha School, in the first pie chart, percentage of male students who opted for various profession is shown, while in the second pie chart, percentage of female students who opted for various profession is shown.

Percentage (for Males)



■ Scientists ■ Doctors ■ Engineers ■ Defence Forces ■ CA

Percentage (for Females)



■ Scientists ■ Doctors ■ Engineers ■ Defence Forces ■ CA

In Alpha School, if total number of students is 390 in which 150 are females, find the number of male students who opted to join Defence Forces.

- Ans
- ☐ 1. 57
 - ☐ 2. 36
 - ☐ 3. 40
 - ☒ 4. 60

Q.9 An amount of ₹5,000 is invested at an annual interest rate of 8%, compounded semi-annually, for a period of 1 year. What will be the total amount at the end of the year?

- Ans
- ☐ 1. ₹5,400
 - ☐ 2. ₹5,204
 - ☒ 3. ₹5,408
 - ☐ 4. ₹5,306

Q.10 Find the average of 315, 129 and 99.

- Ans
- ☐ 1. 180
 - ☐ 2. 182
 - ☐ 3. 183
 - ☒ 4. 181

Q.11 In a class, 15 students scored an average of 78 marks and 10 students scored an average of 84 marks. Find the overall average marks of the class.

- Ans
- ☐ 1. 80.2
 - ☐ 2. 81.2
 - ☐ 3. 81.6
 - ☒ 4. 80.4

Q.12 If 8% of $x = 144$, then x is equal to:91

- Ans
- ☒ 1. 1800
 - ☐ 2. 3700
 - ☐ 3. 3600
 - ☐ 4. 1900

Q.13 Simplify the given expression. $2.\overline{3636} + 7\frac{4153}{11}$

- Ans
- ☐ 1. $9\frac{5}{11}$
 - ☐ 2. $9\frac{8}{11}$
 - ☒ 3. $9\frac{4}{11}$
 - ☐ 4. $9\frac{9}{11}$

Q.14 The weights of six boys are recorded as 53 kg, 65 kg, 72 kg, 70 kg, 42 kg and 94 kg. Find the average weight of all the six boys.

- Ans
- ☐ 1. 63 kg
 - ☐ 2. 70 kg
 - ☒ 3. 66 kg
 - ☐ 4. 56 kg

Q.15 The following bar graph shown the monthly sales of two shops A and B (in hundreds). Study the graph and answer the question that follows.



In which month was the difference in sales between Shop A and Shop B the greatest, and what was the difference?

- Ans
- ☒ 1. February, 2000
 - ☒ 2. April, 3000
 - ☒ 3. January, 3000
 - ☒ 4. March, 2000

Q.16 Simplify: $\frac{8^5 \div 4^3 \times 2^8}{16^4 \div 2^5}$

- Ans
- ☒ 1. 256
 - ☒ 2. 64
 - ☒ 3. 32
 - ☒ 4. 128

Q.17 The difference between the compound interest, compounded annually, and the simple interest on ₹84700 at 9% per annum for 2 years is ____.

- Ans
- ☒ 1. ₹688.6
 - ☒ 2. ₹686.07
 - ☒ 3. ₹696.1
 - ☒ 4. ₹684.36

Q.18 Anil has ₹1,716 with him. He divides this amount between his sons, Ashok and Raj, and asks them to invest their respective shares at a compound interest rate of 8% per annum, compounded annually. It is observed that Ashok and Raj receive the same amount after 14 years and 15 years, respectively. How much money (in ₹) did Anil give to Ashok?

- Ans
- ☒ 1. 741
 - ☒ 2. 891
 - ☒ 3. 925
 - ☒ 4. 825

Q.19 An investor holds four stocks with returns of 5%, 9%, 12%, and 16% on investments of ₹1,000, ₹2,000, ₹3,000, and ₹4,000, respectively. What is the percentage return on the entire portfolio?

- Ans
- ☒ 1. 12.3%
 - ☒ 2. 13%
 - ☒ 3. 12.7%
 - ☒ 4. 12%

Q.20 The monthly incomes of two friends, Kiran and Mahesh, are in the ratio 6 : 8 and each of them saves ₹39000 every month. If the ratio of their monthly expenditure is 1 : 4, find the monthly income of Kiran (in ₹).

- Ans
- ☐ 1. 61425
 - ☒ 2. 43875
 - ☐ 3. 42875
 - ☐ 4. 44875

Section : Arithmetical and Numerical Ability1

Q.1 Find the fourth proportional of 3.4, 10.2, 6.2.

- Ans
- ☐ 1. 19.6
 - ☒ 2. 18.6
 - ☐ 3. 21.6
 - ☐ 4. 17.6

Q.2 Find the height of a conical vessel whose base radius is 21 cm and capacity is 3.234 liters. (Use $\pi = 22/7$)

- Ans
- ☐ 1. 8 cm
 - ☐ 2. 7.5 cm
 - ☐ 3. 10 cm
 - ☒ 4. 7 cm

Q.3 If 99 and 11 are two numbers, find their mean proportional.

- Ans
- ☐ 1. 23
 - ☐ 2. 43
 - ☐ 3. 21
 - ☒ 4. 33

Q.4 Pipe A can fill a tank in 12 hours. After 8 hours, Pipe B is also opened. The tank gets completely filled in 10 hours (from the beginning). In how much time can Pipe B fill the tank alone?

- Ans
- ☐ 1. 11 hrs 45 min
 - ☐ 2. 11 hrs 30 min
 - ☒ 3. 12 hrs
 - ☐ 4. 11 hrs

Q.5 Two trains, 215 meters and 190 meters long, are travelling in opposite directions at speeds of 72 km/h and 90 km/h, respectively. How long will it take for them to cross each other?

- Ans
- ☒ 1. 9 seconds
 - ☐ 2. 10 seconds
 - ☐ 3. 8 seconds
 - ☐ 4. 7 seconds

Q.6 Mahesh bought 800 decorative pieces for ₹40,000. He sold some at 25% profit and the rest at 10% loss. If his overall loss is ₹500. Find how many pieces were sold at 25% profit.

- Ans
- ☐ 1. 600
 - ☐ 2. 400
 - ☒ 3. 200
 - ☐ 4. 300

Q.7 A person travels around a circular path, covering half the distance at 28 km/h and the other half at 21 km/h. What is his average speed?

- Ans
- ☐ 1. 23 km/h
 - ☐ 2. 22 km/h
 - ☐ 3. 21 km/h
 - ☒ 4. 24 km/h

Q.8 A, B and C started a business and each invested ₹5500. After 2 months, A and C both invested ₹970 and ₹450 more, respectively, and B withdrew ₹3400. At the end of the year, a total profit of ₹1188 was earned. What is C's share (in ₹)?

- Ans
- ☐ 1. 469
 - ☒ 2. 470
 - ☐ 3. 459
 - ☐ 4. 425

Q.9 If 15 men or 20 women can build a wall in 10 days, how many days will 15 men and 20 women take for the same work?

- Ans
- ☐ 1. 2 days
 - ☐ 2. 7 days
 - ☒ 3. 5 days
 - ☐ 4. 10 days

Q.10 B can complete a certain work in 30 days. A is 25% more efficient than B. In how many days can they complete the work if they all work together?

- Ans
- ☐ 1. 19
 - ☐ 2. 18
 - ☒ 3. 10
 - ☐ 4. 15

Q.11 Two positive numbers are in the ratio 4 : 9. The mean proportional between them exceeds the smaller number by 12. Find the larger number.

- Ans
- ☒ 1. 54
 - ☐ 2. 36
 - ☐ 3. 45
 - ☐ 4. 81

Q.12 The length of a closed cuboid is twice its breadth, and its height is 10% more than its breadth. The volume of the cuboid is 2928.2 m^3 . Find its total surface area (in m^2).

- Ans
- ☐ 1. 1222.6
 - ☐ 2. 1222.8
 - ☒ 3. 1282.6
 - ☐ 4. 1220.6

Q.13 A wholesaler offers a 15% discount on the list price of a product, followed by another 10% discount on the already discounted price. If the list price is ₹1,000, find out the final selling price.

- Ans
- ☐ 1. ₹750
 - ☐ 2. ₹850
 - ☒ 3. ₹765
 - ☐ 4. ₹800

Q.14 A boat takes 2 hours to travel 40 km downstream and 4 hours to travel upstream. Find the speed of the boat in still water (in km/hr).

Ans ☒ 1. 20

☒ 2. 15

☒ 3. 25

☒ 4. 5

Q.15 A trader marks his goods 30% above the cost price. If he allows a discount of 10%, find his profit percentage.

Ans ☒ 1. 20%

☒ 2. 16%

☒ 3. 17%

☒ 4. 18%

Q.16 There are 17 taps connected to a tank among which some are inlet taps and others are outlet taps. Each inlet tap can fill the tank in 24 minutes and each outlet tap can empty completely filled tank in 30 minutes. The tank will be emptied in 24 minutes if all the taps are opened together. The number of the outlet taps is:

Ans ☒ 1. twice the inlet taps

☒ 2. equal to the number of the inlet taps

☒ 3. three more than the inlet taps

☒ 4. one more than twice the inlet taps

Q.17 A train starts from station P to station Q at a speed of 98 km/hr and then returns to station P at a speed of 70 km/hr. What is the average speed (rounded off to two decimal places) of the train during the entire journey?

Ans ☒ 1. 83.67 km/hr

☒ 2. 82.67 km/hr

☒ 3. 84.67 km/hr

☒ 4. 81.67 km/hr

Q.18 The perimeter of an isosceles triangle is 40 cm. The ratio of equal side to its base is 3:2. Find the area of the triangle.

Ans ☒ 1. $40\sqrt{3} \text{ cm}^2$

☒ 2. $40\sqrt{2} \text{ cm}^2$

☒ 3. $50\sqrt{2} \text{ cm}^2$

☒ 4. $50\sqrt{3} \text{ cm}^2$

Q.19 A cylinder of diameter 28 cm and height 110 cm is melted to cast three mini cones of height 30 cm each. What is the area of the base of (Give your answer in cm^2 .) (Round your answer off to two decimal places)

Ans ☒ 1. 1670.28 cm^2

☒ 2. 2254.79 cm^2

☒ 3. 1152.65 cm^2

☒ 4. 2065.48 cm^2

Q.19 Which among the following features most accurately distinguishes the northern part of the Great Indian Desert from its southern part?

- Ans
- ☐ 1. Predominance of deciduous vegetation in the north
 - ☐ 2. Orientation of sand dunes towards the Vindhyas
 - ☒ 3. Southern part slopes towards Sindh and the Rann of Kachchh
 - ☐ 4. Presence of extensive salt lakes

Q.20 According to the Official Languages Act, 1963, the Committee on Official Language consists of how many members?

- Ans
- ☐ 1. 5
 - ☐ 2. 15
 - ☐ 3. 23
 - ☒ 4. 30

Section : **Arithmetical and Numerical Ability**

Q.1 Find the average of the data set below if 5 is subtracted from each number in the following list.

35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 105, 110, 115, 120, 125, 130

- Ans
- ☐ 1. 87.5
 - ☒ 2. 77.5
 - ☐ 3. 82.5
 - ☐ 4. 72.5

Q.2 In what duration (in years) will ₹4,800 fetch a simple interest of ₹240 at 4% per annum rate of interest?

- Ans
- ☐ 1. 0.25
 - ☐ 2. 2.5
 - ☐ 3. 2.25
 - ☒ 4. 1.25

Q.3 The difference between the compound interest (when interest is compounded annually) and the simple interest if ₹48600 is deposited at 3% rate of interest per annum for 2 years is:942

- Ans
- ☐ 1. ₹43.30
 - ☐ 2. ₹47.44
 - ☒ 3. ₹43.74
 - ☐ 4. ₹48

Q.4 Simplify the following:

$$\frac{5.4}{1.2} - \frac{3}{4}$$

- Ans
- ☐ 1. 15
 - ☐ 2. $\frac{21}{4}$
 - ☒ 3. $\frac{15}{4}$
 - ☐ 4. 3

Q.5

The value of $\frac{\left(\frac{16}{2} + \frac{16}{8} \text{ of } \frac{8}{2}\right)}{\left(15 - \frac{14}{8} \div \frac{2}{8}\right)}$ is ³⁶⁴²

- Ans
- ☐ 1. 11
 - ☐ 2. 7
 - ☒ 3. 2
 - ☐ 4. -1

Q.6 Find the compound interest on ₹45,000 at 20% per annum, compounded annually, for 2 years.

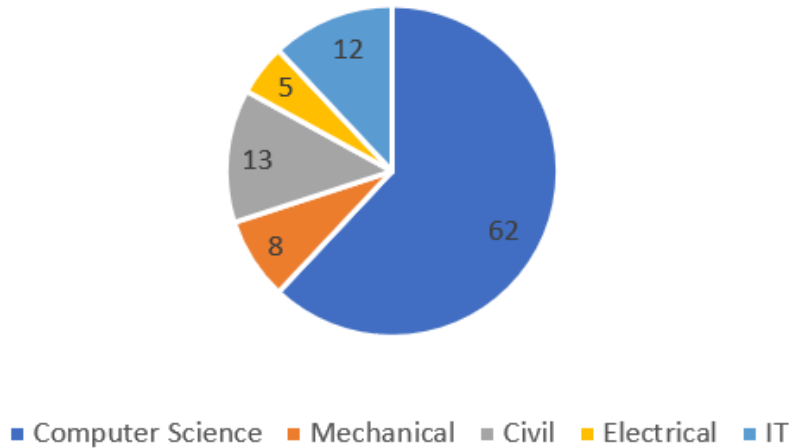
- Ans
- ☒ 1. ₹19,800
 - ☐ 2. ₹20,000
 - ☐ 3. ₹24,200
 - ☐ 4. ₹26,000

Q.7 The monthly incomes of two friends, Kiran and Mahesh, are in the ratio 6 : 8 and each of them saves ₹36000 every month. If the ratio of their monthly expenditure is 1 : 4, find the monthly income of Kiran (in ₹).

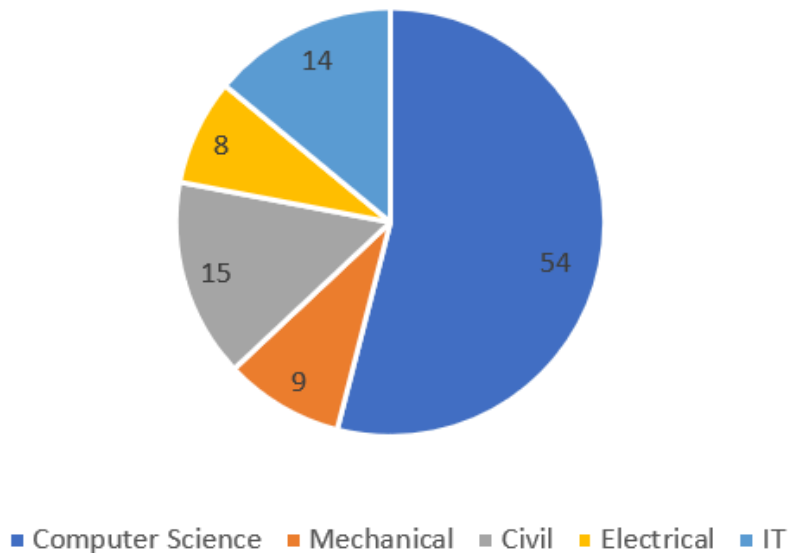
- Ans
- ☐ 1. 41500
 - ☐ 2. 39500
 - ☐ 3. 56700
 - ☒ 4. 40500

Q.8 Study the following charts and answer the question below. The first chart shows the percentage of students who took admission in various courses in college Alpha and the second chart shows the percentage of students who took admission in various courses in college Beta. The total number of students who took admission in college Alpha is 750 and that in college Beta is 680.

Percentage (College Alpha)



Percentage (College Beta)



Find the total number of students who have taken admission in Mechanical in college Alpha and Civil in college Beta.

- Ans
- ☐ 1. 139
 - ☐ 2. 148
 - ☐ 3. 123
 - ☒ 4. 162

Q.9 Find the average of the first 9 consecutive even numbers greater than 2.

- Ans
- ☐ 1. 13
 - ☒ 2. 12
 - ☐ 3. 11
 - ☐ 4. 10

Q.10 A trader bought a chair for ₹1,200. He sold it to a customer at a profit of 25%. The customer later sold it to another person at a loss of 10%. What was the final selling price of the chair?

- Ans
- ☐ 1. ₹1,620
 - ☐ 2. ₹1,400
 - ☒ 3. ₹1,350
 - ☐ 4. ₹1,500

Q.11 A man sells toffees at the rate of 4 for ₹1 and incurs a loss of 45%. At what rate (number of toffees per rupee) should he sell them to earn a profit of 10%?

- Ans
- ☐ 1. 3
 - ☒ 2. 2
 - ☐ 3. 1
 - ☐ 4. 4

Q.12 The price of a watch is reduced by 12%, but the daily sale of the watch increased by 20%. Find the net effect on the daily sale receipts.1960

- Ans
- ☐ 1. 3.8% decrease
 - ☐ 2. 3.8% increase
 - ☐ 3. 5.6% decrease
 - ☒ 4. 5.6% increase

Q.13 If 8% of $x = 228$, then x is equal to:84

- Ans
- ☐ 1. 2950
 - ☐ 2. 5700
 - ☐ 3. 5800
 - ☒ 4. 2850

Q.14 A student's marks were incorrectly entered as 32 instead of 39. Due to this, the average marks got decreased by $\frac{7}{3}$. What is the number of students in the class?

- Ans
-
- ☒ 1. 3
 - ☐ 2. 11
 - ☐ 3. 2
 - ☐ 4. 9

Q.15 The price of a stock decreased by 18% one week and increased by 23% the following week. If the initial price of the stock was ₹15,500, find the final price of the stock after these two weeks.

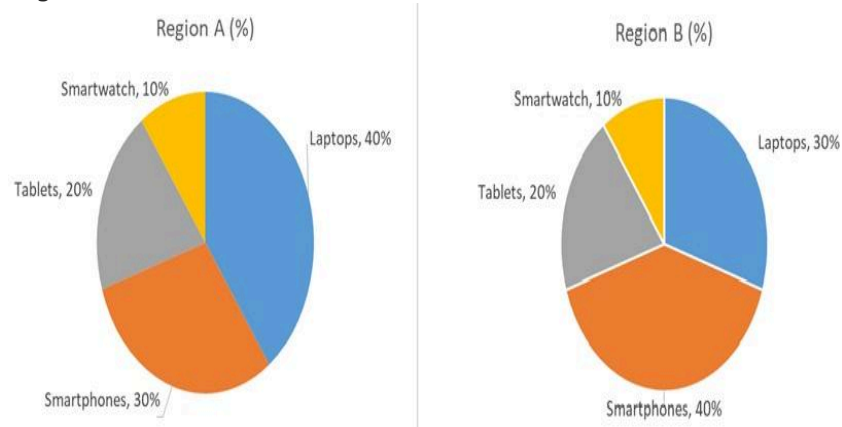
1286

- Ans
- ☐ 1. ₹15,937.30
 - ☐ 2. ₹15,233.30
 - ☒ 3. ₹15,633.30
 - ☐ 4. ₹16,133.30

Q.16 Two numbers are in the ratio 4:5. If their Highest Common Factor (HCF) is 6, what is their Lowest Common Multiple (LCM)?

- Ans**
- ☐ 1. 30
 - ☐ 2. 60
 - ☒ 3. 120
 - ☐ 4. 240

Q.17 The pie charts below show the percentage shares of sales of different products in two regions.



If the total sales in region A and B were 10,000 units and 8,000 units, respectively, then how many units of Smartphones were sold in both regions taken together?

- Ans**
- ☐ 1. 1800
 - ☐ 2. 7400
 - ☒ 3. 6200
 - ☐ 4. 3600

Q.18 A student's marks were incorrectly entered as 72 instead of 100. Due got decreased by $\frac{4}{3}$. What is the number of students in the class?

- Ans**
- ☐ 1. 18
 - ☐ 2. 28
 - ☐ 3. 22
 - ☒ 4. 21

Q.19 The sum of the first 5 prime numbers is:

- Ans**
- ☐ 1. 28
 - ☐ 2. 27
 - ☐ 3. 29
 - ☒ 4. 26

Q.20 A city has a population of 1 million people. If the population increases at a steady rate of 5% per year, what will the population of the city be after 2 years?

- Ans**
- ☐ 1. 1,050,000
 - ☒ 2. 1,102,500
 - ☐ 3. 900,000
 - ☐ 4. 1,000,000

Q.1 A cylindrical tank of diameter 36 cm is full of water. If 14.256 litres of water is drawn off, by how much does the water level drop? (Use $\pi = 22/7$)

- Ans
- ☒ 1. 14cm
 - ☐ 2. 15cm
 - ☐ 3. 18cm
 - ☐ 4. 12cm

Q.2 Three cubes of sides 1 cm, 6 cm and 8 cm are melted to form a new cube whose volume is 729 cm^3 . Find $\frac{7}{6}$ th of the surface area of the new cube.

- Ans
- ☐ 1. 576 cm²
 - ☐ 2. 586 cm²
 - ☐ 3. 568 cm²
 - ☒ 4. 567 cm²

Q.3 Leena and Kareena entered into a partnership with investment in the ratio 4:5. Meena also joined the partnership with some investment at the same time. After 3 months, Leena withdrew one-fourth and Kareena withdrew one-fifth of their respective investments. If the gain at the end of 10 months is ₹7,480, find Meena's share (in ₹) in the profit if Leena's share is ₹1,815.

- Ans
- ☐ 1. 2,365
 - ☒ 2. 3,300
 - ☐ 3. 4,350
 - ☐ 4. 2,750

Q.4 A leak in the bottom of a tank can empty the full tank in 9 hours. An inlet pipe fills water at the rate of 4.5 liters per minute. When the tank is full, the inlet pipe is opened and due to the leak, the tank got empty in 15 hours. What is the capacity of the tank (in liters)?

- Ans
- ☐ 1. 6095 liters
 - ☐ 2. 6085 liters
 - ☒ 3. 6075 liters
 - ☐ 4. 6060 liters

Q.5 A and B invest in a business in the ratio 3:2. If 5% of the total profit goes to charity and A's share is ₹684, then the total profit is:

- Ans
- ☐ 1. ₹1400
 - ☒ 2. ₹1200
 - ☐ 3. ₹1280
 - ☐ 4. ₹1410

Q.6 A train goes from A to B at a speed of 72 km/h and returns from B to A by the same route at 24 km/h. The average speed (in km/h) of the train during the two-way journey is: 757

- Ans
- ☐ 1. 33
 - ☐ 2. 34
 - ☒ 3. 36
 - ☐ 4. 35

Q.7 A boat covers 45 km downstream in 3 hours and covers the same 45 km upstream in 9 hours. What will be the time taken by the boat during the upstream leg if the stream's speed instantaneously increases to 150% of its original value when the boat has travelled 22.5 km from the start of the upstream journey, and remains constant thereafter? (Assume the boat's speed in still water remains unchanged.)

- Ans
- ☐ 1. 10.5 hours
 - ☐ 2. 12.5 hours
 - ☐ 3. 11.5 hours
 - ☒ 4. 13.5 hours

Q.8 Three friends M, N, and O shared the profit in a business in the ratio 8 : 10 : 11. They had invested their money for 18 months, 10 months, and 9 months, respectively. If the total investment in the business was ₹9,60,000, what was M's investment?

- Ans
- ☐ 1. ₹80,000
 - ☐ 2. ₹4,80,000
 - ☒ 3. ₹1,60,000
 - ☐ 4. ₹3,20,000

Q.9 Which of the following ratios is the greatest?2789

- Ans
- ☐ 1. 40 : 63
 - ☐ 2. 34 : 75
 - ☒ 3. 39 : 51
 - ☐ 4. 30 : 54

Q.10 A cistern has three pipes M, N and P which can fill the cistern in 15 hours, 10 hours and 12 hours, respectively. If Pipe M is opened at 7:30 AM, Pipe N is opened at 9 AM and Pipe P is opened at 10: 30 AM, find the time at which the cistern will be completely filled.

- Ans
- ☐ 1. 12 : 58 PM
 - ☐ 2. 12 : 46 PM
 - ☒ 3. 1 : 06 PM
 - ☐ 4. 1 : 16 PM

Q.11 By selling an article at $\frac{6}{13}$ of its original list price, Nirbhay incurs a loss. If he sells it at 90% of its original list price, then the profit percentage is

- Ans
- ☐ 1. 62.6%
 - ☒ 2. 59.9%
 - ☐ 3. 61.8%
 - ☐ 4. 62.4%

Q.12 Two sides of an isosceles triangle are 10.5 cm each while the third side is k cm. Then find the value of k.

- Ans
- ☐ 1. 25.5
 - ☒ 2. 22.5
 - ☐ 3. 27.3
 - ☐ 4. 20.8

Q.13 A train travels at 82.6 km/h. How many meters will it travel in 15 minutes?

- Ans
- ☐ 1. 21,310
 - ☐ 2. 22,190
 - ☒ 3. 20,650
 - ☐ 4. 20,860

Q.14 An article is priced at ₹200. The shopkeeper first increases the price by 15% and then offers a discount of 10% on the increased price. What is the final selling price of the article?

- Ans
- ☒ 1. ₹207
 - ☐ 2. ₹200
 - ☐ 3. ₹190
 - ☐ 4. ₹240

Q.15 Pipe A can fill a cistern in 6 hours, while Pipe B can empty the same cistern in 9 hours. If both the pipes are opened together, how long will it take to fill the cistern?

- Ans
- ☐ 1. 8 hours
 - ☐ 2. 28 hours
 - ☒ 3. 18 hours
 - ☐ 4. 16 hours

Q.16 An article is priced at ₹25,000. The shopkeeper first increases the price by 10% and then offers a discount of 25% on the increased price. What is the final selling price of the article?

- Ans
- ☐ 1. ₹22,625
 - ☐ 2. ₹20,000
 - ☒ 3. ₹20,625
 - ☐ 4. ₹21,050

Q.17 A 100 m long train overtakes a 140 m long train, moving in the same direction, in 0.5 minutes. If the second train is moving at 50 kmph, at what speed is the first train moving?

- Ans
- ☒ 1. 78.8 kmph
 - ☐ 2. 74.8 kmph
 - ☐ 3. 68.8 kmph
 - ☐ 4. 88.8 kmph

Q.18 Mohan can complete a piece of work in 5 hours. His friend joins and they finish the work in 2 hours. How long would the friend take alone to complete the work? (Correct to one decimal place)

- Ans
- ☐ 1. 4.3 hours
 - ☒ 2. 3.3 hours
 - ☐ 3. 3.6 hours
 - ☐ 4. 2.3 hours

Q.19 During a sale, 60% of the goods are sold at 35% profit, 25% of the remaining goods are sold at 45% profit and the remaining goods are sold at a loss of 30%. If there is an overall profit of x%, then what is the value of x?

- Ans
- ☐ 1. 7
 - ☐ 2. 10
 - ☒ 3. 16.5
 - ☐ 4. 3.5

Q.20 Which Constitutional Amendment led to the inclusion of Fundamental Duties for Indian citizens?

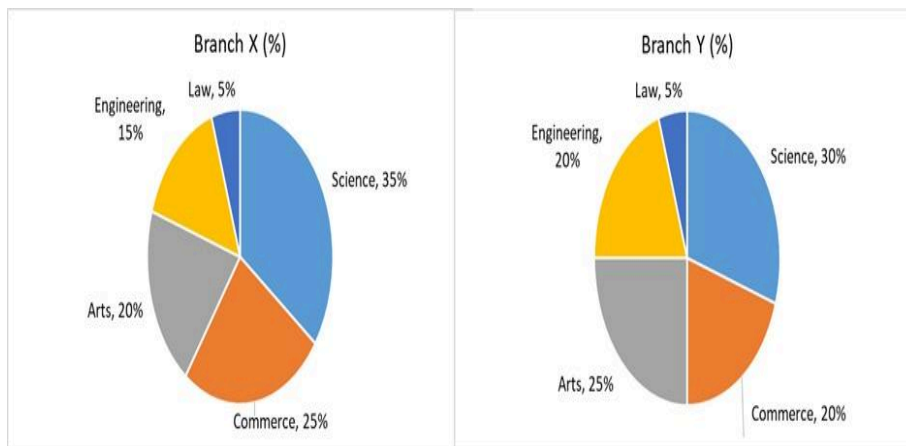
- Ans**
- ☐ 1. 44th Amendment
 - ☐ 2. 52nd Amendment
 - ☒ 3. 42nd Amendment
 - ☐ 4. 40th Amendment

Section : **Arithmetical and Numerical Ability**

Q.1 A vendor sells 24 chocolates for one rupee and makes a profit of 75%. How many chocolates did he originally purchase for one rupee?

- Ans**
- ☐ 1. 48
 - ☐ 2. 46
 - ☒ 3. 42
 - ☐ 4. 44

Q.2 The following pie charts show the distribution of students in two branches of a college.



If the total number of students in branches X and Y are 600 and 400, respectively, then how many more Science students are there in Branch X compared to Branch Y?

- Ans**
- ☐ 1. 85
 - ☒ 2. 90
 - ☐ 3. 75
 - ☐ 4. 80

Q.3 Akshay's salary was first reduced by 30% and subsequently increased by 16%. By what percentage is his final salary lower than his initial salary?

- Ans**
- ☐ 1. 14.8%
 - ☐ 2. 16%
 - ☒ 3. 18.8%
 - ☐ 4. 14%

Q.4 The given table shows the monthly sales of four products A, B, C, and D (in ₹) over four months. Study the table and answer the question that follows.

Product	January	February	March	April
A	120	150	130	170
B	100	120	110	130
C	80	90	100	120
D	150	140	160	180

If each unit of Product A is sold at ₹50 and each unit of Product B at ₹40, calculate the total revenue generated from products A and B in February.

- Ans ☒ 1. ₹12,300
☐ 2. ₹12,330
☐ 3. ₹12,500
☐ 4. ₹11,300

Q.5 If $25x + 25y = 150$, what is the mean of x and y ?

- Ans ☒ 1. 3
☐ 2. 4
☐ 3. 6
☐ 4. 5

Q.6 किसी स्थान की जनसंख्या वर्ष 2023 में 5% प्रति वर्ष की दर से बढ़कर 66,150 हो गई। वर्ष 2021 की जनसंख्या ज्ञात कीजिए।

- Ans ☐ 1. 70,000
☐ 2. 50,000
☒ 3. 60,000
☐ 4. 80,000

Q.7 Akshay's salary was first reduced by 30% and subsequently increased by 14%. By what percentage is his final salary lower than his initial salary?

- Ans ☐ 1. 24.2%
☐ 2. 14%
☐ 3. 13%
☒ 4. 20.2%

Q.8 Simplify:

$$\frac{0.53^2 - 0.05^2}{0.24}$$

- Ans ☐ 1. 1.02
☐ 2. 0.50
☒ 3. 1.16
☐ 4. 0.96

Q.9 The average of five consecutive numbers is 47. Find the product of the smallest and largest numbers.

- Ans ☐ 1. 2455
☐ 2. 2250
☐ 3. 2025
☒ 4. 2205

Q.10 Which of the following statements is not correct?

- Ans
- ☐ 1. If a number is the sum of two odd primes, then the number is a composite number.
 - ☐ 2. A positive composite number can be written as product of two or more primes.
 - ☐ 3. A positive integer is prime if it has only two positive integer divisors.
 - ☒ 4. An even number is always a composite number.

Q.11 The LCM of $\frac{4}{27}, \frac{7}{9}, \frac{11}{36}, \frac{5}{18}, \frac{2}{45}$ is:

- Ans
- ☐ 1. 150
 - ☐ 2. 171
 - ☐ 3. $\frac{77}{127}$
 - ☒ 4. $\frac{1540}{9}$

Q.12 The price of a water purifier is first increased by 20% and then decreased by 25%. What is the overall percentage change from the original price?

- Ans
- ☒ 1. 10% decrease
 - ☐ 2. 5% decrease
 - ☐ 3. 5% increase
 - ☐ 4. 10% increase

Q.13 Raj has ₹1,716 with him. He divides this amount between his sons, Varun and Ashish, and asks them to invest their respective shares at a compound interest rate of 8% per annum, compounded annually. It is observed that Varun and Ashish receive the same amount after 12 years and 13 years, respectively. How much money (in ₹) did Raj give to Varun?

- Ans
- ☐ 1. 925
 - ☐ 2. 741
 - ☐ 3. 825
 - ☒ 4. 891

Q.14 In what duration (in years) will ₹4,200 fetch a simple interest of ₹840 at 5% per annum rate of interest?

- Ans
- ☐ 1. 5
 - ☐ 2. 8
 - ☐ 3. 3
 - ☒ 4. 4

Q.15 A shopkeeper marks the price of an item 20% above its cost price. If the cost price of the item is ₹1,000 and he sells it for ₹1,000, what percentage discount does he offer to the customer?

- Ans
- ☐ 1. $26\frac{1}{3}\%$
 - ☐ 2. $17\frac{2}{3}\%$
 - ☒ 3. $16\frac{2}{3}\%$
 - ☐ 4. $15\frac{1}{3}\%$

Q.16 A retailer buys an item for ₹800 and sells it a 15% profit. What is the selling price of the item?

- Ans
- ☒ 1. ₹920
 - ☐ 2. ₹940
 - ☐ 3. ₹930
 - ☐ 4. ₹950

Q.17 On a certain sum of money, Neha received a compound interest (interest compounded annually) of ₹308 in 2 years. She received a simple interest of ₹280 on the same amount for the same time period. What is the rate of interest per annum?

- Ans
- ☐ 1. 18%
 - ☐ 2. 12%
 - ☐ 3. 16%
 - ☒ 4. 20%

Q.18 The average age of 50 students in a class is 20 years. Out of them, the average age of 10 students is 16 years. Find the average age of the remaining students.

- Ans
- ☐ 1. 22 years
 - ☐ 2. 23 years
 - ☒ 3. 21 years
 - ☐ 4. 20 years

Q.19 Express $0.\overline{5839}$ as a vulgar fraction.

704

- Ans
- ☐ 1. $\frac{73}{125}$
 - ☐ 2. $\frac{5839}{10000}$
 - ☒ 3. $\frac{1927}{3300}$
 - ☐ 4. $\frac{2917}{4995}$

Q.20 A student's marks were incorrectly entered as 59 instead of 89. Due to this, the average marks got decreased by $\frac{3}{2}$. What is the number of students in the class?

- Ans
-
- ☐ 1. 14
 - ☐ 2. 30
 - ☐ 3. 17
 - ☒ 4. 20

Q.1 In class A, the ratio of boys to girls is 7 : 5. In class B, the ratio of boys to girls is 9 : 7. In class C, the ratio of boys to girls is 9 : 5. Which class has a higher proportion of boys?

- Ans**
- ☐ 1. A
 - ☐ 2. Same number of boys in all classes
 - ☐ 3. B
 - ☒ 4. C

Q.2 A solid cuboid with dimensions 12 cm × 10 cm × 5 cm is melted and transformed to a solid cone with height 12 cm and base radius 5 cm. What percentage of the original material is wasted in the process? (Use $\pi = 22/7$, round off your answer to the nearest integer)

- Ans**
- ☒ 1. 48%
 - ☐ 2. 50%
 - ☐ 3. 44%
 - ☐ 4. 40%

Q.3 A man covers a certain distance while going from M to N at a speed of 30 km/hr in 30 minutes, and another distance N to O at a speed of 40 km/hr in another 30 minutes. Find his average speed during the entire journey.

- Ans**
- ☐ 1. 36 km/hr
 - ☒ 2. 35 km/hr
 - ☐ 3. 34 km/hr
 - ☐ 4. 37 km/hr

Q.4 A metal block having dimensions 125 cm × 80 cm × 16 m is melted and two metal cubes of the same size are formed. Find the side of the metal cube.

- Ans**
- ☒ 1. 2 m
 - ☐ 2. 150 cm
 - ☐ 3. 100 cm
 - ☐ 4. 5 m

Q.5 A, B and C started a business and each invested ₹8800. After 2 months, A and C both invested ₹740 and ₹570 more, respectively, and B withdrew ₹4500. At the end of the year, a total profit of ₹9768 was earned. What is C's share (in ₹)?

- Ans**
- ☒ 1. 3816
 - ☐ 2. 3768
 - ☐ 3. 3754
 - ☐ 4. 3664

Q.6 The marked price of an item is 1.5 times its cost price. Two successive discounts of 10% each are offered on the marked price. The percentage of profit is ____%.

- Ans**
- ☐ 1. 22.5
 - ☒ 2. 21.5
 - ☐ 3. 25
 - ☐ 4. 20

Q.7 A train 220 meters long runs at a speed of 72 km/h. How long will it take to pass a man standing near the track?

- Ans**
- ☐ 1. 22 seconds
 - ☐ 2. 9 seconds
 - ☐ 3. 12 seconds
 - ☒ 4. 11 seconds

Q.8 By selling an article at $\frac{2}{7}$ of its original list price, Sharad incurs a loss of 20%.
If he sells it at 60% of its original list price, then the profit percentage is

- Ans
- ☐ 1. 80.7%
 - ☐ 2. 80.9%
 - ☒ 3. 78.5%
 - ☐ 4. 76.8%

Q.9 A football is in the shape of a sphere of radius 7 cm. Find its surface area. (Use $\pi = \frac{22}{7}$)

- Ans
- ☒ 1. 616 cm²
 - ☐ 2. 642 cm²
 - ☐ 3. 604 cm²
 - ☐ 4. 636 cm²

Q.10 A train travels 180 km in 3 hours. How far will it go in 4.5 hours at the same speed (in km)?

- Ans
- ☐ 1. 260
 - ☐ 2. 245
 - ☒ 3. 270
 - ☐ 4. 220

Q.11 Shubham covers distances of 7,900 km, 1,500 km, and 250 km at speeds of 79 km/h, x km/h and 10 km/h, respectively. If his average speed for the whole journey is $35\frac{1}{11}$ km/h, what is the value of x ?

- Ans
- ☐ 1. 15
 - ☒ 2. 10
 - ☐ 3. 13
 - ☐ 4. 20

Q.12 A cuboidal block of silver is 18 cm long, 8 cm broad and 7 cm in height. From it, beads of volume 1.5 cm³ each are to be made. Find the number of beads that can be made from the block.

- Ans
- ☐ 1. 664
 - ☒ 2. 672
 - ☐ 3. 784
 - ☐ 4. 512

Q.13 A can finish a job in 10 days, and B can finish it in 15 days. They work together for the first 3 days. Then B leaves, and A continues alone until the job is finished. How many total days will it take to complete the job?

- Ans
- ☐ 1. 10
 - ☐ 2. 5
 - ☐ 3. 16
 - ☒ 4. 8

Q.14 During a sale, 30% of the goods are sold at 37% profit, 40% of the remaining goods are sold at 35% profit and the remaining goods are sold at a loss of 10%. If there is an overall profit of $x\%$, then what is the value of x ?

- Ans
- ☐ 1. 35.5
 - ☐ 2. 37
 - ☒ 3. 16.7
 - ☐ 4. 24

Q.15 Ankur alone can do a piece of work in 12 days and Bibhu alone can do the same work in 18 days. Ankur and Bibhu undertook to do it for ₹10800. With the help of Dhruv, they completed the work in 4 days. What is the one-day payment of Dhruv based on his contribution?

- Ans
- ☐ 1. ₹1300
 - ☐ 2. ₹1240
 - ☐ 3. ₹1250
 - ☒ 4. ₹1200

Q.16 A tank has a leak that can empty a full tank in 12 hours. A pipe fills the tank in 8 hours. If the tank is initially empty and both the pipe and the leak are active/opened, then how long will it take to fill the tank (in hrs)?

- Ans
- ☒ 1. 24
 - ☐ 2. 22
 - ☐ 3. 20
 - ☐ 4. 23

Q.17 Medita is thrice as efficient as Chaitanya. Together, they can do a job in 20 days. In how many days can Chaitanya alone do the work?

- Ans
- ☐ 1. 85 days
 - ☐ 2. 70 days
 - ☒ 3. 80 days
 - ☐ 4. 75 days

Q.18 A starts a cement trading business by investing ₹7 lakh. After 3 months, B joins the business by investing ₹12 lakh, and after another 3 months, C joins them by investing ₹22 lakh. After one year, they make ₹4,18,500 in profit. What is B's share in the profit (in ₹)?¹⁴⁴³

- Ans
- ☒ 1. 1,39,500
 - ☐ 2. 1,22,590
 - ☐ 3. 1,45,680
 - ☐ 4. 1,84,200

Q.19 Find the ratio of the cost price to the list price if a shopkeeper earns a profit of 14% on selling an item at 24% discount on the list price.

- Ans
- ☐ 1. 3 : 5
 - ☐ 2. 4 : 5
 - ☒ 3. 2 : 3
 - ☐ 4. 5 : 6

Q.15 Which of the following is the primary function of the small intestine in the digestive system?

- Ans**
- ☐ 1. Storage of bile
 - ☐ 2. Synthesis of digestive enzymes
 - ☒ 3. Absorption of nutrients
 - ☐ 4. Mechanical digestion of food

Q.16 The "Iron Pillar" in Delhi, famous for its rust-resistance, was built during the reign of which king?

- Ans**
- ☒ 1. Chandragupta II
 - ☐ 2. Harshavardhan
 - ☐ 3. Ashoka
 - ☐ 4. Samudragupta

Q.17 In which of the following states is the Keoladeo National Park located?

- Ans**
- ☐ 1. Uttar Pradesh
 - ☒ 2. Rajasthan
 - ☐ 3. Uttarakhand
 - ☐ 4. Madhya Pradesh

Q.18 The style of architecture combining Nagara and Dravida elements is called:

- Ans**
- ☐ 1. Valabhi
 - ☐ 2. Phamsana
 - ☐ 3. Panchayatana
 - ☒ 4. Vesara

Q.19 According to the Ministry of Steel, the largest steel producer state in India in the year 2021-22 was:

- Ans**
- ☐ 1. Jharkhand
 - ☐ 2. Chhattisgarh
 - ☒ 3. Odisha
 - ☐ 4. Madhya Pradesh

Q.20 The Constitutional guarantee that provides Indian citizens the Fundamental Right to freedom of speech and expression, including expression through print, digital media, and the press, is contained in which Article of the Indian Constitution?

- Ans**
- ☐ 1. Article 32
 - ☐ 2. Article 25
 - ☐ 3. Article 21
 - ☒ 4. Article 19(1)(a)

Section : **Arithmetical and Numerical Ability**

Q.1 The average of 22 numbers is 31. If all the numbers are increased by 3, what will be the new average?

- Ans**
- ☒ 1. 34
 - ☐ 2. 53
 - ☐ 3. 28
 - ☐ 4. 31

Q.2 The number of prime numbers lying between 336 and 344, both included, is:

- Ans
- ☒ 1. 1
 - ☐ 2. 4
 - ☐ 3. 2
 - ☐ 4. 3

Q.3 Find the compound interest on ₹20,000 at 16% per annum for 1.5 years, compounded half-yearly.

- Ans
- ☐ 1. ₹6,482.80
 - ☐ 2. ₹7,492.80
 - ☐ 3. ₹6,492.80
 - ☒ 4. ₹5,194.24

Q.4 Diya buys pineapples at a store for ₹1,200 and retails them at a dozen. Find the profit or loss percentage.

170

- Ans
- ☐ 1. $105\frac{1}{2}\%$ profit
 - ☐ 2. $120\frac{1}{3}\%$ loss
 - ☐ 3. $125\frac{1}{3}\%$ loss
 - ☒ 4. $108\frac{1}{3}\%$ profit

Q.5 The difference between the compound interest, compounded annually, and the simple interest on ₹40,300 at 6% per annum for 2 years is ____.

- Ans
- ☐ 1. ₹146
 - ☒ 2. ₹145.08
 - ☐ 3. ₹152.7
 - ☐ 4. ₹153.5

Q.6 The following table displays the monthly sales figures (in ₹ thousands) for Company A and Company B over a period of five consecutive months.

Month	Company	
	A	B
Jan	120	100
Feb	150	130
Mar	180	160
Apr	170	190
May	200	220

What is the difference between the average monthly sales of Company A and Company B over the period of 5 months?

- Ans
- ☐ 1. ₹3,500
 - ☐ 2. ₹3,000
 - ☐ 3. ₹2,500
 - ☒ 4. ₹4,000

Q.7 A vendor sells 24 chocolates for one rupee and makes a profit of 100%. How many chocolates did he originally purchase for one rupee?

- Ans**
- ☒ 1. 48
 - ☐ 2. 50
 - ☐ 3. 54
 - ☐ 4. 52

Q.8 The cost of an article is successively increased by 7% and 14%. If the increased cost of the article is ₹10,600, find its initial cost. (Round off your answer to the nearest rupee.)

- Ans**
- ☐ 1. ₹8,590
 - ☐ 2. ₹8,490
 - ☐ 3. ₹8,600
 - ☒ 4. ₹8,690

Q.9 The average ages of 10 boys and 15 girls are 11 and 6 years, respectively. What is the average age (in years) of all the boys and girls?

- Ans**
- ☒ 1. 8
 - ☐ 2. 10
 - ☐ 3. 9
 - ☐ 4. 7

Q.10 The price of a commodity decreases successively by 10% and 20%. What is the overall percentage decrease in its price?

- Ans**
- ☐ 1. 25%
 - ☒ 2. 28%
 - ☐ 3. 30%
 - ☐ 4. 32%

Q.11 A jug contains 200 ml sugar syrup and a glass contains 100 ml lemon juice. From the glass, 50 ml lemon juice is poured into the jug and stirred well. Now, from the jug, 50 ml of the mixture is poured into the glass. Find the ratio of lemon juice in the jug to the lemon juice in the glass after the two iterations.

- Ans**
- ☐ 1. 1:6
 - ☐ 2. 3:5
 - ☒ 3. 2:3
 - ☐ 4. 4:1

Q.12 Which of the following numbers is divisible by 9?

- Ans**
- ☐ 1. 1452
 - ☐ 2. 4274
 - ☐ 3. 2148
 - ☒ 4. 3456

Q.13 In what duration (in years) will ₹3,600 fetch a simple interest of ₹1,080 at 5% per annum rate of interest?

- Ans**
- ☐ 1. 7
 - ☐ 2. 12
 - ☒ 3. 6
 - ☐ 4. 5

Q.14 Simplify: $\frac{\sqrt{324} + \sqrt{676}}{\sqrt{81} - \sqrt{9} - \sqrt{4}}$

- Ans
- ☐ 1. 9
 - ☒ 2. 11
 - ☐ 3. 15
 - ☐ 4. 13

Q.15 The scores of a batsman in the last 10 innings of one day international cricket are 52, 73, 12, 25, 105, 10, 64, 115, 76, 57. Find the average score of the ten innings.

- Ans
- ☐ 1. 56.2
 - ☐ 2. 59.4
 - ☐ 3. 48.9
 - ☒ 4. 58.9

Q.16 The number of prime numbers lying between 334 and 347, both numbers inclusive, is _____.3509

- Ans
- ☐ 1. 3
 - ☐ 2. 4
 - ☒ 3. 2
 - ☐ 4. 5

Q.17 Rupesh's salary was first reduced by 30% and subsequently increased by 15%. By what percentage is his final salary lower than his initial salary?

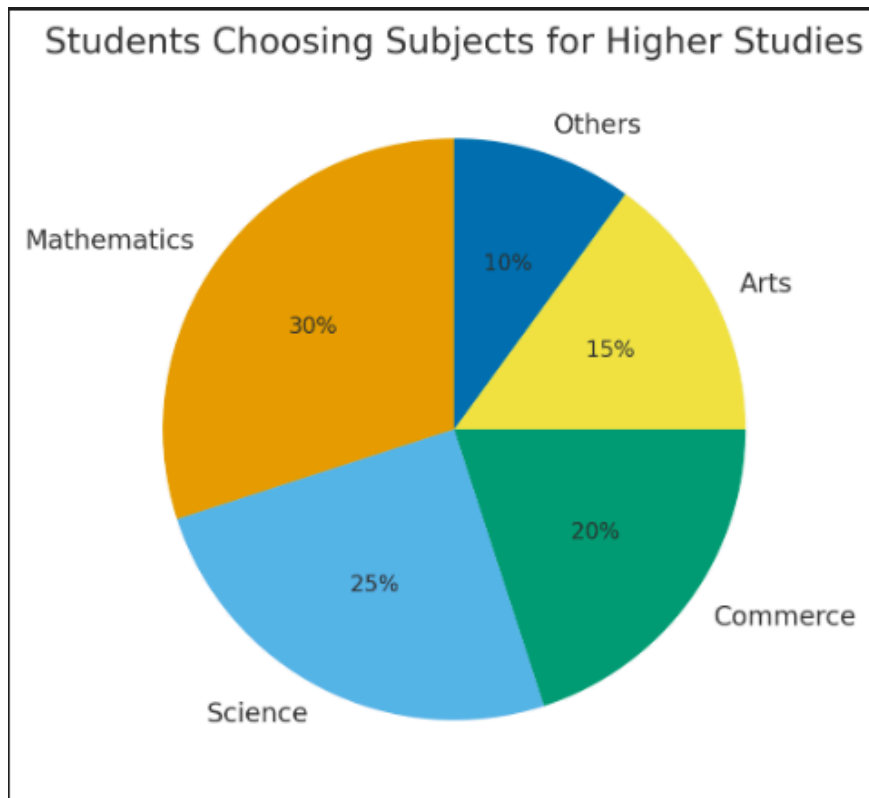
- Ans
- ☐ 1. 15%
 - ☐ 2. 20.5%
 - ☐ 3. 14%
 - ☒ 4. 19.5%

Q.18 If the price of wheat is raised by 25%, then by how much percentage expenditure remains the same?



- Ans
- ☐ 1. 25%
 - ☐ 2. 10%
 - ☒ 3. 20%
 - ☐ 4. 15%

Q.19 The following pie chart shows the percentage of students in a school choosing different subjects for higher studies.



If the total number of students is **600**, how many students chose **Science**?

- Ans
- ☒ 1. 100
 - ☒ 2. 180
 - ☒ 3. 150
 - ☒ 4. 125

Q.20 Hardik deposited a sum of ₹52,850 at 20% rate of interest per annum, compounded annually. The total amount received by Hardik after 2 years is:

- Ans
- ☒ 1. ₹76,368
 - ☒ 2. ₹75,907
 - ☒ 3. ₹76,104
 - ☒ 4. ₹76,462

Section : Arithmetical and Numerical Ability1

Q.1 A shopkeeper marks the price of sugar to earn a 25% profit. Due to a weighing error, he gives only 900 g instead of 1 kg. To compensate for this error, he offers a 10% discount on the marked price. What is his actual profit percentage?

- Ans
- ☒ 1. 25%
 - ☒ 2. 15%
 - ☒ 3. 20%
 - ☒ 4. 10%

Q.2 Reena can cover a certain distance in 1 hour 16 minutes by covering two-thirds of the distance at 5 kmph and the remaining distance at 4 kmph. Find the total distance travelled by Reena. (Round your answer to the nearest integer.)

- Ans**
- ☐ 1. 3 km
 - ☒ 2. 6 km
 - ☐ 3. 4 km
 - ☐ 4. 5 km

Q.3 P and Q together can fill a cistern with water in 30 hours. If P alone can fill the cistern with water in 80 hours, then in how many hours will Q alone fill half of the cistern with water?⁸⁸⁵

- Ans**
- ☒ 1. 24
 - ☐ 2. 48
 - ☐ 3. 49
 - ☐ 4. 25

Q.4 A train 150 meters long runs at a speed of 54 km/hr. How long will it take to pass a man standing near the track?

- Ans**
- ☐ 1. 7 seconds
 - ☐ 2. 15 seconds
 - ☒ 3. 10 seconds
 - ☐ 4. 12 seconds

Q.5 A cylindrical jar has a radius of 10 cm and a height of 30 cm. Find its volume. (Use $\pi=3.14$)

- Ans**
- ☐ 1. 9,204 cm³
 - ☐ 2. 9,402 cm³
 - ☐ 3. 9,240 cm³
 - ☒ 4. 9,420 cm³

Q.6 The volume (in m³) of a cube, each of whose edges is 15 m, is:²⁸⁶

- Ans**
- ☒ 1. 3375
 - ☐ 2. 3292
 - ☐ 3. 3181
 - ☐ 4. 3427

Q.7 A train 180 m-long crosses a man standing on the platform in 9 seconds. What is the speed (in km/hr) of the train and how long will it take to cross a platform of length 270 m?

- Ans**
- ☒ 1. 72 km/hr, 22.5 seconds
 - ☐ 2. 90 km/hr, 18 seconds
 - ☐ 3. 80 km/hr, 20 seconds
 - ☐ 4. 60 km/hr, 27 seconds

Q.8 P can complete a piece of work 3 times as fast as Q and therefore, takes 44 days less than Q to complete it. Find the time in which P and Q, respectively, can complete the work individually.

- Ans**
- ☐ 1. 21 days, and 63 days
 - ☒ 2. 22 days, and 66 days
 - ☐ 3. 24 days, and 72 days
 - ☐ 4. 23 days, and 69 days

Q.9 A train, $(x + 40)$ m long, passes a pole in 10 seconds and crosses a bridge, $(x - 10)$ m long, in 15 seconds. Find the value of x .

- Ans ☒ 1. 60
☐ 2. 55
☐ 3. 65
☐ 4. 50

Q.10 The mean proportion of $\sqrt{5 + 2\sqrt{6}}$ and $(20 - 4\sqrt{24})^{-\frac{1}{2}}$ is:

- Ans ☐ 1. $\frac{\sqrt{6} + \sqrt{2}}{2}$
☐ 2. $\frac{1}{2} + \sqrt{2}$
☒ 3. $1 + \frac{\sqrt{6}}{2}$
☐ 4. $\frac{\sqrt{3} + \sqrt{2}}{2}$

Q.11 Pipe A can fill a tank in 5 hours and Pipe B can fill the same tank in 6 then in how much total time will the tank get filled?

- Ans ☐ 1. 3 hours 25 minutes
☐ 2. 3 hours
☐ 3. 3 hours 10 minutes
☒ 4. 3 hours 20 minutes

Q.12 A shopkeeper sold a book for ₹369 after giving two successive discounts of 18% and 10% on the marked price. Find the marked price of the book.

- Ans ☐ 1. ₹460
☐ 2. ₹520
☒ 3. ₹500
☐ 4. ₹490

Q.13 A and B invest in a partnership business in the ratio 3 : 4. After 6 months, A withdraws 50% of his investment. If the profit at the end of one year is ₹5600, how much profit does A receive?

- Ans ☒ 1. ₹2016
☐ 2. ₹2014
☐ 3. ₹2020
☐ 4. ₹2018

Q.14 The marked price of an article is ₹4,375. The shopkeeper offers two successive discounts of 7% and $x\%$ and it is available at ₹3,906. Find the value of x .

- Ans ☐ 1. 2
☐ 2. 5
☐ 3. 3
☒ 4. 4

Q.15 The mean proportional of 512 and 2048 is _____.

- Ans ☐ 1. 512
☐ 2. 1000
☐ 3. 2048
☒ 4. 1024

Q.18 Which of the following rivers is a right-bank tributary of the Ganga originating from the Amarkantak Plateau?

- Ans**
- ☐ 1. Betwa
 - ☒ 2. Son
 - ☐ 3. Ghaghara
 - ☐ 4. Ken

Q.19 As per Census 2011, which of the following states has the highest percentage of the Christian population out of the total population of that state?

- Ans**
- ☐ 1. Tripura
 - ☐ 2. Arunachal Pradesh
 - ☐ 3. Meghalaya
 - ☒ 4. Nagaland

Q.20 In India, the Community Development Programme was started in which of the following years?

- Ans**
- ☐ 1. 1955
 - ☒ 2. 1952
 - ☐ 3. 1954
 - ☐ 4. 1953

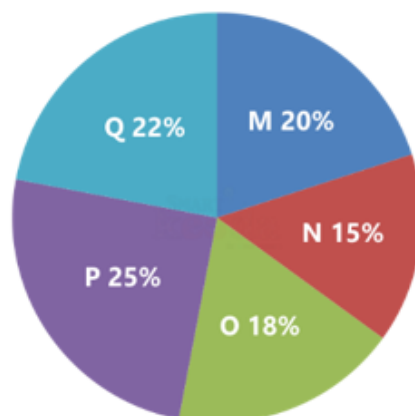
Section : **Arithmetical and Numerical Ability**

Q.1 Find the ratio in which rice worth ₹65/kg should be mixed with rice worth ₹98/kg to produce a mixture worth ₹80/kg.

- Ans**
- ☐ 1. 2 : 1
 - ☐ 2. 5 : 4
 - ☒ 3. 6 : 5
 - ☐ 4. 3 : 2

Q.2 Study the graph given below and answer the question that follows.

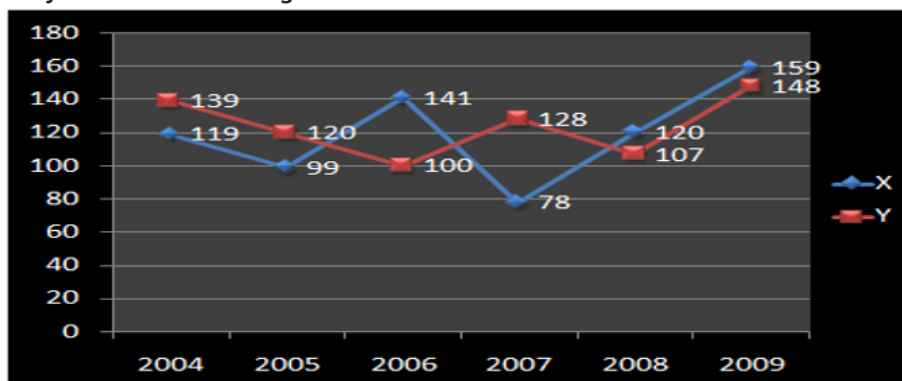
The graph below shows the distribution of the production of sugar by 5 different factories M, N, O, P and Q. The total production by these factories is 6000 kg.



Find the ratio of the total sugar production by factory M and N to that of O and Q.

- Ans**
- ☐ 1. 10 : 9
 - ☒ 2. 7 : 8
 - ☐ 3. 9 : 10
 - ☐ 4. 8 : 7

- Q.3 Study the following line graph and answer the following question. In the given graph, the number of cars manufactured by two different companies, X and Y, from the year 2004 to 2009 are given.



By what percentage did the manufacturing of car Y increase from year 2005 to 2009?

- Ans
- ☒ 1. 23%
 - ☒ 2. $28\frac{2}{3}\%$
 - ☒ 3. 21%
 - ☒ 4. $23\frac{1}{3}\%$

- Q.4 A phone's price is first increased by 15% and then decreased by 10%. What is the overall percentage change in the price of the phone?

- Ans
- ☒ 1. 4.5% increase
 - ☒ 2. 2.5% increase
 - ☒ 3. 5% increase
 - ☒ 4. 3.5% increase

- Q.5 Rishi has ₹1,716 with him. He divides this amount between his sons, Shan and Piyush, and asks them to invest their respective shares at a compound interest rate of 8% per annum, compounded annually. It is observed that Shan and Piyush receive the same amount after 16 years and 17 years, respectively. How much money (in ₹) did Rishi give to Shan?

- Ans
- ☒ 1. 891
 - ☒ 2. 925
 - ☒ 3. 741
 - ☒ 4. 825

- Q.6 There are two sections A and B of a class consisting of 22 and 50 students, respectively. If the average weight of section A is 42 kg and that of section B is 38 kg, find the average weight (in kg, rounded off to two decimal places) of the whole class.

- Ans
- ☒ 1. 39.22
 - ☒ 2. 39.72
 - ☒ 3. 38.72
 - ☒ 4. 40.22

- Q.7 When the price of petrol increased by 17%, Anshu reduced its consumption by 5%. Find the overall percentage change in her expenditure on petrol.

- Ans
- ☒ 1. 11.15% decrease
 - ☒ 2. 11.05% increase
 - ☒ 3. 11.15% increase
 - ☒ 4. 10.15% increase

Q.8 The population of a region is 3,56,000, out of which 1,78,000 are males. 41% of the population is literate. If 64% males are literate, then what percentage of females are literate?²⁰⁸⁰

- Ans
- ☐ 1. 20%
 - ☐ 2. 19%
 - ☒ 3. 18%
 - ☐ 4. 16%

Q.9 Which of the following numbers divides 835677 exactly?

- Ans
- ☐ 1. 7
 - ☒ 2. 9
 - ☐ 3. 6
 - ☐ 4. 4

Q.10 David's salary was first reduced by 30% and subsequently increased by 20%. By what percentage is his final salary lower than his initial salary?

- Ans
- ☒ 1. 16%
 - ☐ 2. 14%
 - ☐ 3. 18%
 - ☐ 4. 6%

Q.11 Simplify: $6^2 - 2^5 + \left(\frac{120}{2}\right)^2 - 15 + 7 \times 10$

- Ans
- ☐ 1. 3654
 - ☒ 2. 3659
 - ☐ 3. 3655
 - ☐ 4. 3658

Q.12 What will be the amount on a sum of ₹4,096 invested for 1.5 years a

- Ans
- ◀ ▶
- ☐ 1. ₹4,912
 - ☐ 2. ₹4,914
 - ☒ 3. ₹4,913
 - ☐ 4. ₹4,911

Q.13 In what duration (in years) will ₹4800 fetch a simple interest of ₹480 at 4% per annum rate of interest?

- Ans
- ☐ 1. 1.5
 - ☐ 2. 3.5
 - ☒ 3. 2.5
 - ☐ 4. 5

Q.14 A student's marks were incorrectly entered as 22 instead of 78. Due to this, the class average got decreased by $\frac{8}{7}$. What is the number of students in the class?

- Ans
- ◀ ▶
- ☒ 1. 49
 - ☐ 2. 51
 - ☐ 3. 50
 - ☐ 4. 41

Q.15 A vendor sells 24 chocolates for one rupee and makes a profit of 25%. How many chocolates did he originally purchase for one rupee?

- Ans ☒ 1. 30
☐ 2. 34
☐ 3. 36
☐ 4. 32

Q.16 A shopkeeper is arranging packets of biscuits. When he tries to stack them in piles of 6, 8, or 12 packets, he always has 5 packets left over. What is the smallest possible number of biscuit packets he could have (assuming that the number of piles he makes is a natural number)?

- Ans ☒ 1. 29
☐ 2. 53
☐ 3. 24
☐ 4. 34

Q.17 If the average of seven consecutive ascending odd numbers A, B, C, D, E, F and G is 53, then find the difference of E and B.

- Ans ☐ 1. 10
☐ 2. 8
☒ 3. 6
☐ 4. 4

Q.18 A dishonest shopkeeper sells his goods at cost price but uses a weight of 840 grams for 1 kg weight. What is his gain percentage (rounded off to two decimal places)?

- Ans ☐ 1. 23.70%
☒ 2. 19.05%
☐ 3. 23.07%
☐ 4. 19.50%

Q.19 Simplify: $\frac{5 - [4 \div 2 - 3(4 - (7 - 4))]}{3 + 3\{7 - 5(4 - (6 \div 2 + 1))\}}$

- Ans ☒ 1. $\frac{1}{4}$
☐ 2. $\frac{3}{7}$
☐ 3. $\frac{3}{5}$
☐ 4. $\frac{3}{4}$

Q.20 Two banks offer 8% per annum. Bank A gives simple interest, Bank B gives compound interest (compounded annually). For what time will both give the same total interest on ₹37,000?

- Ans ☐ 1. 3 years
☐ 2. 2 years
☐ 3. 4 years
☒ 4. 1 year

Q.1 A pipe can fill a tank in 6 hours. Another pipe can empty the filled tank in 42 hours. If both the pipes are opened simultaneously, then the time (in hours) in which the tank will be filled is:1380

- Ans ☒ 1. 7
☒ 2. 8
☒ 3. 9
☒ 4. 10

Q.2 Find the surface area of a sphere whose volume is $268\frac{4}{21} \text{ cm}^3$ (use π)

- Ans ☒ 1. $248\frac{3}{7} \text{ cm}^2$
☒ 2. $168\frac{2}{7} \text{ cm}^2$
☒ 3. $189\frac{5}{7} \text{ cm}^2$
☒ 4. $201\frac{1}{7} \text{ cm}^2$

Q.3 A runner runs at a speed of 9 km/hr and covers a certain distance in 4 hours. If the runner increases the speed to 12 km/hr, how much time will it take to cover the same distance?

- Ans ☒ 1. 2.5 hours
☒ 2. 1.5 hours
☒ 3. 3 hours
☒ 4. 2 hours

Q.4 A car is moving at a speed of 49 km/h. If its speed is reduced by 46%, the new speed of the car (in km/h) will be:3186

- Ans ☒ 1. 24.45
☒ 2. 26.46
☒ 3. 27.68
☒ 4. 27.56

Q.5 A boat travels 42 km downstream in 3 hours and returns the same distance upstream in 6 hours. After a while, the speed of the stream increases by 2 km/hr. If the boat again travels 42 km downstream at the new effective speed, how long will it take?

- Ans ☒ 1. 2.265 hours
☒ 2. 2.625 hours
☒ 3. 2.526 hours
☒ 4. 2.652 hours

Q.6 A man sells a mobile phone for ₹600 and loses some money. If he had sold it for ₹1,170, his gain would have been twice the former loss. The cost price (in ₹) of the mobile phone is:

- Ans ☒ 1. 780
☒ 2. 790
☒ 3. 810
☒ 4. 800

Q.7 A and B can complete a piece of work in 12 days. They worked together for 4 days, and then B left. A alone finished the remaining work in 8 more days. How long would A alone take to complete the work?

- Ans**
- ☐ 1. 18 days
 - ☐ 2. 20 days
 - ☒ 3. 12 days
 - ☐ 4. 16 days

Q.8 A shopkeeper fixed the marked price of an article to obtain 30% profit. He offered a discount of 15% and a ₹250 cash discount. If his actual profit is 8%, what is the cost price of the article?

- Ans**
- ☒ 1. ₹10,000
 - ☐ 2. ₹11,800
 - ☐ 3. ₹9,850
 - ☐ 4. ₹12,600

Q.9 The ratio of the present ages of Sridhar and his father is 2 : 9. The father's age at the time of Sridhar's birth was 28 years. Find the father's present age.

- Ans**
- ☐ 1. 45 years
 - ☐ 2. 35 years
 - ☐ 3. 42 years
 - ☒ 4. 36 years

Q.10 A rectangle measures 14 cm by 8 cm. On one of the longer sides (14 cm), a semicircle is constructed externally with that side as its diameter. Find the area of the resulting figure. $\left(\text{Use } \pi = \frac{22}{7} \right)$

- Ans**
- ☐ 1. 181 cm²
 - ☐ 2. 198 cm²
 - ☒ 3. 189 cm²
 - ☐ 4. 193 cm²

Q.11 A right circular cone has its slant height 4 cm more than its radius. If the curved surface area of the cone is $192\pi \text{ cm}^2$, find the radius of the cone.

- Ans**
- ☒ 1. 12 cm
 - ☐ 2. 12.8 cm
 - ☐ 3. 10.5 cm
 - ☐ 4. 11.2 cm

Q.12 A canal is flowing at a speed of 120 km/hour. The water in the canal is 50 decimeters wide and 28 decimeters deep. How much area will it irrigate in 45 minutes if 9 cm of standing water is required?

- Ans**
- ☒ 1. 1,40,00,000 m²
 - ☐ 2. 1,37,00,000 m²
 - ☐ 3. 1,39,00,000 m²
 - ☐ 4. 1,40,04,000 m²

Q.13 A shopkeeper marked the price of an article to gain 40%. If he allows a discount of 25% on the marked price, then find the actual profit percentage.

- Ans**
- ☐ 1. 8%
 - ☐ 2. 6.4%
 - ☒ 3. 5%
 - ☐ 4. 4.5%

Q.14 Yuvi, Tanisha, and Paarth started a business by investing ₹1,20,000, ₹2,00,000, and ₹1,80,000. Yuvi is working as manager and taking 10% of profit as salary. From the remaining profit, they all decided to share the profit in invested capital ratio. If the total profit earned is ₹1,75,000, then the profit share of Paarth is:

- Ans
- ☐ 1. ₹2,000 more than the share of Yuvi
 - ☐ 2. ₹55,750
 - ☐ 3. ₹56,500
 - ☒ 4. ₹6,300 less than the share of Tanisha

Q.15 By selling an article at $\frac{3}{4}$ of its original list price, Hitesh incurs a loss of 10%. If he sells it at 89% of its original list price, then the profit percentage is:

- Ans
- ☐ 1. 9.8%
 - ☐ 2. 5.8%
 - ☒ 3. 6.8%
 - ☐ 4. 8.7%

Q.16 If x is mean proportional of $(a - b)$ and $(a^3 - a^2b)$, find x^2 .

- Ans
- ☐ 1. $a(a + b)^2$
 - ☐ 2. $a^2(a + b)$
 - ☐ 3. $a^2(a - b)$
 - ☒ 4. $a^2(a - b)^2$

Q.17 If 90 men can complete a work in 10 days, working 6 hours per day, then 60 men can complete the same work in:

- Ans
- ☒ 1. $\frac{8}{9}$
 - ☐ 2. $\frac{5}{9}$
 - ☐ 3. $\frac{7}{9}$
 - ☐ 4. $\frac{2}{9}$

Q.18 Mr. Ayodhya Singh travels equal distances with speeds of 6 kmph, 5 kmph, 4 kmph and 3 kmph, and he takes a total time of 4.75 hours. The total distance he travelled (in km) is:

- Ans
- ☐ 1. 4
 - ☒ 2. 20
 - ☐ 3. 80
 - ☐ 4. 5

Q.19 The ratio between two numbers is 4 : 7 and their sum is 88. Find the larger of the two numbers.

- Ans
- ☒ 1. 56
 - ☐ 2. 50
 - ☐ 3. 54
 - ☐ 4. 52

Section : Arithmetical and Numerical Ability

Q.1 Find the average of 412, 226, 125 and 99.

Ans ☒ 1. 215.5

☐ 2. 210

☐ 3. 225.5

☐ 4. 220

Q.2 A shopkeeper mixes two types of rice priced at ₹48/kg and ₹72/kg in the ratio 3 : 2. He sells the mixture at ₹72/kg. What is his profit percentage?

Ans ☐ 1. 20%

☐ 2. 35%

☐ 3. 30%

☒ 4. 25%

Q.3 A man spends 85% of his income. If his expenditure increases by 20% and his income increases by 10%, what is the approximate percentage change in his savings?

Ans ☐ 1. 56.76%, increase

☒ 2. 46.67%, decrease

☐ 3. 50.67%, decrease

☐ 4. 36.67%, increase

Q.4 The average weight of 12 students in a class is 25 kg. If the teacher's weight is included, the average weight of the class becomes 27 kg. Find the weight (in kg) of the teacher.

Ans ☐ 1. 48

☐ 2. 52

☒ 3. 51

☐ 4. 49

Q.5 Simplify: $\frac{(2^{-3} \cdot 4^2)^3 \cdot 8^{-2}}{(16^{-1} \cdot 2^5)^2}$

Ans ☐ 1. $\frac{1}{8}$

☐ 2. 2

☒ 3. $\frac{1}{32}$

☐ 4. $\frac{1}{2}$

Q.6 If p is a prime number, what is the number of factors of p^2 ?

Ans ☒ 1. 3

☐ 2. 5

☐ 3. 2

☐ 4. 4

Q.7 A vendor sells 23 chocolates for one rupee and makes a profit of 100%. How many chocolates did he originally purchase for one rupee?

Ans ☐ 1. 48

☐ 2. 50

☒ 3. 46

☐ 4. 52

Q.8 The monthly incomes of two friends, Tushar and Salil, are in the ratio 6 : 8 and each of them saves ₹36000 every month. If the ratio of their monthly expenditure is 2 : 4, find the monthly income of Tushar (in ₹).

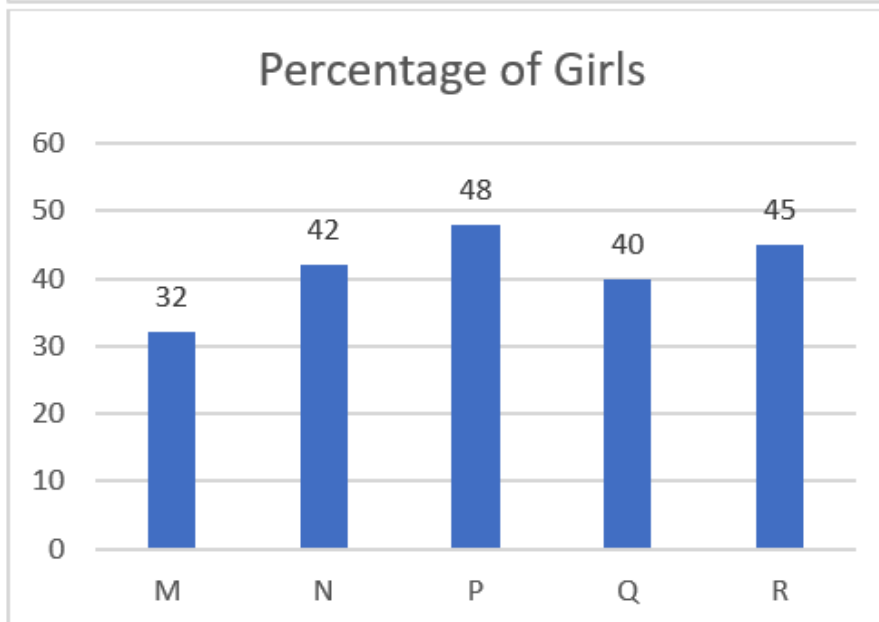
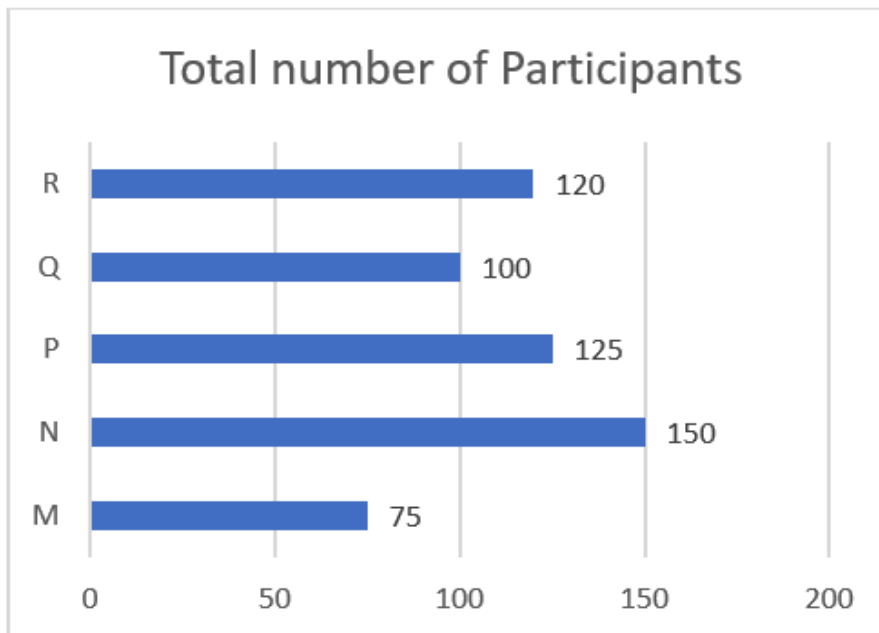
Ans ☒ 1. 54000

☐ 2. 53000

☐ 3. 75600

☐ 4. 55000

Q.9 Study the following graphs and answer the question. In the first graph, the total number of participants in intercollege games from five different college M, N, P, Q and R is shown while in the second graph, the percentage of girl participants out of the total number of participants from five different college is shown.



Find the average of the number of boy participants from the college M, N and R.

Ans ☐ 1. 87

☐ 2. 94

☒ 3. 68

☐ 4. 56

Q.10 Hundred oranges are purchased for ₹50 and sold at the rate of ₹0.60 each. Calculate the percentage profit.

- Ans
- ☐ 1. 25%
 - ☐ 2. 10%
 - ☒ 3. 20%
 - ☐ 4. 15%

Q.11 The expenditure of R is four times his savings. If his salary is doubled and savings are now four times the previous savings, then the expenditure now is ____ times the previous expenditure.

- Ans
- ☐ 1. 1.75
 - ☒ 2. 1.5
 - ☐ 3. 2
 - ☐ 4. 1.25

Q.12 Find the value of

$$\left(\frac{66.066}{0.066} - 1 \right) \times 10^{-5} + \frac{0.0006 \times 10^5}{60} + \frac{0.006 \times 0.06 \times 10^3}{36}.$$

- Ans
- ☒ 1. $\frac{51}{50}$
 - ☐ 2. $\frac{101}{50}$
 - ☐ 3. $\frac{101}{100}$
 - ☐ 4. $\frac{1}{50}$

Q.13 Kartik has ₹1,716 with him. He divides this amount between his sons, Ishan and Krish, and asks them to invest their respective shares at a compound interest rate of 8% per annum, compounded annually. It is observed that Ishan and Krish receive the same amount after 15 years and 16 years, respectively. How much money (in ₹) did Kartik give to Ishan?

- Ans
- ☐ 1. 925
 - ☒ 2. 891
 - ☐ 3. 825
 - ☐ 4. 741

Q.14 Find the compound interest on ₹12,420 at the rate of $33\frac{1}{3}\%$ per ann for 1 year 6 months, interest being compounded annually.



- Ans
- ☐ 1. ₹7,200
 - ☐ 2. ₹6,880
 - ☒ 3. ₹6,900
 - ☐ 4. ₹7,050

Q.15 Simplify $\left(\frac{2^3 \times 2^{-4}}{2^{-2}} \right)^2$

- Ans
- ☐ 1. 2^{-4}
 - ☒ 2. 2^2
 - ☐ 3. 2^4
 - ☐ 4. 2^{-2}

Q.16 A price is increased by 10% and then again increased by 22%. What is the total percentage increase?

- Ans
- ☐ 1. 32%
 - ☒ 2. 34.2%
 - ☐ 3. 44%
 - ☐ 4. 33%

Q.17 In what duration (in years) will ₹4800 fetch a simple interest of ₹480 at 5% per annum rate of interest?

- Ans
- ☐ 1. 4
 - ☐ 2. 3
 - ☐ 3. 1
 - ☒ 4. 2

Q.18 If the average of a , b and c is x and $ab + bc + ca = 0$, then find the average of a^2 , b^2 , c^2 .

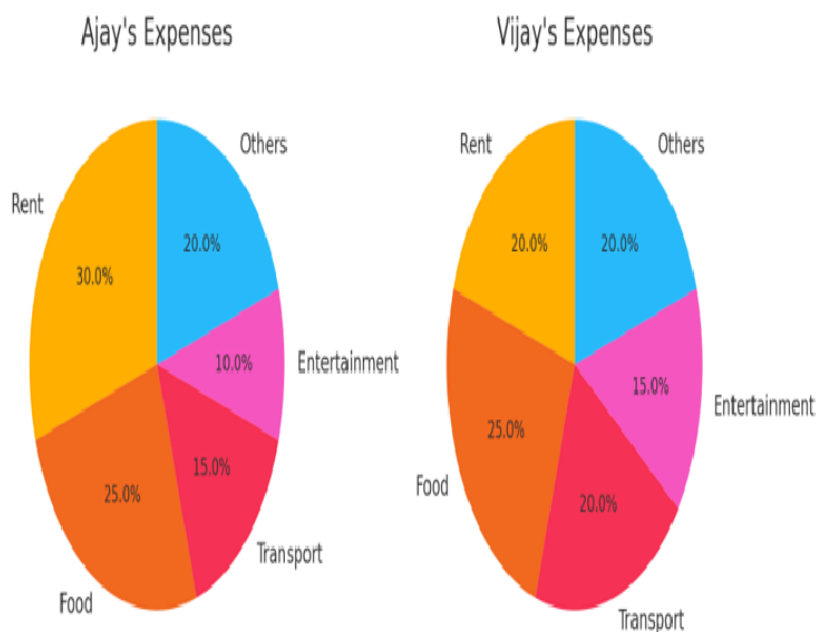
- Ans
- ☐ 1. x^2
 - ☐ 2. x^3
 - ☒ 3. $3x^2$
 - ☐ 4. $3x$

Q.19 Akshay has ₹1,716 with him. He divides this amount between his sons, Arjun and Kartik, and asks them to invest their respective shares at a compound interest rate of 8% per annum, compounded annually. It is observed that Arjun and Kartik receive the same amount after 11 years and 12 years, respectively. How much money (in ₹) did Akshay give to Arjun?

- Ans
- ☐ 1. 741
 - ☐ 2. 925
 - ☒ 3. 891
 - ☐ 4. 825

Q.20 Study the given graphs and answer the question that follows.

The two pie charts below show the expenditure breakdown of two friends, Ajay and Vijay, for one month.



What is the difference in the amount spent on Entertainment by Ajay and Vijay if the total expenditure for Ajay is ₹20,000 and Vijay is ₹18,000?

- Ans
- ☒ 1. ₹300
 - ☒ 2. ₹200
 - ☒ 3. ₹400
 - ☒ 4. ₹700

Section : Arithmetical and Numerical Ability1

Q.1 The price of an item is first increased by 10%, and then, a discount of 20% is applied on the increased price. Find the overall percentage change in the price.

- Ans
- ☒ 1. 12% decrease
 - ☒ 2. 12% increase
 - ☒ 3. 8% increase
 - ☒ 4. 8% decrease

Q.2 Priya can type 60 pages in 6 hours. Kunal can type 45 pages in 3 hours. If they work together, how many hours will they take to type 70 pages? (Round off to the nearest integer)

- Ans
- ☒ 1. 1 hour
 - ☒ 2. 3 hours
 - ☒ 3. 2 hours
 - ☒ 4. 4 hours

Q.3 A trip is divided into two parts. A fraction α of the distance is covered at speed u km/h, and the remaining fraction $1 - \alpha$ is covered at speed v km/h. What is the average speed (in km/h) for the entire trip?

- Ans
- ☐ 1. $\sqrt{uv}$
 - ☐ 2. $\frac{2uv}{u+v}$
 - ☒ 3. $\frac{\alpha}{u} + \frac{1-\alpha}{v}$
 - ☐ 4. $\alpha u + (1-\alpha)v$

Q.4 If the third proportion of $(2x - 3)$ and 5 is $(x + 1)$, find the first proportion, where x is not a natural number.

- Ans
- ☐ 1. 3
 - ☐ 2. -4
 - ☒ 3. -10
 - ☐ 4. 5

Q.5 Two inlet pipes can fill a tank in 18 minutes and 24 minutes, respectively, while a drain pipe can empty the full tank in 36 minutes. All pipes are opened together, but after a certain time the drain pipe is closed, allowing the tank to fill completely in a total time of 12 minutes. After how many minutes was the drain pipe closed?

- Ans
- ☐ 1. 8
 - ☐ 2. 5
 - ☒ 3. 6
 - ☐ 4. 7

Q.6 A car travels the first one-third of a certain distance with a speed of 10 km/h, the next one-third distance at 20 km/h and last one-third distance at 60 km/h. Find the average speed of the car.

- Ans
- ☐ 1. 32 km/h
 - ☐ 2. 24 km/h
 - ☒ 3. 18 km/h
 - ☐ 4. 30 km/h

Q.7 The area of a regular polygon with a side of 8 cm is 120 cm^2 . If the perpendicular distance from the center to the side of the polygon is 5 cm, find the number of the sides of the polygon.

- Ans
- ☐ 1. 8
 - ☐ 2. 7
 - ☒ 3. 6
 - ☐ 4. 9

Q.8 A person covers a distance of 29 km in a bus in 35 minutes. After getting down from the bus, he takes rest for 10 minutes, and then covers another 10 km in a taxi in 20 minutes. What is his average speed (in kmph) for the whole journey including the time for rest?

- Ans
- ☐ 1. 63
 - ☐ 2. 39
 - ☒ 3. 36
 - ☐ 4. 42.55

Q.9 A solid sphere has radius 10.5 cm. What is the volume of the sphere? (Use $\pi = 22/7$)

- Ans
- ☐ 1. 4,900 cubic cm
 - ☐ 2. 4,620 cubic cm
 - ☒ 3. 4,851 cubic cm
 - ☐ 4. 5,005 cubic cm

Q.10 A mobile phone is marked at ₹20,000. A shopkeeper sells it for ₹15, the first being 10% and the second being x%. Find the value of x.

- Ans
- ☐ 1. 20
 - ☐ 2. 17
 - ☐ 3. 19
 - ☒ 4. 15

Q.11 In a transaction, the profit percentage is 72% of the cost price. If the cost further increases by 24% but the selling price remains the same, what is the difference between initial and final profit percentage (rounded off to 1 decimal place)?

- Ans
- ☐ 1. 35.3%
 - ☐ 2. 31.6%
 - ☐ 3. 38.7%
 - ☒ 4. 33.3%

Q.12 If 5 pens cost ₹50, what is the cost of 10 pens?

- Ans
- ☐ 1. ₹128
 - ☐ 2. ₹130
 - ☒ 3. ₹100
 - ☐ 4. ₹120

Q.13 A man sells a mobile phone for ₹600 and loses some money. If he had sold it for ₹1,230, his gain would have been twice the former loss. The cost price (in ₹) of the mobile phone is:

- Ans
- ☐ 1. 830
 - ☒ 2. 810
 - ☐ 3. 820
 - ☐ 4. 800

Q.14 Arjun and Dilip together can complete a piece of work in 20 days. The remaining work alone in 40 days. Find the number of days Arjun alone

- Ans
- ☒ 1. $33\frac{1}{3}$ days
 - ☐ 2. $32\frac{4}{5}$ days
 - ☐ 3. $33\frac{1}{5}$ days
 - ☐ 4. $32\frac{1}{5}$ days

Q.15 The volume of a solid cylinder is 13860 cm^3 and its height is 10 cm. What is the total surface area of the solid cylinder?

$\left(\text{Use } \pi = \frac{22}{7} \right)$

- Ans
- ☐ 1. 4084 cm²
 - ☒ 2. 4092 cm²
 - ☐ 3. 4069 cm²
 - ☐ 4. 4062 cm²

Q.16 A tank can be filled by Pipe A in 12 hours and emptied by Pipe B in 24 hours. If both pipes are opened together, how long will it take to fill the tank?

- Ans
- ☐ 1. 18 hours
 - ☐ 2. 20 hours
 - ☒ 3. 24 hours
 - ☐ 4. 22 hours

Q.17 A spherical ball of radius 14.7 cm is cut into two equal hemispheres. What is the total surface area (in cm²) of both the hemispheres?

$\left(\text{Use } \pi = \frac{22}{7} \right)$

- Ans
- ☐ 1. 4084.84
 - ☐ 2. 4084.74
 - ☐ 3. 4074.74
 - ☒ 4. 4074.84

Q.18 The correct ascending order of numbers: $\frac{5}{6}, \frac{0.25}{0.35}, \frac{7}{8}, \frac{1.8}{2}$ is _____.

- Ans
- ☒ 1. $\frac{0.25}{0.35}, \frac{5}{6}, \frac{7}{8}, \frac{1.8}{2}$
 - ☐ 2. $\frac{0.25}{0.35}, \frac{7}{8}, \frac{5}{6}, \frac{1.8}{2}$
 - ☐ 3. $\frac{5}{6}, \frac{0.25}{0.35}, \frac{7}{8}, \frac{1.8}{2}$
 - ☐ 4. $\frac{5}{6}, \frac{7}{8}, \frac{0.25}{0.35}, \frac{1.8}{2}$

Q.19 A, B, and C are partners in a business. The partnership agreement states that profits and losses will be shared in the ratio 5 : 3 : 2. After a year of business, the partnership agreement is amended, and the new profit-sharing ratio is determined to be 2 : 2 : 1 for A, B, and C, respectively. At the end of the year, the total profit of the business is ₹18,00,000. A new partner, D, is admitted with an agreed share of one-fifth of the total profit. To ensure fairness, A, B, and C agree to re-adjust their respective shares based on the new ratio. After D is admitted, how much will C receive as their share of the total profit?

- Ans
- ☐ 1. ₹3,00,000
 - ☒ 2. ₹2,88,000
 - ☐ 3. ₹2,50,000
 - ☐ 4. ₹3,20,000

Q.14 The curled top of a young fern frond is also commonly referred to as a/an:

- Ans**
- ☐ 1. helix
 - ☒ 2. fiddlehead
 - ☐ 3. loop
 - ☐ 4. obcordate

Q.15 Which of the following is a tributary of the Damodar River that flows through Jharkhand and West Bengal?

- Ans**
- ☐ 1. Subarnarekha
 - ☒ 2. Barakar
 - ☐ 3. Mahananda
 - ☐ 4. Ajay

Q.16 The Supreme Court held that inclusive digital access to e-governance and welfare systems forms an integral part of the fundamental right to life and liberty. This right is guaranteed under which Article of the Indian Constitution?

- Ans**
- ☐ 1. Article 14
 - ☒ 2. Article 21
 - ☐ 3. Article 19(1)(a)
 - ☐ 4. Article 32

Q.17 Umami, one of the five fundamental taste sensations, is found in which food?

- Ans**
- ☐ 1. Boiled potatoes
 - ☐ 2. Marmalade
 - ☒ 3. Cured meats
 - ☐ 4. Pickled dills

Q.18 In which Article of Part III of the Indian Constitution is the Right to Constitutional Remedies mentioned?

- Ans**
- ☐ 1. Articles 30
 - ☐ 2. Articles 31
 - ☐ 3. Article 33
 - ☒ 4. Articles 32

Q.19 The 73rd and 74th Constitutional Amendment Acts were passed by the Parliament of India in which of the following years?

- Ans**
- ☒ 1. 1992
 - ☐ 2. 1989
 - ☐ 3. 1990
 - ☐ 4. 1988

Q.20 Which of the following Ministries of India along with the Linguistic Experts' Committee was constituted by the Government of India to consider demands for the categorisation of languages as Classical Languages?

- Ans**
- ☐ 1. Ministry of Education
 - ☐ 2. Ministry of Skill Development and Entrepreneurship
 - ☐ 3. Ministry of Communications
 - ☒ 4. Ministry of Culture

Q.1 Five pumps can empty a 12,000-liter tank in 2 hours. How much time will three pumps take to empty 7,200 liters at the same rate of pumping?

- Ans
- ☒ 1. 2 hours
 - ☐ 2. 3 hours
 - ☐ 3. 2.5 hours
 - ☐ 4. 1.5 hours

Q.2 The population of a city increases by 5% annually. The present population of the city is 1,86,102. The population of this city two years ago was _____.1570

- Ans
- ☐ 1. 1,86,800
 - ☒ 2. 1,68,800
 - ☐ 3. 84400
 - ☐ 4. 1,88,600

Q.3 One litre of a milk–water mixture contains 70% milk. It is mixed with two litres of another mixture that contains 60% water. What percentage of milk is in the resulting mixture?

- Ans
- ☐ 1. 60%
 - ☐ 2. 55%
 - ☐ 3. 45%
 - ☒ 4. 50%

Q.4 A and B are two fixed points 5 cm apart and C is a point on AB such
If the length of AC is increased by 6%, then the length of CB decreases
831



- Ans
- ☒ 1. 9%
 - ☐ 2. 5%
 - ☐ 3. 7%
 - ☐ 4. 6%

Q.5 A family spends ₹12,000 in 4 months. If the family wants to maintain the same average monthly expenditure, how much should they spend (in ₹) in the next 2 months?

- Ans
- ☐ 1. 9,000
 - ☒ 2. 6,000
 - ☐ 3. 8,000
 - ☐ 4. 7,000

Q.6 Find the amount on ₹10,24,000 at 5% per annum interest, compounded quarterly, for a period of 6 months.

- Ans
- ☐ 1. ₹10,53,340
 - ☐ 2. ₹10,50,340
 - ☒ 3. ₹10,49,760
 - ☐ 4. ₹10,43,545

Q.7 In an exam, the average marks obtained by students in group A of 30 students is 68, and in group B of 40 students is 74. A third group C is added, and the combined average becomes 72. If group C has 50 students, then by how much percentage does its average score exceed the overall combined average score?

- Ans
- ☐ 1. $2\frac{1}{9}\%$
 - ☒ 2. $1\frac{1}{9}\%$
 - ☐ 3. $1\frac{2}{9}\%$
 - ☐ 4. $2\frac{2}{9}\%$

Q.8 A student's marks were incorrectly entered as 24 instead of 59. Due to this, the class average got decreased by $\frac{7}{6}$. What is the number of students in the class?

- Ans
- ☐ 1. 36
 - ☐ 2. 35
 - ☐ 3. 39
 - ☒ 4. 30

Q.9 When certain goods are sold for ₹37,400, the owner loses 15%. At what price must those goods be sold in order to gain 15%? 1483

- Ans
- ☐ 1. ₹45,600
 - ☐ 2. ₹47,643
 - ☐ 3. ₹46,520
 - ☒ 4. ₹50,600

Q.10 A farmer purchases a tractor for ₹3,50,000, spends ₹30,000 on repairs, and then sells it for ₹4,40,000. What is his percentage profit (rounded off to two decimal places)?

- Ans
- ☐ 1. 15.63%
 - ☒ 2. 15.79%
 - ☐ 3. 15.36%
 - ☐ 4. 15.97%

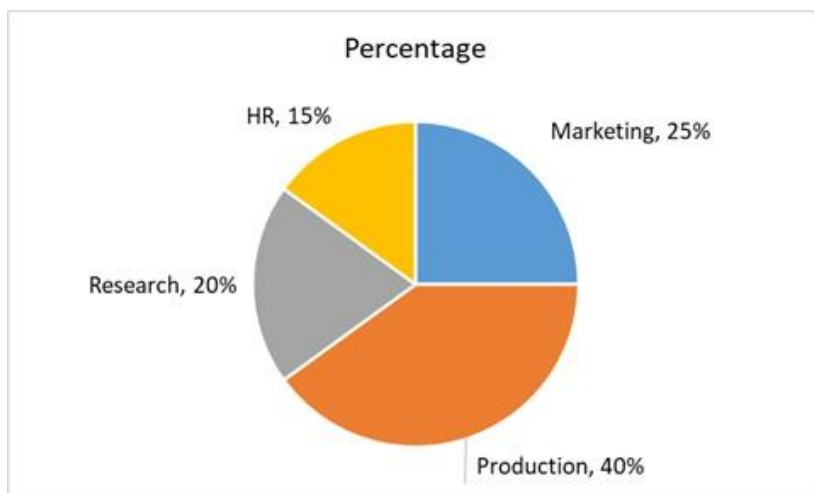
Q.11 In what duration (in years) will ₹4800 fetch a simple interest of ₹600 at 5% per annum rate of interest?

- Ans
- ☐ 1. 5
 - ☒ 2. 2.5
 - ☐ 3. 3.5
 - ☐ 4. 1.5

Q.12 A trader marks an article 25% above its cost price. If the cost price of the article is ₹800 and he sells it for ₹880, what percentage discount does he give to the buyer?

- Ans
- ☐ 1. 7%
 - ☐ 2. 15%
 - ☒ 3. 12%
 - ☐ 4. 10%

Q.13 A company's annual budget is distributed as shown in the pie chart below.



If the total budget is ₹20,00,000, find the amount allocated to Research.

- Ans
- ☐ 1. ₹5,00,000
 - ☐ 2. ₹4,80,000
 - ☒ 3. ₹4,00,000
 - ☐ 4. ₹5,20,000

Q.14 A designer's monthly income increases by 12% in January and by 8% in February. If her income was ₹25,000 before the raises, what is her income after both raises?

- Ans
- ☐ 1. ₹30,000
 - ☐ 2. ₹30,600
 - ☒ 3. ₹30,240
 - ☐ 4. ₹30,400

Q.15 A school has two activities. Yoga classes are held on every 8th day, while Art classes are held on every 12th day. If both classes are held today, on which day (without counting today) will they be held together again?

- Ans
- ☐ 1. 48th
 - ☐ 2. 36th
 - ☒ 3. 24th
 - ☐ 4. 96th

Q.16 The value of a car depreciates by 15% every year. If the car's value was ₹10,00,000 at the time of purchase, what will be its value after 2 years?

- Ans
- ☒ 1. ₹7,22,500
 - ☐ 2. ₹7,11,250
 - ☐ 3. ₹7,47,500
 - ☐ 4. ₹7,74,750

Q.17 The HCF of two numbers is 39, and their LCM is 468. If one of the numbers is 117, find the other number.

- Ans
- ☐ 1. 182
 - ☐ 2. 104
 - ☒ 3. 156
 - ☐ 4. 169

Q.18 The seven-digit number 2A3491B is divisible by 4. Find the least possible value of A+B.

- Ans ☒ 1. 2
☐ 2. 6
☐ 3. 4
☐ 4. 0

Q.19 If ₹1,50,000 amounts to ₹1,61,533.59 in 18 months with interest compounded every six months, what is the rate of interest per annum?

- Ans ☒ 1. 5%
☐ 2. 6%
☐ 3. 5.5%
☐ 4. 2.5%

Q.20 The table below shows the number of Junior Staff and Officers employees recruited by three banks (Alpha, Beta and Gamma) during 2015-2018. Study the table and answer the question.

Banks Years	Alpha		Beta		Gamma	
	Junior Staff	Officer	Junior Staff	Officer	Junior Staff	Officer
2015	1256	431	1310	502	1140	3
2016	1510	498	1404	490	1648	5
2017	910	328	1001	327	898	3
2018	1115	415	1205	370	1178	3

Which bank recruited the highest number of Officers from the year 2015 to 2018?

- Ans ☐ 1. Both Alpha and Gamma recruited equally
☐ 2. Alpha
☐ 3. Gamma
☒ 4. Beta

Section : Arithmetical and Numerical Ability1

Q.1 Find the mean proportional of $2\sqrt{2}$ and $2\sqrt{8}$.

- Ans ☒ 1. 4
☐ 2. 8
☐ 3. 2
☐ 4. 16

Q.2 Anju and Babita, when working together, can complete a certain piece of work in 4 hours. If Babita alone can do it in 6 hours, then in how many hours can Anju alone complete the work?

- Ans ☐ 1. 5
☐ 2. 10
☐ 3. 18
☒ 4. 12

Q.3 Find the volume of a cylinder with a base radius of 7 cm and a height of 10.4 cm.

- Ans
- ☐ 1. 1602.6 cm³
 - ☒ 2. 1601.6 cm³
 - ☐ 3. 1603.6 cm³
 - ☐ 4. 1604.6 cm³

Q.4 A and B's ratio of investment in a business is 6 : 4 and that of A and C is 4 : 3. A and B invested for a year and C withdrew his investment after 8 months. Find the share of B (in ₹) in the profit of ₹12,443 at the end of one year. (Round off your answer to the nearest rupee.)

- Ans
- ☐ 1. 4328
 - ☐ 2. 6492
 - ☐ 3. 1623
 - ☒ 4. 3829

Q.5 A shopkeeper sells a TV for ₹18,000 after giving a discount of 10%. What is the marked price of the TV?

- Ans
- ☐ 1. ₹19,000
 - ☐ 2. ₹22,000
 - ☒ 3. ₹20,000
 - ☐ 4. ₹21,000

Q.6 Anju can do a certain piece of work in 12 days. Bhanu is 60% more efficient than Anju. They undertake to do a piece of work for ₹10,000. With the help of Champak, they complete it in 3 days. Then the shares of money to be received by Anju, Bhanu and Champak, respectively, are:

- Ans
- ☐ 1. ₹3,000; ₹3,750; ₹3,250
 - ☐ 2. ₹3,000; ₹3,600; ₹3,400
 - ☐ 3. ₹2,500; ₹4,250; ₹3,250
 - ☒ 4. ₹2,500; ₹4,000; ₹3,500

Q.7 The height of a cylinder is 25 cm and its volume is 34650 cm³. The ci

(Use $\pi = \frac{22}{7}$)

- Ans
- ☐ 1. 133.5
 - ☐ 2. 136
 - ☐ 3. 134.5
 - ☒ 4. 132

Q.8 Find the diagonal of a cuboid whose dimensions are 16 cm by 12 cm by 10 cm.

- Ans
- ☒ 1. $10\sqrt{5}$ cm
 - ☐ 2. $12\sqrt{5}$ cm
 - ☐ 3. $8\sqrt{5}$ cm
 - ☐ 4. $16\sqrt{5}$ cm

Q.9 The ratio of p to q is 4:7 and the ratio of q to r is 3:8. Given p = 6, find the fourth proportional to p, q and r.

- Ans
- ☐ 1. 42
 - ☐ 2. 60
 - ☐ 3. 56
 - ☒ 4. 49

Q.10 If 66% of a number is equal to three-fifths of another number, what is the ratio of the first number to the second number?¹⁴⁴²

- Ans
- ☒ 1. 10 : 11
 - ☐ 2. 11 : 10
 - ☐ 3. 3 : 11
 - ☐ 4. 11 : 3

Q.11 A fills a tank in 10 hours, B empties it in 12 hours, and C empties it in 30 hours. If all work together, how long will it take for the tank to get emptied if initially it is completely full?

- Ans
- ☒ 1. Empties in 60 hours
 - ☐ 2. Empties in 50 hours
 - ☐ 3. Empties in 36 hours
 - ☐ 4. Empties in 40 hours

Q.12 Two people, A and B, are initially D km apart and start moving towards each other. B starts first, and A starts t hours later. The speeds of A and B are u km/h and v km/h, respectively. Find the time from B's start when they meet.

- Ans
- ☒ 1. $\frac{D + ut}{u + v}$
 - ☐ 2. $\frac{D + vt}{u + v}$
 - ☐ 3. $\frac{D}{u + v}$
 - ☐ 4. $\frac{D - vt}{u + v}$

Q.13 A train travelling at a speed of 60 km/h crossed a platform of length 2 km in 2 minutes 24 seconds. Another train of length 500 m is travelling on a parallel track at a speed of 75 km/h in the same direction. If they start from the same point, then find the time (in minutes) taken by the faster train to cross the slower train.

- Ans
- ☐ 1. 6.1
 - ☐ 2. 5.4
 - ☒ 3. 3.6
 - ☐ 4. 4.2

Q.14 The volume of a right circular cone is 1100 cm^3 . If the radius of its base is 6 cm, find the curved surface area (in cm^2) of the cone. (Use $\pi = 22/7$, rounded off to two decimal places)

- Ans
- ☐ 1. 572.67 cm^2
 - ☐ 2. 548.16 cm^2
 - ☐ 3. 568.75 cm^2
 - ☒ 4. 561.52 cm^2

Q.15 Two trains are 155.5 m and 159.5 m long. They run in opposite directions and cross each other in 10.5 seconds. What is their combined speed in km/h?

- Ans
- ☐ 1. 104 km/h
 - ☐ 2. 102 km/h
 - ☐ 3. 106 km/h
 - ☒ 4. 108 km/h

Q.19 The "Onam" festival, celebrated with boat races and cultural performances, belongs to which state?

- Ans**
- ☐ 1. Andhra Pradesh
 - ☐ 2. Tamil Nadu
 - ☒ 3. Kerala
 - ☐ 4. Karnataka

Q.20 Which of the following is a major factor influencing the location of an iron and steel plant?

- Ans**
- ☐ 1. Availability of luxury goods market
 - ☐ 2. High population density
 - ☐ 3. Presence of educational institutions
 - ☒ 4. Proximity to iron ore reserves

Section : **Arithmetical and Numerical Ability**

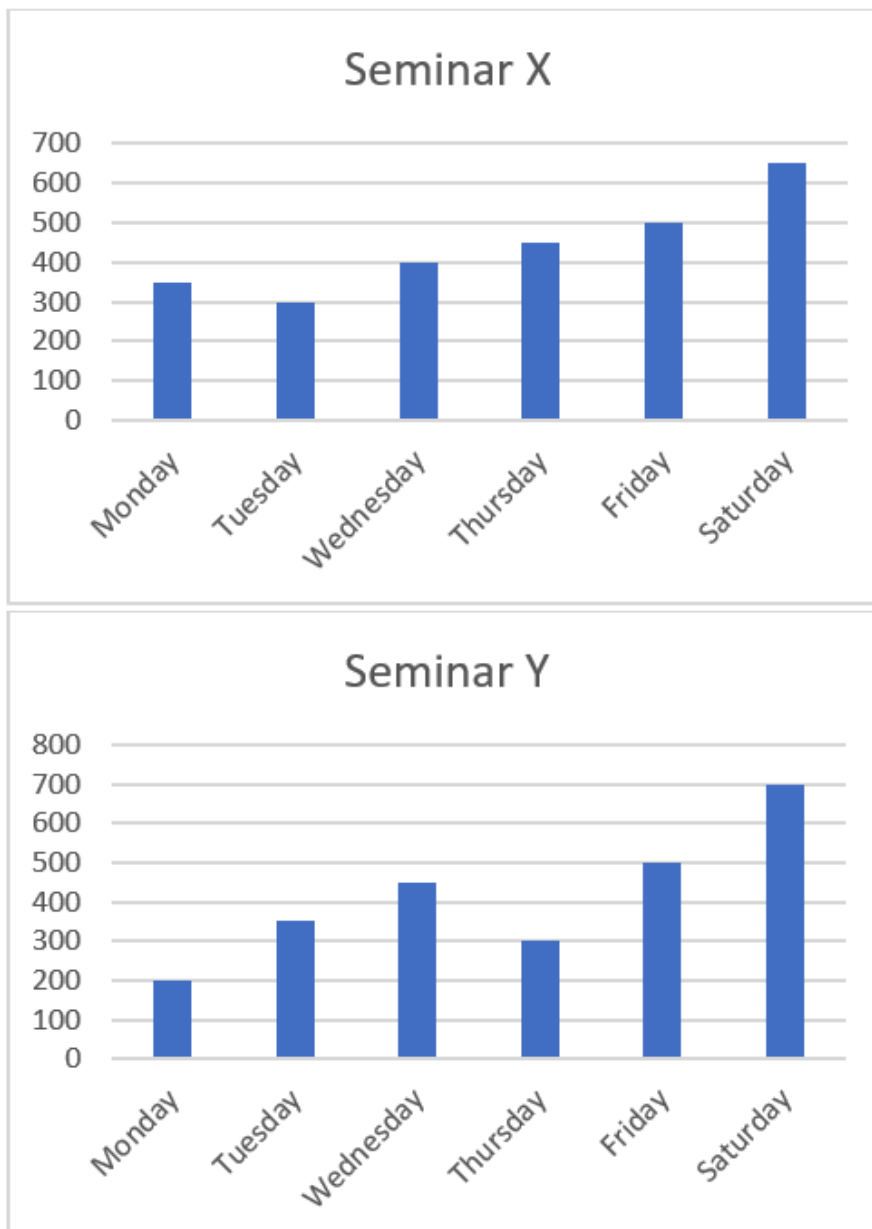
Q.1 R borrows ₹1,50,000 from his friend at 10% simple rate of interest per annum. He invested the amount in a scheme, which gives 10% per annum compound interest, compounded annually. In three years, after paying back the borrowed money, he earns ₹_____.

- Ans**
- ☐ 1. 5,640
 - ☐ 2. 4,560
 - ☐ 3. 6,450
 - ☒ 4. 4,650

Q.2 Find the compound interest on ₹16,000 at 20% per annum for 9 months compounded quarterly.

- Ans**
- ☐ 1. ₹2,732
 - ☐ 2. ₹2,432
 - ☐ 3. ₹2,722
 - ☒ 4. ₹2,522

Q.3 The graphs below shows the number of visitors who participated in Seminar X and Seminar Y on various days of the week. Assume all numbers are multiples of 50.



Find the ratio of the total number of visitors who participated in Seminar X on Monday and Thursday to the total number of visitors who participated in Seminar Y on Tuesday and Friday.

Ans ☒ 1. 16 : 17

☐ 2. 15 : 17

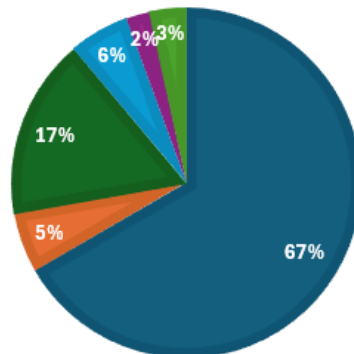
☐ 3. 17 : 16

☐ 4. 17 : 19

- Q.4 The pie chart below shows the percentage distribution of people based on how they spend their daytime on different hobbies such as Reading, Writing, Trekking, Travelling, Exercise, and Eating.

PEOPLE USING DAYTIME FOR HOBBIES IN PERCENTAGE

■ Reading ■ Writing ■ Trekking ■ Travelling ■ Exercise ■ Eating



If the total number of people surveyed is 6,000, find the number of people who use their daytime for reading.

- Ans
- ☐ 1. 4,200
 - ☐ 2. 3,980
 - ☐ 3. 3,930
 - ☒ 4. 4,020

- Q.5 A person earns ₹40,000 per month, and spends 25% on education, 15% on entertainment, and remaining amount he saves. How much do they save?

- Ans
- ☐ 1. ₹12,000
 - ☐ 2. ₹20,000
 - ☐ 3. ₹16,000
 - ☒ 4. ₹24,000

- Q.6 The average height of 8 students is 150 cm. A new student joins the group, and the average becomes 152 cm. Find the height (in cm) of the new student.

- Ans
- ☐ 1. 170
 - ☒ 2. 168
 - ☐ 3. 174
 - ☐ 4. 155

- Q.7 A TV was bought for ₹23,000. The value of the TV was depreciated by 5% per annum. Find the value of the TV after two years.

- Ans
- ☐ 1. ₹20,657.50
 - ☐ 2. ₹20,557.50
 - ☒ 3. ₹20,757.50
 - ☐ 4. ₹20,857.50

- Q.8 Simplify: $\frac{2.5 + 3.75 - 1.25}{3.5 - 0.5 \times 5}$

- Ans
- ☒ 1. 5
 - ☐ 2. 4.5
 - ☐ 3. 5.25
 - ☐ 4. 4.75

Q.9 Simplify: $63 \div 9 + 42 \div 7 \times 6 - 13$ of $3 + 5$

- Ans
- ☐ 1. 7
 - ☐ 2. 8
 - ☒ 3. 9
 - ☐ 4. 6

Q.10 93 is the smallest number which, when divided by 6, 9, and a certain number x, leaves the same remainder of 3 in each case. What is the least possible value of x?

- Ans
- ☒ 1. 5
 - ☐ 2. 9
 - ☐ 3. 15
 - ☐ 4. 3

Q.11 The production of a company increases from 60,000 units to 65,400 units. Find the percentage increase.

- Ans
- ☒ 1. 9%
 - ☐ 2. 6%
 - ☐ 3. 7%
 - ☐ 4. 8%

Q.12 A container contained 60 liters milk. Out of this, 6 liters of milk was taken out and replaced with water. This process was repeated two more times. How much milk (in liters) was there in the container after the third replacement?

- Ans
- ☒ 1. 43.74 liters
 - ☐ 2. 43.12 liters
 - ☐ 3. 40.22 liters
 - ☐ 4. 42.33 liters

Q.13 Amit mixes two varieties of tea costing ₹410 per kg and ₹380 per kg in the ratio 2 : 3. What is the price per kg of the resulting mixture?

- Ans
- ☒ 1. ₹392
 - ☐ 2. ₹382
 - ☐ 3. ₹402
 - ☐ 4. ₹384

Q.14 Keshav's salary was first reduced by 36% and subsequently increased by 30%. By what percentage is his final salary lower than his initial salary?

- Ans
- ☐ 1. 18%
 - ☐ 2. 20%
 - ☐ 3. 10.8%
 - ☒ 4. 16.8%

Q.15 A number when decreased by $31\frac{1}{2}\%$, gives 274. The number is:

78

- Ans
- ☐ 1. 200
 - ☐ 2. 500
 - ☐ 3. 300
 - ☒ 4. 400

Q.16

Find the value of $\{\sqrt{1152} \times \sqrt{512} - \sqrt{507} \times \sqrt{3}\}^{\frac{1}{2}}$.

Ans

- ☐ 1. 8
- ☐ 2. 16
- ☐ 3. 49
- ☒ 4. 27

Q.17

A bookseller buys 200 books at ₹30 each and gives a discount of 10% on the marked price of ₹50 per book. Find his profit or loss percentage.

Ans

- ☐ 1. 50%, Loss
- ☐ 2. 40%, Profit
- ☒ 3. 50%, Profit
- ☐ 4. 40%, Loss

Q.18

In what duration (in years) will ₹4,800 fetch a simple interest of ₹720 at 6% per annum rate of interest?

Ans

- ☒ 1. 2.5
- ☐ 2. 5
- ☐ 3. 3.5
- ☐ 4. 1.5

Q.19

Yuvraj sold his cricket bat at a loss of 20%. He would have made a profit of 5% if he had sold it for ₹1000 more. What would be the selling price if he wanted to make a profit of 10%?

Ans

- ☐ 1. ₹4200
- ☐ 2. ₹3600
- ☒ 3. ₹4400
- ☐ 4. ₹4000

Q.20

If the average of seventy-five numbers is 35, and each number is increased by 3, then what is the average of the new numbers?

Ans

- ☐ 1. 40
- ☐ 2. 32
- ☐ 3. 35
- ☒ 4. 38

Section : Arithmetical and Numerical Ability1

Q.1

A tap fills a cistern in 27 hours. Another tap empties the full tank in 54 hours. How long (in hours) will it take to fill the tank completely, if the tank is empty and both the taps are open together?

Ans

- ☐ 1. 55
- ☒ 2. 54
- ☐ 3. 56
- ☐ 4. 57

Q.2 Abhi does 30% of a work in 15 days. Biswa can complete 40% of the same work in 10 days. How long would both Abhi and Biswa together take to complete the whole work?

- Ans
- ☐ 1. $14\frac{2}{3}$ days
 - ☒ 2. $16\frac{2}{3}$ days
 - ☐ 3. $13\frac{2}{3}$ days
 - ☐ 4. $15\frac{1}{3}$ days

Q.3 The radius and slant height of a right circular cone are in the ratio 3:5. The curved surface area of the cone exceeds the area of its base by 301.44 cm^2 . Find the slant height of the cone (use $\pi = 3.14$).

- Ans
- ☐ 1. 32 cm
 - ☒ 2. 20 cm
 - ☐ 3. 18 cm
 - ☐ 4. 28 cm

Q.4 Two trains are moving in the same direction at speeds of 15 km/h and 100 km/h. Their lengths are 400 m and 300 m, respectively. How long does the faster train, coming from behind, take to completely cross the slower train? (Give your answer in seconds, correct to two places after decimal.)

- Ans
- ☐ 1. 27.63 seconds
 - ☐ 2. 26.63 seconds
 - ☒ 3. 29.65 seconds
 - ☐ 4. 30.63 seconds

Q.5 An article has a marked price of ₹3,200. If a discount of 12.5% is offered on the marked price, what is the selling price?

- Ans
- ☐ 1. ₹2,840
 - ☒ 2. ₹2,800
 - ☐ 3. ₹2,720
 - ☐ 4. ₹2,900

Q.6 The fourth proportion of $0.\overline{21}$, $\sqrt{\frac{0.49}{1.21}}$, and $1\frac{1}{3}$ is:

- Ans
- ☐ 1. $\sqrt{3.6}$
 - ☐ 2. $0.\overline{34}$
 - ☒ 3. 4
 - ☐ 4. $2\frac{3}{5}$

Q.7 A shopkeeper sells an article at a loss of 10%. If he had sold it for ₹450 more than the original selling price, and the cost price of the article is ₹1,500, what would have been the profit percentage?

- Ans
- ☒ 1. 20%
 - ☐ 2. 18%
 - ☐ 3. 25%
 - ☐ 4. 22%

Q.8 If the total surface area of a cone is 704 square meters and its radius of base is 7 meters, what is the slant height of the cone? (Given $\pi = \frac{22}{7}$)

- Ans
- ☐ 1. 22 meters
 - ☒ 2. 25 meters
 - ☐ 3. 21 meters
 - ☐ 4. 23 meters

Q.9 Two numbers, a and b, are in the ratio 3 : 4. If each number is increased by 4, then the ratio becomes 5 : 6. Find the original smallest number.

- Ans
- ☒ 1. 6
 - ☐ 2. 8
 - ☐ 3. 10
 - ☐ 4. 7

Q.10 Pipes P and Q can fill a tank in 10 hours and 12 hours, respectively. Pipe R can empty it in 15 hours. If all the three pipes are opened together, then the tank will be filled in:

- Ans
- ☒ 1. $8\frac{4}{7}$ hours
 - ☐ 2. $7\frac{4}{7}$ hours
 - ☐ 3. $6\frac{4}{7}$ hours
 - ☐ 4. $9\frac{4}{7}$ hours

Q.11 Two toys are sold at ₹1,755 each. One toy brings the dealer a gain of 17% and the other a loss of 35%. The gain or loss percent by selling both the toys is:

- Ans
- ☐ 1. $14\frac{2}{3}\%$ loss
 - ☐ 2. $12\frac{1}{4}\%$ gain
 - ☒ 3. $16\frac{3}{7}\%$ loss
 - ☐ 4. $18\frac{5}{9}\%$ gain

Q.12 The surface area of a sphere is 452.16 cm^2 . What is the radius of the sphere? (Use $\pi = 3.14$)

- Ans
- ☐ 1. 9 cm
 - ☐ 2. 8 cm
 - ☒ 3. 6 cm
 - ☐ 4. 7 cm

Q.13 Two trains of lengths 190 m and 160 m are running towards each other at the speeds of 18 km/hr and 45 km/hr, respectively. How long will they take to cross each other (in sec)?

- Ans
- ☐ 1. 16
 - ☒ 2. 20
 - ☐ 3. 22
 - ☐ 4. 18

Q.14 A man travels from A to B at 52 km/hr and returns at 48 km/hr. What is his average speed for the entire journey (in km/hr)?

- Ans
- ☐ 1. 49.25
 - ☐ 2. 42.25
 - ☐ 3. 42.52
 - ☒ 4. 49.92

Q.15 How much time will a 500 m long train, running at 50 km/h, take to cross another train 200 m long running at 60 km/h in the opposite direction? (Round your answer to the nearest integer value in seconds.)

- Ans
- ☒ 1. 23 sec
 - ☐ 2. 17 sec
 - ☐ 3. 13 sec
 - ☐ 4. 10 sec

Q.16 The mean proportional between two numbers is 12. If one number is 8, then find the other number.

- Ans
- ☒ 1. 18
 - ☐ 2. 14
 - ☐ 3. 20
 - ☐ 4. 16

Q.17 Four shopkeepers, A, B, C, and D, have books of stories and video games in the ratio mentioned below.

A	B	C	D
21:23	17:18	19:21	25:27

The shopkeeper who has the lowest ratio is:

- Ans
- ☒ 1. C
 - ☐ 2. D
 - ☐ 3. A
 - ☐ 4. B

Q.18 A and B together can complete a work in 30 days. B and C together can complete it in 15 days. A and C together can complete it in 10 days. In how many days can A, B and C together complete the work?

- Ans
- ☒ 1. 10 days
 - ☐ 2. 16 days
 - ☐ 3. 12 days
 - ☐ 4. 14 days

Q.19 The marked price of a shirt is ₹1,000. A shopkeeper offers a discount of 20%. What is the selling price of the shirt?

- Ans
- ☐ 1. ₹750
 - ☐ 2. ₹850
 - ☐ 3. ₹780
 - ☒ 4. ₹800

Q.15 In which year was Tamil declared a classical language of India?

- Ans**
- ☐ 1. 2000
 - ☐ 2. 2001
 - ☐ 3. 2005
 - ☒ 4. 2004

Q.16 Which Article of the Indian Constitution provides the Supreme Court with the power of advisory jurisdiction?

- Ans**
- ☒ 1. Article 143
 - ☐ 2. Article 136
 - ☐ 3. Article 124
 - ☐ 4. Article 141

Q.17 Which of the following food products is the best natural source of niacin (B3), vitamin D and vitamin A?

- Ans**
- ☐ 1. Carrots
 - ☐ 2. Whole wheat bread
 - ☐ 3. Almonds
 - ☒ 4. Salmon

Q.18 The Gateway of India in Mumbai is a significant symbol built in the early 20th century to mark the visit of British royalty. Which architectural style does it primarily reflect?

- Ans**
- ☐ 1. Art Deco
 - ☒ 2. Indo-Saracenic
 - ☐ 3. Gothic Revival
 - ☐ 4. Dravidian

Q.19 Which of the following language families does Santali, Khasi, and Mundari belong to?

- Ans**
- ☒ 1. Austro-Asiatic
 - ☐ 2. Dravidian
 - ☐ 3. Tibeto-Burmese
 - ☐ 4. Indo-European

Q.20 A motion for removal may be introduced in either House of Parliament and must be supported by at least 100 members of the Lok Sabha or 50 members of the Rajya Sabha before it is taken up. This removal procedure applies to which constitutional body of India?

- Ans**
- ☐ 1. Election Commission of India
 - ☐ 2. Comptroller and Auditor General of India
 - ☐ 3. Union Public Service Commission
 - ☒ 4. Supreme Court and High Courts Judges

Section : **Arithmetical and Numerical Ability**

Q.1 A student's marks were incorrectly entered as 51 instead of 69. Due to this, the average marks of the class got decreased by $\frac{9}{8}$. What is the number of students in the class?

Ans

- ☒ 1. 6
- ☒ 2. 16
- ☒ 3. 23
- ☒ 4. 18

Q.2 Simplify: $30 + \frac{42}{3} + 82 - 20$

Ans

- ☒ 1. 109
- ☒ 2. 106
- ☒ 3. 107
- ☒ 4. 108

Q.3 The LCM of $3^3 \times 7^2 \times 14$, $3^2 \times 14^2 \times 16$ and $7^3 \times 14^2 \times 16^2$ is:

Ans

- ☒ 1. $212 \times 33 \times 76$
- ☒ 2. $212 \times 33 \times 75$
- ☒ 3. $210 \times 33 \times 75$
- ☒ 4. $28 \times 33 \times 76$

Q.4 Riya's test scores in science are 82, 88, 98, and 94. What score must she get on her fifth test to have an average of exactly 92?

Ans

- ☒ 1. 97
- ☒ 2. 98
- ☒ 3. 99
- ☒ 4. 96

Q.5 Simplify: $120 \times (96 \div 6) \div 4 - \{5 \times 8 + 30 - (11 - 3) \div 4\}$

Ans

- ☒ 1. 310
- ☒ 2. 456
- ☒ 3. 424
- ☒ 4. 412

Q.6 Which of the following numbers is divisible by 9?

Ans

- ☒ 1. 747
- ☒ 2. 791
- ☒ 3. 542
- ☒ 4. 623

Q.7 The compound interest on ₹30,000 at 7% per annum for n years is ₹4,347 (interest compounded annually). Find the value of n.

Ans

- ☒ 1. 2
- ☒ 2. 3
- ☒ 3. 4
- ☒ 4. 1

Q.8 A person's monthly expenses are 22% of his salary. If his monthly income is ₹44,000, what are his monthly savings?

- Ans
- ☐ 1. ₹35,230
 - ☐ 2. ₹33,320
 - ☐ 3. ₹24,320
 - ☒ 4. ₹34,320

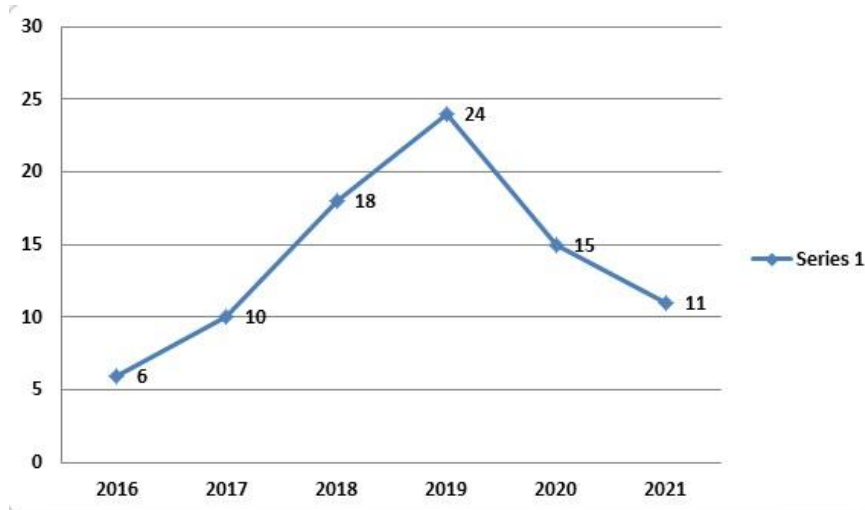
Q.9 The average weight of Ramesh, Suresh, Mahesh, and Naresh is 60 kg. If the weight of Ramesh is 56 kg, Suresh is 58 kg, and Mahesh is 64 kg, then what is the weight of Naresh?

- Ans
- ☐ 1. 58 kg
 - ☐ 2. 60 kg
 - ☒ 3. 62 kg
 - ☐ 4. 61 kg

Q.10 Three years ago, the population of a town was 1,20,000. The population increased by 15% in the first year and increased by 10% in the second year. However, it decreased by 8% due to an outbreak in the third year. What is the current population of the town?

- Ans
- ☐ 1. 1,39,565
 - ☒ 2. 1,39,656
 - ☐ 3. 1,40,000
 - ☐ 4. 1,36,944

Q.11 The line graph given below shows the income (in ₹ lakh) from 2016 to 2021 of a company manufacturing plastic items. Study the graph carefully and answer the question that follows.



Find the positive difference between the average annual income (in ₹ lakh) from 2016 to 2019 and the average annual income from 2018 to 2021.

- Ans
- ☐ 1. 3.9
 - ☐ 2. 4.3
 - ☐ 3. 3.2
 - ☒ 4. 2.5

Q.12 Shan has ₹1,716 with him. He divides this amount between his sons, Piyush and Manoj, and asks them to invest their respective shares at a compound interest rate of 8% per annum, compounded annually. It is observed that Piyush and Manoj receive the same amount after 13 years and 14 years, respectively. How much money (in ₹) did Shan give to Piyush?

Ans ☒ 1. 891

☐ 2. 925

☐ 3. 825

☐ 4. 741

Q.13 A number is first increased by 20% and then reduced by 15%. If the :
then what is the initial value of the number?

822

Ans ☒ 1. 2000

☐ 2. 1900

☐ 3. 2100

☐ 4. 1800

Q.14 Sachin's salary was first reduced by 30% and subsequently increased by 21%. By what percentage is his final salary lower than his initial salary?

Ans ☒ 1. 15.3%

☐ 2. 6.3%

☐ 3. 21%

☐ 4. 18%

Q.15 The table below shows the weekly sales (in ₹) of five stores (A, B, C , D and E).

Store	Weekly Sales (₹)
Store A	50,000
Store B	48,000
Store C	55,000
Store D	51,000
Store E	58,500

Which store recorded exactly 10% more sales than Store A?

Ans ☐ 1. Store E

☐ 2. Store D

☐ 3. Store B

☒ 4. Store C

Q.16 A baker buys a number of buns at 6 for ₹15 and an equal number at 9 for ₹15. He sells all the buns at 8 for ₹24. What is his profit or loss percentage?

Ans ☐ 1. 44% loss

☐ 2. 42% profit

☐ 3. 42% loss

☒ 4. 44% profit

Q.17 In what duration (in years) will ₹4,800 fetch a simple interest of ₹720 at 4% per annum rate of interest?

- Ans
- ☒ 1. 3.75
 - ☐ 2. 7.5
 - ☐ 3. 4.75
 - ☐ 4. 2.75

Q.18 The price of a product is increased by 28% and then decreased by 25%. What is the overall increase or decrease percentage?

- Ans
- ☐ 1. 2.8% decrease
 - ☐ 2. 4% increase
 - ☒ 3. 4% decrease
 - ☐ 4. 2.8% increase

Q.19 A vendor sells 25 chocolates for one rupee and makes a profit of 60%. How many chocolates did he originally purchase for one rupee?

- Ans
- ☐ 1. 42
 - ☐ 2. 46
 - ☐ 3. 44
 - ☒ 4. 40

Q.20 The average temperature for 5 days was 36°C. If the temperature on the 6th day drops to 2°C below the 5-day average, what is the average temperature for the entire time period? [Give your answer in °C, correct to two places after decimal.]

- Ans
- ☐ 1. 36.33°C
 - ☐ 2. 34.67°C
 - ☐ 3. 35.33°C
 - ☒ 4. 35.67°C

Section : Arithmetical and Numerical Ability1

Q.1 The ratio of the radius to the height of a cone is 3:4. If the total surface area of the cone is 1056 cm^2 , what is the radius (in cm)?

(Take $\pi = \frac{22}{7}$)

- Ans
- ☐ 1. $\sqrt{17} \text{ cm}$
 - ☒ 2. $3\sqrt{14} \text{ cm}$
 - ☐ 3. 12 cm
 - ☐ 4. 15.5 cm

Q.2 A can finish a job in 12 days, and B can finish it in 6 days. They work together for the first 3 days, then B leaves, and A continues alone until the job is finished. How many total days will it take to complete the job?

- Ans
- ☒ 1. 6 days
 - ☐ 2. 8 days
 - ☐ 3. 4 days
 - ☐ 4. 10 days

Q.3 A cylinder having a radius of 5 cm and a height of 10 cm is melted to form spheres, each having a radius of 2.5 cm. How many such spheres can be formed?

- Ans
- ☐ 1. 18
 - ☐ 2. 8
 - ☐ 3. 16
 - ☒ 4. 12

Q.4 The distance between two stations M and N is 600 km. A train starts from station M towards N at 5:00 A.M. at a speed of 60 km/h. Another train starts one hour later, at 6:00 A.M., from station N towards M at a speed of 90 km/h. At what distance from M will both trains meet?

- Ans
- ☒ 1. 276 km
 - ☐ 2. 274 km
 - ☐ 3. 273 km
 - ☐ 4. 272 km

Q.5 Equal distances are covered at speeds of u km/h, v km/h, and w km/h. The average speed (in km/h) is:

- Ans
- ☐ 1. $\frac{u+v+w}{3}$
 - ☐ 2. $\frac{\sqrt{uvw}}{3}$
 - ☒ 3. $\frac{1}{\frac{1}{u} + \frac{1}{v} + \frac{1}{w}}$
 - ☐ 4. $\frac{uv + vw + uw}{u + v + w}$

Q.6 A can complete a piece of work in 6 days, B in 8 days, and C in 12 days. C joins them 2 days after B. How many days in total will it take to complete the work?

- Ans
- ☐ 1. $4\frac{3}{5}$ days
 - ☐ 2. $4\frac{1}{5}$ days
 - ☐ 3. $4\frac{1}{9}$ days
 - ☒ 4. $4\frac{2}{9}$ days

Q.7 A cuboid has length, breadth and height in the ratio 3:2:1. If its volume is 384 cubic cm, what is its length?

- Ans
- ☐ 1. 10 cm
 - ☐ 2. 8 cm
 - ☒ 3. 12 cm
 - ☐ 4. 6 cm

Q.8 An article was sold at a profit of 20%. If the cost price was increased by ₹500 and the selling price remained the same, the profit percentage would have decreased to 10%. The original cost price (in ₹) is: 6486

- Ans
- ☐ 1. 6,000
 - ☐ 2. 7,500
 - ☐ 3. 4,000
 - ☒ 4. 5,500

Q.9 The breadth of a rectangular playground is 60 m, and its diagonal is 100 m. Find the cost of fencing it at ₹75 per meter.

- Ans**
- ☐ 1. ₹22,000
 - ☐ 2. ₹21,500
 - ☐ 3. ₹21,800
 - ☒ 4. ₹21,000

Q.10 If 15, 45, 24 and x are in proportion, find the value of x .

- Ans**
- ☐ 1. 68
 - ☐ 2. 76
 - ☐ 3. 74
 - ☒ 4. 72

Q.11 After allowing a discount of 16% on the marked price of an article, it is sold for ₹924. Find the marked price of the article.

- Ans**
- ☐ 1. ₹1,080
 - ☒ 2. ₹1,100
 - ☐ 3. ₹1,200
 - ☐ 4. ₹1,150

Q.12 A sold a music system to B at 25% gain and B sold it to C at 30% gain. If C paid ₹17,500 for the music system, then what amount (in ₹) did A pay for the same? (Correct to the nearest rupee)

- Ans**
- ☐ 1. 19,076
 - ☐ 2. 16,079
 - ☒ 3. 10,769
 - ☐ 4. 17,069

Q.13 Pipe A can fill a tank in 10 hours. After 4 hours, pipe B is also opened. The tank gets completely filled in a total of 6 hours. In how much time can pipe B alone fill the tank (in hours)?

- Ans**
- ☒ 1. 5
 - ☐ 2. 4
 - ☐ 3. 7
 - ☐ 4. 6

Q.14 The ratio of milk to water in a mixture is 3 : 2. If 10 litres of water is added to the mixture, the ratio becomes 3 : 4. What was the original quantity of the mixture?

- Ans**
- ☐ 1. 35 L
 - ☒ 2. 25 L
 - ☐ 3. 20 L
 - ☐ 4. 30 L

Q.15 Find the fourth proportional to 6, 9, and 12.

- Ans**
- ☐ 1. 17
 - ☐ 2. 15
 - ☒ 3. 18
 - ☐ 4. 16

Q.17 What is another name for the Northern Plains?

- Ans
- ✓ 1. Indo-Gangetic Plains
 - ✗ 2. Thar Desert
 - ✗ 3. Peninsular Plateau
 - ✗ 4. Deccan Plateau

Q.18 The Pavagada Solar Park is located in which state?

- Ans
- ✗ 1. Andhra Pradesh
 - ✗ 2. Maharashtra
 - ✓ 3. Karnataka
 - ✗ 4. Telangana

Q.19 The Purvanchal Hills, a part of the Himalayas, are located mainly in which of the following states?

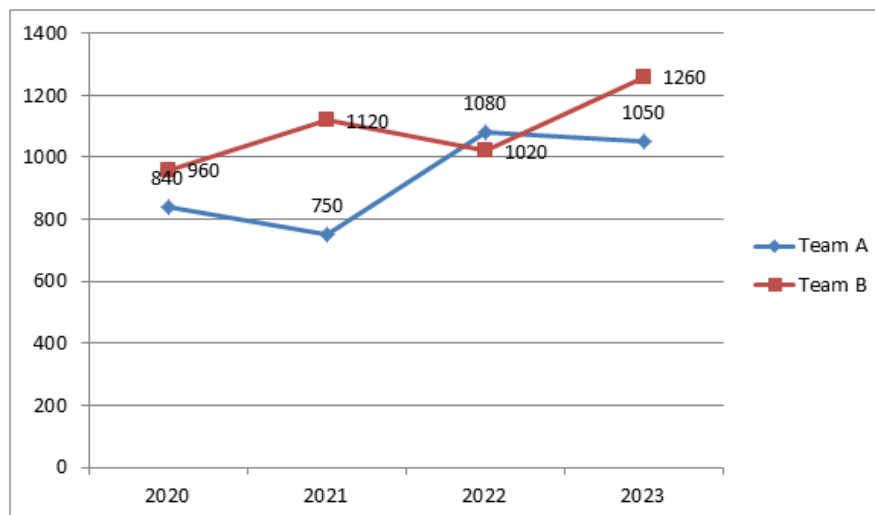
- Ans
- ✓ 1. Arunachal Pradesh
 - ✗ 2. Uttarakhand
 - ✗ 3. Jammu & Kashmir
 - ✗ 4. Himachal Pradesh

Q.20 The right to freedom of speech and expression is under which Article of the Indian Constitution?

- Ans
- ✗ 1. Article 14
 - ✓ 2. Article 19
 - ✗ 3. Article 17
 - ✗ 4. Article 21

Section : Arithmetical and Numerical Ability

Q.1 The following line graph shows the fair play points of two different IPL teams over four years. Study the graph carefully and answer the question that follows:



Find the average fair play points of team A from 2020 to 2023.

- Ans
- ✓ 1. 930
 - ✗ 2. 925
 - ✗ 3. 927
 - ✗ 4. 932

Q.2 A shopkeeper wants to earn a profit of 25% on an item after giving a discount of 6.25%. By what percentage should he mark the goods above the cost price? (Answer correct to two decimal places)

- Ans
- ☒ 1. 34.33%
 - ☒ 2. 33.44%
 - ☒ 3. 33.33%
 - ☒ 4. 33.35%

Q.3 A student's marks were incorrectly entered as 26 instead of 51. Due to this, the average marks of the class got decreased by 1. What is the number of students in the class?

- Ans
- ☒ 1. 5
 - ☒ 2. 20
 - ☒ 3. 15
 - ☒ 4. 14

Q.4 Find the value of $2\frac{5}{6} - 4\frac{3}{7} + 2\frac{5}{9} - 1\frac{3}{7}$.

- Ans
- ☒ 1. $-\frac{59}{126}$
 - ☒ 2. $\frac{59}{126}$
 - ☒ 3. $-\frac{36}{71}$
 - ☒ 4. $\frac{36}{71}$

Q.5 A student's marks were incorrectly entered as 29 instead of 50. Due to this, the average marks of the class got decreased by $\frac{7}{3}$. What is the number of students in the class?

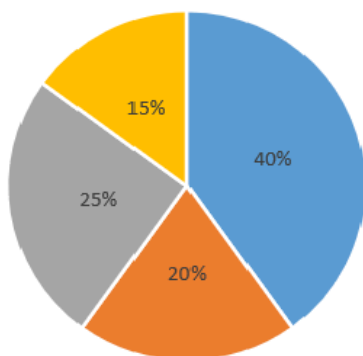
- Ans
- ☒ 1. 18
 - ☒ 2. 14
 - ☒ 3. 9
 - ☒ 4. 10

Q.6 A vendor sold 28 chocolates for a rupee, thereby gaining 25%. How many did he buy for a rupee?

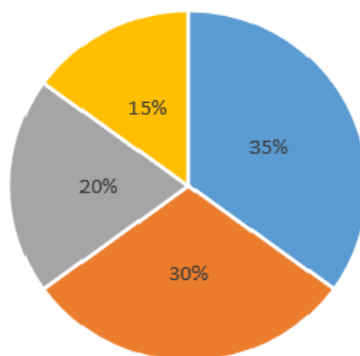
- Ans
- ☒ 1. 41
 - ☒ 2. 39
 - ☒ 3. 35
 - ☒ 4. 37

Q.7 Two pie charts show the percentage-wise distribution of total sales of four products in the years 2023 and 2024. The total sales in 2023 were ₹8 lakh and in 2024 were ₹10 lakh. By how much (in ₹) did the sales of laptops increase from 2023 to 2024?

2023 Sales Distribution



2024 Sales Distribution



■ Mobiles ■ Laptops ■ Tablets ■ Accessories

- Ans**
- ☐ 1. ₹0.5 lakh
 - ☐ 2. ₹1.5 lakh
 - ☐ 3. ₹1 lakh
 - ☒ 4. ₹1.4 lakh

Q.8 In what duration (in years) will ₹9,600 fetch a simple interest of ₹360 at 3% per annum rate of interest?

- Ans**
- ☐ 1. 2.25
 - ☒ 2. 1.25
 - ☐ 3. 2.5
 - ☐ 4. 0.25

Q.9 Manoj has ₹1,722 with him. He divided it between his sons Anand and Anil and asked them to invest it at 5% rate of interest compounded annually. It was seen that Anand and Anil got the same amount after 14 and 15 years, respectively. How much (in ₹) did Manoj give to Anand?

- Ans**
- ☐ 1. 840
 - ☒ 2. 882
 - ☐ 3. 732
 - ☐ 4. 940

Q.10 A shop's revenue increased from ₹1,80,000 to ₹2,07,000 in a month. What is the percentage increase?

- Ans**
- ☐ 1. 12%
 - ☐ 2. 20%
 - ☐ 3. 18%
 - ☒ 4. 15%

Q.11 Three motorbike riders are racing around a circular track. They take 48 seconds, 36 seconds, and 54 seconds respectively to complete one lap. If they all start together, how many additional times will they meet at the starting point within 1 hour and 12 minutes?

- Ans**
- ☒ 1. 9
 - ☐ 2. 10
 - ☐ 3. 8
 - ☐ 4. 12

Q.12 The cost of gold increased by $9\frac{11}{21}\%$ from January 2024 to March 2024. If the cost of gold per gram in March 2024 was ₹6,900, then what was its cost (in ₹ per gram) in January 2024?

- Ans
- ☐ 1. 6,450
 - ☐ 2. 6,600
 - ☒ 3. 6,300
 - ☐ 4. 6,500

Q.13 Naresh deposited a sum of ₹79,950 at 20% rate of interest per annum, compounded annually. The total amount received by Naresh after 2 years is:

- Ans
- ☐ 1. ₹1,15,560
 - ☐ 2. ₹1,15,076
 - ☒ 3. ₹1,15,128
 - ☐ 4. ₹1,14,855

Q.14 The average of 5, 6, 8, 9, 12 is:

- Ans
- ☒ 1. 8
 - ☐ 2. 7
 - ☐ 3. 10
 - ☐ 4. 9

Q.15 What is the compound interest on ₹8,000 at 10% p.a. compounded annually for 2 years?

- Ans
- ☐ 1. ₹1,570
 - ☐ 2. ₹1,500
 - ☐ 3. ₹1,600
 - ☒ 4. ₹1,680

Q.16 Find the value of $\sqrt{\sqrt{648} \times \sqrt{98} + (\sqrt{37})^2}$.

- Ans
- ☐ 1. 12
 - ☐ 2. 15
 - ☒ 3. 17
 - ☐ 4. 19

Q.17 Sunita spent 85% of her salary and saved ₹28,050. What is her total salary (in ₹)?

- Ans
- ☐ 1. 1,85,000
 - ☐ 2. 1,88,000
 - ☒ 3. 1,87,000
 - ☐ 4. 1,86,000

Q.18 If the number of quantities in group P is 20, and that in group Q is 16, and their individual average is 48 and 32, respectively, then the combined average (rounded off to two decimal places) of the two groups is:

- Ans
- ☒ 1. 40.89
 - ☐ 2. 38.88
 - ☐ 3. 48.32
 - ☐ 4. 38.22

Q.19 The LCM and HCF of two numbers are 225 and 15, respectively and their sum is 120. Find the numbers.

- Ans**
- ☐ 1. 55, 65
 - ☒ 2. 45, 75
 - ☐ 3. 35, 85
 - ☐ 4. 25, 95

Q.20 A shopkeeper increases the price of a painting by 25% and then decreases it by 15%. Find the overall percentage increase in the price of the painting.

- Ans**
- ☐ 1. 8.25%
 - ☐ 2. 5.25%
 - ☒ 3. 6.25%
 - ☐ 4. 7.25%

Section : **Arithmetical and Numerical Ability1**

Q.1 The fourth proportional to 15, 18 and 30 is how much more than 18?

- Ans**
- ☐ 1. 12
 - ☐ 2. 21
 - ☐ 3. 15
 - ☒ 4. 18

Q.2 A laptop is sold for ₹28,800 after giving a 20% discount. What was its marked price?

- Ans**
- ☐ 1. ₹35,000
 - ☐ 2. ₹37,000
 - ☐ 3. ₹34,000
 - ☒ 4. ₹36,000

Q.3 What single discount is equivalent to successive discounts of 17% and 13%?

- Ans**
- ☐ 1. 26.92%
 - ☒ 2. 27.79%
 - ☐ 3. 27.25%
 - ☐ 4. 26.25%

Q.4 Which number should be added to each of 10, 18, 13 and 23 so that the resultant numbers will be in proportion?

- Ans**
- ☐ 1. 6
 - ☐ 2. 4
 - ☐ 3. 8
 - ☒ 4. 2

Q.5 A person walks from P to Q in 2 parts: 40 km at 20 km/h and remaining 60 km at 30 km/h. What is the average speed for the entire trip?

- Ans**
- ☐ 1. 30 km/h
 - ☐ 2. 40 km/h
 - ☒ 3. 25 km/h
 - ☐ 4. 35 km/h

Q.6 Pipe A can fill a tank in 12 hours. After 6 hours, pipe B is also opened. The tank gets completely filled in a total of 8 hours. In how much time can pipe B alone fill the tank (in hours)?

- Ans
- ☐ 1. 14
 - ☒ 2. 6
 - ☐ 3. 8
 - ☐ 4. 12

Q.7 The sides of a triangle are in the ratio 5:5:6. If the perimeter of the triangle is 320 cm, find the length of the perpendicular drawn on one of the equal sides of the triangle.

- Ans
- ☐ 1. 72 cm
 - ☐ 2. 89 cm
 - ☐ 3. 83 cm
 - ☒ 4. 96 cm

Q.8 A water tank has three inlet pipes P, Q, and R, and one outlet pipe S. respectively to fill or empty the tank completely. Initially, the tank is empty when the tank is $\frac{3}{4}$ full, pipe P is closed. How much time will it take to empty the tank?

- Ans
- ☐ 1. $4\frac{1}{4}$ hours
 - ☐ 2. 4 hours
 - ☐ 3. $3\frac{1}{2}$ hours
 - ☒ 4. $3\frac{3}{4}$ hours

Q.9 If the mean proportional between x and y is 12, and the ratio of x to y is 1:4, what is the value of x?

- Ans
- ☐ 1. 12
 - ☐ 2. 9
 - ☐ 3. 3
 - ☒ 4. 6

Q.10 A can do a job in 48 days. B is twice as fast as A. In how many days will they complete the work together?

- Ans
- ☐ 1. 8
 - ☒ 2. 16
 - ☐ 3. 6
 - ☐ 4. 12

Q.11 Aman sold his house to Bharti at a loss of 10%. Bharti renovated it for ₹3,00,000 and sold it to Kavita at a profit of 20% on her total investment. If the final selling price was ₹14,40,000, what was the original cost price for Aman?

- Ans
- ☐ 1. ₹ 12,00,000
 - ☐ 2. ₹ 11,00,000
 - ☐ 3. ₹ 10,00,500
 - ☒ 4. ₹ 10,00,000

Q.12 A rectangle has sides in the ratio 3:5. If the mean proportional between the sides is 15 cm, what is the area (in cm^2) of the rectangle?

- Ans ☒ 1. 225
☐ 2. 180
☐ 3. 200
☐ 4. 240

Q.13 A right circular cone of base radius 6 cm and height $\frac{256}{9}$ cm is recast

- Ans ☒ 1. 16
☐ 2. 14
☐ 3. 20
☐ 4. 18

Q.14 Abhinav bought two cycles for a total sum of ₹8,200. He sold one cycle at a loss of 30% and the other at a gain of 30%. If the selling prices of both cycles are the same, find the selling price of each cycle.

- Ans ☐ 1. ₹4,026
☒ 2. ₹3,731
☐ 3. ₹3,854
☐ 4. ₹3,723

Q.15 A alone can complete a work in 10 days, and B alone can complete the same work in 15 days. If both A and B work together, in how many days will they complete the work?

- Ans ☐ 1. 5 days
☐ 2. 8 days
☒ 3. 6 days
☐ 4. 7 days

Q.16 A cyclist travels a certain distance in two equal halves. He covers the first half at a speed of 20 km/hr and the second half at a speed of 30 km/hr. What is his average speed for the entire journey (in km/hr)?

- Ans ☐ 1. 40
☐ 2. 25
☒ 3. 24
☐ 4. 50

Q.17 A plot of land is in the shape of a trapezium. The lengths of the parallel sides are 36 m and 24 m, and the distance between them is 10 m. What is the area of the plot?

- Ans ☐ 1. 320 m^2
☐ 2. 280 m^2
☐ 3. 350 m^2
☒ 4. 300 m^2

Q.18 A car travels from City A to City B at 72 km/hr and returns from City B to City A at 48 km/hr. If the total travel time is 5 hours, find the distance between the two cities.

- Ans ☒ 1. 144 km
☐ 2. 150 km
☐ 3. 154 km
☐ 4. 160 km

Q.16 A stepwell in Gujarat is renowned for its seven levels of stairs and intricate carvings, reflecting the water architecture of the region. Which heritage site is this?

- Ans**
- ☐ 1. Adalaj Stepwell
 - ☐ 2. Agrasen ki Baoli
 - ☒ 3. Rani ki Vav
 - ☐ 4. Baoli Ghaus Ali Shah

Q.17 Recommended Dietary Allowances are meant to:

- Ans**
- ☒ 1. Cover the needs of almost all healthy individuals
 - ☐ 2. Apply only to people with medical conditions
 - ☐ 3. Reduce food intake
 - ☐ 4. Increase consumption of processed foods

Q.18 Which of the following farming systems is scientifically managed and highly capital-intensive?

- Ans**
- ☐ 1. Primitive subsistence
 - ☐ 2. Shifting cultivation
 - ☒ 3. Plantation farming
 - ☐ 4. Subsistence dry farming

Q.19 The thin, delicate membrane that surrounds a skeletal muscle cell is termed as:

- Ans**
- ☐ 1. Sarcomere
 - ☐ 2. Capsule
 - ☐ 3. Myofibril
 - ☒ 4. Sarcolemma

Q.20 The Kaveri River basin lies majorly within which of the following states?

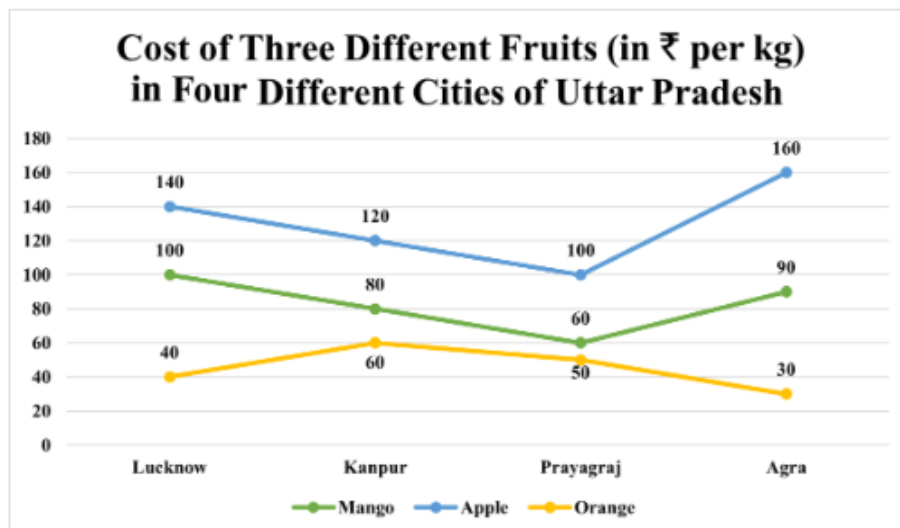
- Ans**
- ☐ 1. Madhya Pradesh and Odisha
 - ☐ 2. Andhra Pradesh and Kerala
 - ☐ 3. Maharashtra and Telangana
 - ☒ 4. Tamil Nadu and Karnataka

Section : **Arithmetical and Numerical Ability**

Q.1 Sachin deposited a sum of ₹23,175 at a rate of interest of 20% per annum, compounded annually. What will be the total amount received by Sachin after 2 years?

- Ans**
- ☐ 1. ₹33,105
 - ☐ 2. ₹33,471
 - ☐ 3. ₹33,523
 - ☒ 4. ₹33,372

Q.2 Study the following graph carefully to answer the question that follows.



In which city is the difference between the cost of 1 kg of apple and cost of 1 kg of orange second highest?

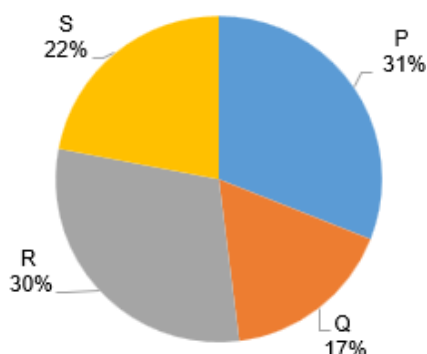
- Ans
- ☒ 1. Agra
 - ☒ 2. Kanpur
 - ☒ 3. Lucknow
 - ☒ 4. Prayagraj

Q.3 A vendor sells 26 chocolates for one rupee and makes a profit of 100%. How many chocolates did he originally purchase for one rupee?

- Ans
- ☒ 1. 52
 - ☒ 2. 58
 - ☒ 3. 56
 - ☒ 4. 54

Q.4 The following pie chart shows the percentage of tickets that were booked for four buses P, Q, R, S on Wednesday. The total number of tickets booked for these four buses together was 200.

Percentage of tickets booked



Find the number of tickets booked for the buses P and S together on Wednesday.

- Ans
- ☒ 1. 106
 - ☒ 2. 78
 - ☒ 3. 150
 - ☒ 4. 55

Q.5 A store sold 500 units of a product in January. In February, the sales increased by 20%. How many units were sold in February?¹³⁷

- Ans
- ☐ 1. 620
 - ☐ 2. 510
 - ☐ 3. 550
 - ☒ 4. 600

Q.6 A man spends 40% of his monthly salary on food, and one-third of the remaining amount on transport. He saves ₹5,000 per month, which is equal to half of the balance left after spending on both food and transport. What is his monthly salary?

- Ans
- ☐ 1. ₹23,500
 - ☒ 2. ₹25,000
 - ☐ 3. ₹24,530
 - ☐ 4. ₹24,500

Q.7 In what duration (in years) will ₹4800 fetch a simple interest of ₹960 at 4% per annum rate of interest?

- Ans
- ☐ 1. 4
 - ☒ 2. 5
 - ☐ 3. 6
 - ☐ 4. 10

Q.8 A student scored 80 marks out of 100 in the first examination and 90 marks out of 120 in the second examination. What is the difference between the percentage marks between the two examinations?

- Ans
- ☐ 1. 8%
 - ☐ 2. 4%
 - ☒ 3. 5%
 - ☐ 4. 6%

Q.9 Which of the following numbers is divisible by 8?

- Ans
- ☐ 1. 4567
 - ☐ 2. 2345
 - ☐ 3. 1234
 - ☒ 4. 3456

Q.10 Which of the following numbers is divisible by 11?

- Ans
- ☐ 1. 214355
 - ☒ 2. 143627
 - ☐ 3. 234651
 - ☐ 4. 146732

Q.11 Find the value of $\frac{\{(5)^2 - (7)^0 + (2)^3 - (3)^3\}^2}{\{(3)^0 + (2)^2 - (5)^0 + (7)^0\}}$.

- Ans
- ☐ 1. 3
 - ☐ 2. 8
 - ☐ 3. 7
 - ☒ 4. 5

Q.12 A student's marks were incorrectly entered as 27 instead of 67. Due to

What is the number of students in the class?

- Ans
- ☐ 1. 23
 - ☐ 2. 37
 - ☒ 3. 32
 - ☐ 4. 24

Q.13 A grocer mixed two types of rice in the ratio 3 : 2, respectively. The first quality of rice costs ₹50 per kg and second quality of rice costs ₹70 per kg. The cost per kg of mixture is:

- Ans
- ☐ 1. ₹42
 - ☒ 2. ₹58
 - ☐ 3. ₹63
 - ☐ 4. ₹49

Q.14 The cost price of 10 pencils is equal to the selling price of 8 pencils. The percentage of profit is ____%.

- Ans
- ☐ 1. 27.5
 - ☐ 2. 25
 - ☒ 3. 20
 - ☐ 4. 22.5

Q.15 The average weight of M, N and O is 52 kg. If the average weight of M and N is 44 kg and that of N and O is 48 kg, then find the weight of N.

- Ans
- ☐ 1. 29 kg
 - ☒ 2. 28 kg
 - ☐ 3. 27 kg
 - ☐ 4. 26 kg

Q.16 Amit bought 12 oranges for ₹144 and Rohan bought 15 oranges for ₹165. What is the difference between the amount paid by them for one orange?

- Ans
- ☐ 1. ₹3
 - ☐ 2. ₹1.5
 - ☐ 3. ₹2
 - ☒ 4. ₹1

Q.17 A sum of ₹15,000 is invested at 12% per annum compound interest for 2 years, interest being compounded annually. What will be the interest earned? (Use $1.12^2 = 1.2544$)

- Ans
- ☐ 1. ₹3,828
 - ☐ 2. ₹3,836
 - ☐ 3. ₹3,844
 - ☒ 4. ₹3,816

Q.18 Ishan has ₹1,716 with him. He divided it amongst his sons Krish and Veer and asked them to invest it at 8% rate of compound interest per annum, compounded annually. It was seen that Krish and Veer got same amount after 18 and 19 years, respectively. How much (in ₹) did Ishan give to Krish?

- Ans
- ☒ 1. 891
 - ☐ 2. 925
 - ☐ 3. 825
 - ☐ 4. 741

Q.19 The average of three integers is 44. The second number is two times the first number and three times the third number. Find the largest number.

- Ans
- ☐ 1. 66
 - ☒ 2. 72
 - ☐ 3. 68
 - ☐ 4. 70

Q.20 The price of an article was ₹3,600 in 2024. In the year 2025, the article's price becomes ₹3,960. Find the percentage increase in the price of the article.

- Ans
- ☒ 1. 10%
 - ☐ 2. 5%
 - ☐ 3. 20%
 - ☐ 4. 15%

Section : Arithmetical and Numerical Ability1

Q.1 Manvendra sells two watches for ₹3,600 each. He earns 15% profit on one and incurs a loss of 15% on the other. Find his profit or loss percentage in the whole transaction.

- Ans
- ☐ 1. 2.25% profit
 - ☐ 2. 5.35% profit
 - ☒ 3. 2.25% loss
 - ☐ 4. 5.35% loss

Q.2 Two pipes A and B can fill a tank in 25 minutes and 30 minutes respectively and another pipe C can empty 4 gallons per minute. All the three pipes working together can fill the tank in 20 minutes. What is the capacity of the tank?

- Ans
- ☒ 1. $\frac{1200}{7}$ gallons
 - ☐ 2. $\frac{1500}{7}$ gallons
 - ☐ 3. $\frac{1300}{7}$ gallons
 - ☐ 4. $\frac{1600}{7}$ gallons

Q.3 A can complete a job in 12 days, and B can complete the same job in how many more days will the remaining work be completed?

- Ans
- ☐ 1. $3\frac{2}{3}$ days
 - ☒ 2. $3\frac{1}{3}$ days
 - ☐ 3. $3\frac{1}{2}$ days
 - ☐ 4. $3\frac{1}{4}$ days

Q.4 The ratio of the present ages of Sudipto and his father is 3 : 11. The father's age at the time of Sudipto's birth was 32 years. Find the father's present age.

- Ans**
- ☐ 1. 40 years
 - ☐ 2. 42 years
 - ☒ 3. 44 years
 - ☐ 4. 45 years

Q.5 After allowing a discount of 8% on the marked price of an article, it is sold for ₹920. Find its marked price (in ₹).

- Ans**
- ☒ 1. 1,000
 - ☐ 2. 975
 - ☐ 3. 950
 - ☐ 4. 1,100

Q.6 Ravi travels to his friend's house at 15 km/hr and returns using the same route at 30 km/hr. How many hours will Ravi take to cover a distance of 120 km at the average speed of his trip to his friend's house and back?

- Ans**
- ☐ 1. 8
 - ☐ 2. 2
 - ☒ 3. 6
 - ☐ 4. 4

Q.7 Three partners A, B and C shared the profit in a business in the ratio 5 : 7 : 8. They had partnered for 14 months, 8 months and 7 months, respectively. If the total investment was ₹ 9,31,000, then A's investment (in ₹) was:

- Ans**
- ☒ 1. 1,40,000
 - ☐ 2. 1,40,400
 - ☐ 3. 1,45,000
 - ☐ 4. 1,40,040

Q.8 A trapezium has parallel sides of lengths 25 cm and 35 cm, and the distance between them is equal to the average of their lengths. What is the area of the trapezium?

- Ans**
- ☐ 1. 450 cm²
 - ☐ 2. 750 cm²
 - ☐ 3. 1200 cm²
 - ☒ 4. 900 cm²

Q.9 A can complete a task in x days, and B in 30 days. If they work together, they will complete the entire task in 12 days. What is the value of x?

- Ans**
- ☐ 1. 30
 - ☒ 2. 20
 - ☐ 3. 25
 - ☐ 4. 15

Q.10 Two trains are moving in opposite directions at speeds of 30 km/h and 20 km/h. The distance between them is 1000 km. Find the time taken for the trains to meet.

- Ans**
- ☒ 1. 20 hours
 - ☐ 2. 22 hours
 - ☐ 3. 23 hours
 - ☐ 4. 21 hours

Q.11 Arjun covers a distance of 480 km at a speed of 60 km/hour, 540 km distance at a speed of M km/hour and 280 km at a speed of 70 km/hour by a car. If his average speed for the whole journey is 65 km/hour, then find the value of M.

- Ans
- ☐ 1. 64.6
 - ☒ 2. 67.5
 - ☐ 3. 69.3
 - ☐ 4. 68.8

Q.12 A shopkeeper marks an item at 50% above its cost price. He offers a discount of 20% on the marked price and still earns a profit of ₹480. Find the cost price of the item.

- Ans
- ☐ 1. ₹2,300
 - ☒ 2. ₹2,400
 - ☐ 3. ₹2,250
 - ☐ 4. ₹2,222

Q.13 Find the volume of a cuboid 17.7 m long, 15 m broad and 6.5 m high.

- Ans
- ☐ 1. 1745.75 m³
 - ☐ 2. 1715.15 m³
 - ☐ 3. 1735.45 m³
 - ☒ 4. 1725.75 m³

Q.14 If the length, breadth and height of a cuboid are 2 cm, 5 cm and 14 cm, respectively, the length (in cm) of the diagonal of the cuboid is:

- Ans
- ☒ 1. 15
 - ☐ 2. 17
 - ☐ 3. 14
 - ☐ 4. 16

Q.15 A factory has 12 machines, each producing 30 units/hour. A total of 2880 units had to be produced. After 3 hours, 4 machines break down. How much time will be needed by the still functioning machines to complete the remaining work?

- Ans
- ☐ 1. $7\frac{2}{3}$ hours
 - ☐ 2. $6\frac{2}{3}$ hours
 - ☐ 3. $6\frac{1}{2}$ hours
 - ☒ 4. $7\frac{1}{2}$ hours

Q.16 A trader offers 2 items free with each item purchased at the marked price. Despite this offer, he makes a profit of 30%. Find the percentage markup on the cost price at which the trader has set the marked price.

- Ans
- ☐ 1. 280%
 - ☐ 2. 300%
 - ☒ 3. 290%
 - ☐ 4. 250%

Q.17 Excluding stoppages, the speed of a bus is 54 km/hr and including stoppages, it is 45 km/hr. For how many minutes, does the bus stop per hour?

- Ans
- ☐ 1. 8
 - ☒ 2. 10
 - ☐ 3. 5
 - ☐ 4. 6

Q.16 Insulin is an example of ____.

- Ans**
- ☐ 1. Monosaccharide
 - ☒ 2. Globular protein
 - ☐ 3. Polysaccharide
 - ☐ 4. Fibrous protein

Q.17 Under which Article of the Constitution of India can High Court judges be appointed as ad hoc judges of the Supreme Court?

- Ans**
- ☐ 1. Article 126 of the Constitution of India
 - ☐ 2. Article 125 of the Constitution of India
 - ☐ 3. Article 128 of the Constitution of India
 - ☒ 4. Article 127 of the Constitution of India

Q.18 'Prohibition of discrimination on grounds of religion, race, caste, sex or place of birth' is placed under which of the following articles of the Indian Constitution?

- Ans**
- ☐ 1. Article 13
 - ☐ 2. Article 12
 - ☒ 3. Article 15
 - ☐ 4. Article 14

Q.19 Which of the following Sikh festivals commemorates the martyrdom of Guru Arjan Dev?

- Ans**
- ☐ 1. Bandi Chhor Divas
 - ☐ 2. Vaisakhi
 - ☐ 3. Hola Mohalla
 - ☒ 4. Shaheedi Diwas

Q.20 The constitutional provision stating that there shall be a Parliament for the Union consisting of the President and two Houses, namely the Council of States and the House of the People, is contained in which Article of the Indian Constitution?

- Ans**
- ☐ 1. Article 81
 - ☒ 2. Article 79
 - ☐ 3. Article 74
 - ☐ 4. Article 80

Section : **Arithmetical and Numerical Ability**

Q.1 A vendor sells 26 chocolates for one rupee and makes a profit of 50%. How many chocolates did he originally purchase for one rupee?

- Ans**
- ☒ 1. 39
 - ☐ 2. 43
 - ☐ 3. 41
 - ☐ 4. 45

Q.2 If the average weight of 15 boys is 30 kg that of 5 boys is 20 kg and that of the other 3 boys is 10 kg, then find the average weight of all boys. (Round off your answer to two decimal places.)

- Ans**
- ☒ 1. 25.22 kg
 - ☐ 2. 27.21 kg
 - ☐ 3. 22.21 kg
 - ☐ 4. 24.22 kg

Q.3 If ₹6,000 becomes ₹7,260 in 1 year at compound interest compounded half-yearly, then what is the rate of interest per annum?

- Ans
- ☐ 1. 15%
 - ☒ 2. 20%
 - ☐ 3. 25%
 - ☐ 4. 10%

Q.4 A mixture of alcohol and water contains these in the ratio 7 : 5. When 7.5 litres of water is added to it, the ratio of alcohol and water in the new mixture becomes 7 : 8. The total quantity of water in the new mixture is:

- Ans
- ☐ 1. 23 litres
 - ☐ 2. 24 litres
 - ☐ 3. 27 litres
 - ☒ 4. 20 litres

Q.5 If a watch is sold at ₹160, there is a loss of 4%. For a profit of 2%, the watch is to be sold at ____.

- Ans
- ☐ 1. ₹200
 - ☐ 2. ₹190
 - ☒ 3. ₹170
 - ☐ 4. ₹180

Q.6 The HCF of two numbers is 12, and their LCM is 180. If one number is 36, find the other.

- Ans
- ☐ 1. 30
 - ☐ 2. 65
 - ☐ 3. 54
 - ☒ 4. 60

Q.7 If 15 workers can complete a task in 20 days, in how many days will 25 workers complete the same task, given that each of them works at only 75% of the efficiency of the original workers?

- Ans
- ☐ 1. 8
 - ☐ 2. 12
 - ☒ 3. 16
 - ☐ 4. 20

Q.8 In what duration (in years) will ₹4800 fetch a simple interest of ₹840 at 5% per annum rate of interest?

- Ans
- ☐ 1. 7
 - ☒ 2. 3.5
 - ☐ 3. 4.5
 - ☐ 4. 2.5

Q.9 Navjot deposited a sum of ₹56250 at 20% rate of interest per annum, compounded annually. The total amount received by Navjot after 4 years is:

- Ans
- ☐ 1. ₹116628
 - ☒ 2. ₹116640
 - ☐ 3. ₹116998
 - ☐ 4. ₹116182

Q.10 The average of four numbers is 100. If the first number is 35, the second number is 45 and the third number is twice the second number, find the fourth number.

- Ans**
- ☒ 1. 220
 - ☒ 2. 230
 - ☒ 3. 240
 - ☒ 4. 210

Q.11 Atul's salary was first reduced by 36% and subsequently increased by 50%. By what percentage is his final salary lower than his initial salary?

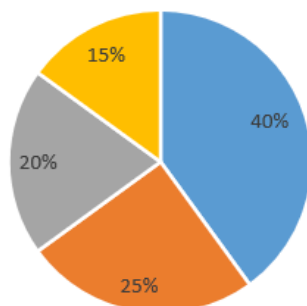
- Ans**
- ☒ 1. 4%
 - ☒ 2. 12%
 - ☒ 3. 14%
 - ☒ 4. 6%

Q.12 The least number to be subtracted from the number 25723, so that it is exactly divisible by 6 is:

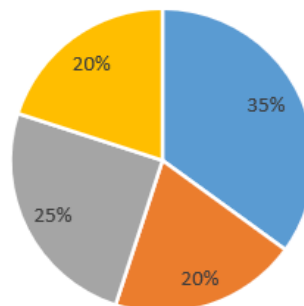
- Ans**
- ☒ 1. 1
 - ☒ 2. 2
 - ☒ 3. 4
 - ☒ 4. 3

Q.13 The two pie charts given below represent the percentage-wise budget allocation of the Science and Arts departments. The annual budget of the Science Department is ₹5 lakh, and that of the Arts Department is ₹4 lakh. Which department spends more on seminars, and by how much?

Science Department



Arts Department



■ Equipment ■ Seminars ■ Research ■ Maintenance

- Ans**
- ☒ 1. Arts Department, by ₹10000
 - ☒ 2. Science Department, by ₹45000
 - ☒ 3. Science Department, by ₹125000
 - ☒ 4. Arts Department, by ₹45000

Q.14 A 2.5 liter bottle of oil costs ₹475. What will be 50% of the cost of 4 bottles, each having a capacity of 200 milliliters?

- Ans**
- ☒ 1. ₹76
 - ☒ 2. ₹152
 - ☒ 3. ₹82
 - ☒ 4. ₹164

Q.15 David's salary was first reduced by 36% and subsequently increased by 35%. By what percentage is his final salary lower than his initial salary?

- Ans**
- ☐ 1. 18%
 - ☐ 2. 20%
 - ☐ 3. 12.6%
 - ☒ 4. 13.6%

Q.16 A refrigerator operates 60% slower than its normal cooling speed. By what percentage does the time taken to cool increase?

- Ans**
- ☐ 1. 100%
 - ☐ 2. 125%
 - ☐ 3. 75%
 - ☒ 4. 150%

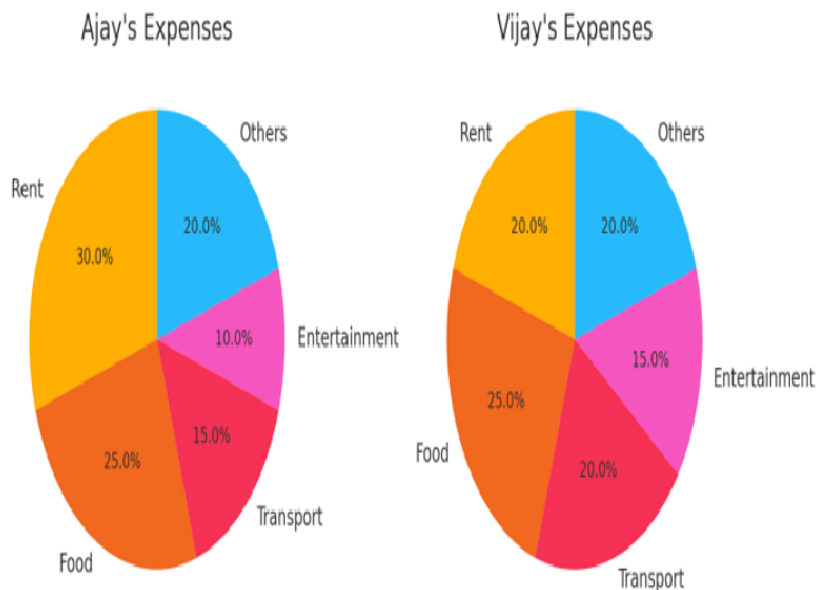
Q.17 Sachin deposited a sum of ₹45050 at 20% rate of interest per annum, compounded annually. The total amount received by Sachin after 2 years is:

- Ans**
- ☐ 1. ₹64947
 - ☐ 2. ₹64507
 - ☐ 3. ₹65103
 - ☒ 4. ₹64872

Q.18 If the mean of the numbers 8, 10, 12, x and 16 is 12, find x.

- Ans**
- ☐ 1. 13
 - ☒ 2. 14
 - ☐ 3. 10
 - ☐ 4. 12

- Q.19** The two pie charts below show the expenditure breakdown of two friends, Ajay and Vijay, for one month.
If Ajay spends ₹6,000 on Rent and Vijay spends ₹4,500 on Food, then what is the total monthly expenditure of both?



- Ans**
- ☐ 1. ₹22,000
 - ☐ 2. ₹18,000
 - ☐ 3. ₹20,000
 - ☒ 4. ₹38,000

- Q.20** The ratio between the monthly incomes of Rita and Shubhi is 4 : 3. Out of her monthly salary, Rita gives one-fourth as rent, one-third to her mother, 10% as her education loan and keeps 25% aside for miscellaneous expenditure. She saves the remaining ₹4,000. What is Shubhi's monthly salary?

- Ans**
- ☐ 1. ₹15,000
 - ☐ 2. ₹30,000
 - ☒ 3. ₹45,000
 - ☐ 4. ₹60,000

Section : **Arithmetical and Numerical Ability1**

- Q.1** Ram ordered shirts and trousers worth ₹8,000. The price of a shirt is half the price of a trouser, while preparing the bill, the shopkeeper interchanged the number of shirts and trousers, due to which the total bill increased by 38%. Find the ratio of the number of shirts to trousers in the original order.

- Ans**
- ☐ 1. 13:7
 - ☒ 2. 88:31
 - ☐ 3. 38:21
 - ☐ 4. 78:29

Q.2 A motorboat, whose speed in still water is 16 km/hr, goes 60 km downstream and then returns the same distance upstream. The entire trip takes 8 hours. Find the speed of the stream (in km/hr).

- Ans
- ☐ 1. 3
 - ☐ 2. 5
 - ☒ 3. 4
 - ☐ 4. 2

Q.3 Find the ratio between the mean proportional of 12 and 147, and the mean proportional of 24 and 54.

- Ans
- ☐ 1. 3 : 2
 - ☒ 2. 7 : 6
 - ☐ 3. 5 : 7
 - ☐ 4. 5 : 3

Q.4 On the eve of New year, a saree is sold for ₹1,800 after allowing 25% discount on the marked price. Find the marked price of saree.

- Ans
- ☒ 1. ₹2,400
 - ☐ 2. ₹2,000
 - ☐ 3. ₹2,200
 - ☐ 4. ₹2,100

Q.5 The distance between points A and B is 24 km. A boat travels from A to B downstream and returns upstream to A in a total of 6 hours. If the speed of the boat in still water is b km/h and the speed of the stream is s km/h, with $b^2 - s^2 = 144$, find the speed of the boat in still water.

- Ans
- ☒ 1. 18 km/h
 - ☐ 2. 12 km/h
 - ☐ 3. 21 km/h
 - ☐ 4. 15 km/h

Q.6 A rhombus has diagonals in the ratio 3 : 4. If its perimeter is 40 cm, find its area.

- Ans
- ☐ 1. 64 cm^2
 - ☐ 2. 60 cm^2
 - ☐ 3. 72 cm^2
 - ☒ 4. 96 cm^2

Q.7 If d is the fourth proportional to 8, 16 and 48, then find the integral part of $\frac{1}{d}$.



- Ans
- ☐ 1. 8
 - ☐ 2. 10
 - ☒ 3. 9
 - ☐ 4. 7

Q.8 If 12, 16, 18 and x are in proportion and 15, 35, 45 and y are also in proportion, then what is the ratio of x to y ?

- Ans
- ☐ 1. 6 : 35
 - ☐ 2. 35 : 8
 - ☒ 3. 8 : 35
 - ☐ 4. 35 : 6

Q.9 A cone of height 15 cm and base diameter 14 cm is cut into two parts by a plane parallel to its base at half the height. What is the ratio of the volumes of the two parts (upper to lower)?

- Ans ☒ 1. 1 : 7
☐ 2. 1 : 3
☐ 3. 1 : 5
☐ 4. 1 : 9

Q.10 A bus travels 60 km at 30 km/hr and returns the same distance at 60 km/hr. What is the average speed of the bus for the entire journey?

- Ans ☐ 1. 42 km/hr
☒ 2. 40 km/hr
☐ 3. 45 km/hr
☐ 4. 50 km/hr

Q.11 A and B can paint a fence together in 10 hours. B and C can do the same in 12 hours, and A and C, in 15 hours. If all three work together for 3 hours, after which A leaves, how much total time will it take to paint the entire fence?

- Ans ☐ 1. 7.5 hours
☐ 2. 9.5 hours
☐ 3. 6.5 hours
☒ 4. 10.5 hours

Q.12 A, B and C can complete a work in x , $2x$ and $(2x + 3)$ days, respectively. If C can complete the same task in 15 days, then in how many days will the work be finished when all are working together? (Round your answer to the nearest integer)

- Ans ☐ 1. 2
☐ 2. 5
☐ 3. 7
☒ 4. 3

Q.13 A tank has three pipes A, B, and C. A and B can fill it in 10 and 15 hours, respectively, while C can empty it in 30 hours. Initially, the tank is half full. Pipes A and C are opened simultaneously for 2 hours, then closed. Then pipe B alone is opened. For how many hours should B alone remain opened to fill the tank completely?

- Ans ☐ 1. 6
☐ 2. 5
☐ 3. $6\frac{1}{2}$
☒ 4. $5\frac{1}{2}$

Q.14 If the area of a regular hexagon with side length $\sqrt{8} \times 3^{\frac{5}{4}}$ cm is equal

- Ans ☐ 1. $14\sqrt{2}$
☐ 2. $16\sqrt{3}$
☐ 3. $15\sqrt{3}$
☒ 4. $18\sqrt{2}$

Q.14 Which among the following zones of the Northern Plains lies closest to the Shiwalik foothills?

- Ans**
- ☐ 1. Khadar
 - ☐ 2. Tarai
 - ☒ 3. Bhabar
 - ☐ 4. Bhangar

Q.15 In Mendelian genetics, the presence of two dissimilar alleles for a particular trait, such as Rr in pea plants, is referred to as which condition?

- Ans**
- ☒ 1. Heterozygous
 - ☐ 2. Dominant
 - ☐ 3. Homozygous
 - ☐ 4. Monogenic

Q.16 Which of the following Assamese festivals is celebrated thrice a year?

- Ans**
- ☐ 1. Ali-Ai-Ligang
 - ☒ 2. Bihu
 - ☐ 3. Ambubachi Mela
 - ☐ 4. Bwisagu

Q.17 The Tawang region, known for high-altitude passes and glacial lakes, is located in which of the following states?

- Ans**
- ☐ 1. Manipur
 - ☐ 2. Sikkim
 - ☐ 3. Nagaland
 - ☒ 4. Arunachal Pradesh

Q.18 Which of the following hydroelectric projects is NOT built on the Sutlej River?

- Ans**
- ☐ 1. Nathpa Jhakri Hydroelectric Project
 - ☐ 2. Bhakra Nangal Hydroelectric Project
 - ☐ 3. Karcham Wangtoo Hydroelectric Project
 - ☒ 4. Nagarjuna Sagar Hydroelectric Project

Q.19 The National Education Policy (NEP) 2020 of the Government of India is related to which Sustainable Development Goal (SDG)?

- Ans**
- ☐ 1. SDG-1
 - ☐ 2. SDG-12
 - ☒ 3. SDG-4
 - ☐ 4. SDG-7

Q.20 Which Indian language, spoken in Nagaland, has a rich oral tradition and is influenced by the diverse tribal cultures of the region?

- Ans**
- ☐ 1. Hindi, from northern India
 - ☒ 2. Nagamese, from the northeast
 - ☐ 3. Marathi, from Maharashtra
 - ☐ 4. Bengali, from West Bengal

Q.1 The price of 12 kg of apples is ₹864 and the price of 8 kg of bananas is ₹520. If Praveen has purchased 7 kg of apples and 3 kg of bananas, find the total price paid by him.

- Ans
- ☐ 1. ₹679
 - ☐ 2. ₹570
 - ☒ 3. ₹699
 - ☐ 4. ₹638

Q.2 Two successive price increases of 10% and 10% of an article are equivalent to a single price increase of:

- Ans
- ☐ 1. 19%
 - ☐ 2. 20%
 - ☒ 3. 21%
 - ☐ 4. 20.5%

Q.3 Sachin deposited a sum of ₹51,600 at a rate of interest of 5% per annum, compounded annually. What will be the total amount received by Sachin after 2 years?

- Ans
- ☒ 1. ₹56,889
 - ☐ 2. ₹56,848
 - ☐ 3. ₹57,116
 - ☐ 4. ₹56,725

Q.4 Chetan's salary was first reduced by 36% and subsequently increased by 49%. By what percentage is his final salary lower than his initial salary?

- Ans
- ☐ 1. 13%
 - ☒ 2. 4.64%
 - ☐ 3. 7.64%
 - ☐ 4. 9%

Q.5 The price of a helmet is increased by 30%, then decreased by 10%, and again increased by 5%. What is the overall percentage increase?

- Ans
- ☐ 1. 12.25%
 - ☒ 2. 22.85%
 - ☐ 3. 11.15%
 - ☐ 4. 20.15%

Q.6 The average score of a batsman in 10 innings is 50 runs. In the next innings, he scores 110 runs. What will be his new average (in runs)? (Round off your answer to two decimal places.)

- Ans
- ☒ 1. 55.45
 - ☐ 2. 65.15
 - ☐ 3. 60.25
 - ☐ 4. 70.45

Q.7 A student's marks were incorrectly entered as 49 instead of 91. Due to this, the class average got decreased by $\frac{7}{6}$. What is the number of students in the class?

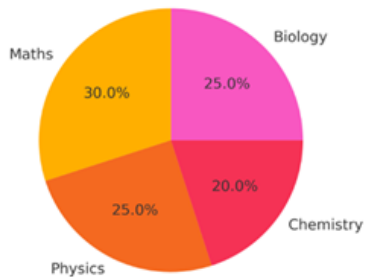
- Ans
- ☐ 1. 46
 - ☐ 2. 42
 - ☒ 3. 36
 - ☐ 4. 33

Q.8 Nita earns 33% on an investment but loses 20% on another investment. If the ratio of the two investments is 3 : 5, then the combined loss/profit percentage is:

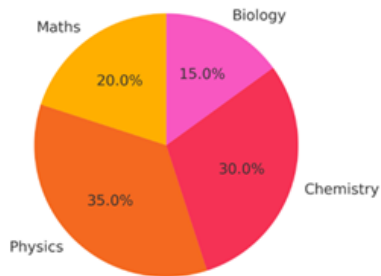
- Ans**
- ☒ 1. 40% profit
 - ☒ 2. 12.5% loss
 - ☒ 3. 12.5% profit
 - ☒ 4. 30% loss

Q.9 The charts below show the distribution of students in two classes (A and B) across different subjects. Study the charts and answer the question.

Distribution of Students in Class A



Distribution of Students in Class B



In which subject does Class A have the highest number of students?

- Ans**
- ☒ 1. Biology
 - ☒ 2. Physics
 - ☒ 3. Chemistry
 - ☒ 4. Maths

Q.10 Manoj has ₹1,722. He divided this sum between his two sons, Anand and Anil, and asked them to invest their respective shares at 5% per annum, compounded annually. It was observed that the amounts received by Anand after 16 years and by Anil after 17 years were equal. Find how much (in ₹) Manoj gave to Anand.

- Ans**
- ☒ 1. 882
 - ☒ 2. 840
 - ☒ 3. 940
 - ☒ 4. 732

Q.11 If 7 pens and 10 pencils cost ₹540 and 8 pencils and 7 pens cost ₹520, then the cost of 15 pencils is:

- Ans**
- ☒ 1. ₹160
 - ☒ 2. ₹120
 - ☒ 3. ₹180
 - ☒ 4. ₹150

Q.12 Find the average of 321, 129, 96, 49, and 125.

- Ans**
- ☒ 1. 144
 - ☒ 2. 145
 - ☒ 3. 146
 - ☒ 4. 147

Q.13 In what duration (in years) will ₹4800 fetch a simple interest of ₹960 at 5% per annum rate of interest?

- Ans**
- ☒ 1. 5
 - ☒ 2. 4
 - ☒ 3. 3
 - ☒ 4. 8

Q.14 A 90 litre container has a mixture of juice and water in the ratio 11:7. 54 litres of this mixture is removed and replaced with pure water. What is the new ratio of juice to water?

- Ans
- ☐ 1. 11 : 17
 - ☐ 2. 11 : 23
 - ☐ 3. 11 : 19
 - ☒ 4. 11 : 34

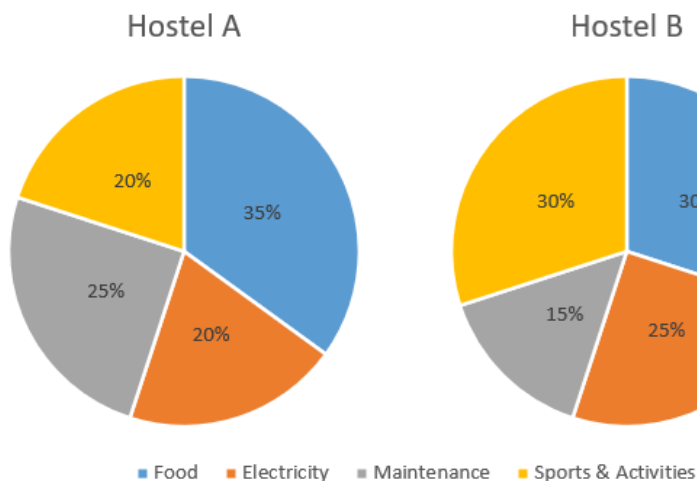
Q.15 The seven-digit number 7A4812B is divisible by 8. Find the maximum possible value of A+B.

- Ans
- ☐ 1. 12
 - ☐ 2. 18
 - ☒ 3. 17
 - ☐ 4. 8

Q.16 Two persons A and B invested the same amount in two different financial companies with the same rate of interest of 10% per year. If their interests are compounded yearly and half-yearly, respectively, then what is the ratio of their interests after one year?

- Ans
- ☐ 1. 43 : 45
 - ☐ 2. 43 : 38
 - ☐ 3. 40 : 31
 - ☒ 4. 40 : 41

Q.17 Two pie charts represent the percentage-wise monthly expenditure of two hostels: Hostel A and Hostel B. The monthly budget of Hostel A is ₹6 lakh, and that of Hostel B is ₹5 lakh. Which hostel spends more on Food, and by how much?



- Ans
- ☐ 1. Hostel B, by ₹10,000
 - ☐ 2. Hostel A, by ₹30,000
 - ☐ 3. Hostel B, by ₹20,000
 - ☒ 4. Hostel A, by ₹60,000

Q.18 The least number to be added to the number 115690, so that the result is exactly divisible by 6 and 8 is:

- Ans
- ☐ 1. 16
 - ☐ 2. 10
 - ☒ 3. 14
 - ☐ 4. 12

Q.19 A person spends 75% of his income and saves the rest. His income increases by 25%, and his expenditure increases by 20%. By what percentage have his savings increased?

- Ans**
- ☐ 1. 25%
 - ☒ 2. 40%
 - ☐ 3. 30%
 - ☐ 4. 35%

Q.20 A vendor sold 28 chocolates for a rupee, thereby gaining 50%. How many did he buy for a rupee?

- Ans**
- ☐ 1. 48
 - ☐ 2. 44
 - ☒ 3. 42
 - ☐ 4. 46

Section : **Arithmetical and Numerical Ability1**

Q.1 A pipe can fill a cistern in 8 hours. Later, a leak develops at the bottom of the cistern, which alone can empty the full cistern in 24 hours. When both the pipe and the leak are working together, how long will it take to fill the cistern?

- Ans**
- ☐ 1. 10 hours
 - ☐ 2. 11 hours
 - ☐ 3. 8 hours
 - ☒ 4. 12 hours

Q.2 A man bought 100 items for ₹2,500. Out of these, 20 items were damaged and could not be sold. He sold the remaining items at ₹30 each. Find the loss percentage.4349

- Ans**
- ☒ 1. 4%
 - ☐ 2. 5%
 - ☐ 3. 6%
 - ☐ 4. 3%

Q.3 A triangle has two sides of lengths 10 cm and 14 cm, and the included angle between them is 60° . What is the area (in cm^2) of the triangle?

- Ans**
- ☐ 1. $40\sqrt{3}$
 - ☒ 2. $35\sqrt{3}$
 - ☐ 3. $30\sqrt{3}$
 - ☐ 4. $33\sqrt{3}$

Q.4 Three quantities A, B and C are in the ratio $A:B=2:3$ and $B:C=3:4$. Another three quantities P, Q and R are in the ratio $P:Q=3:4$ and $Q:R=4:5$. If the sum of A, B and C is equal to the sum of P, Q and R, then find the value of $(A+Q):(P+C)$.

- Ans**
- ☐ 1. 2:7
 - ☐ 2. 3:5
 - ☐ 3. 3:2
 - ☒ 4. 4:5

Q.5 A shopkeeper fixed the marked price of an article to include a 30% profit. He then gave a 10% discount. What is his actual profit if the selling price of the article is ₹17,550?

- Ans**
- ☒ 1. ₹2,550
 - ☐ 2. ₹2,840
 - ☐ 3. ₹3,500
 - ☐ 4. ₹3,750

Q.6 A basketball has a diameter of 42 cm. What is its volume? (Given $\pi = \frac{22}{7}$)

- Ans**
- ☐ 1. 39,102 cubic cm.
 - ☐ 2. 36,875 cubic cm.
 - ☐ 3. 38,782 cubic cm.
 - ☒ 4. 38,808 cubic cm.

Q.7 A car makes a journey in three parts as follows.

First part: 75 km at 30 km/hr
Second part: 123 km at 41 km/hr
Third part: 150 km at 75 km/hr

What is the average speed for the entire journey?

- Ans**
- ☐ 1. 42.7 km/hr
 - ☒ 2. 46.4 km/hr
 - ☐ 3. 43.8 km/hr
 - ☐ 4. 45.8 km/hr

Q.8 Four friends are making fruit juice. The fruit-to-water ratios they used are as follows:

Ravi: 5 : 8
Meera: 7 : 12
Anil: 9 : 16
Sita: 6 : 9

Who used the most fruit in proportion to water?

- Ans**
- ☐ 1. Meera
 - ☐ 2. Anil
 - ☒ 3. Sita
 - ☐ 4. Ravi

Q.9 A pump can fill a tank in 3 hours. Due to a leak, it takes 4 hours to fill the tank. Find the time in which the leak alone can empty the full tank.

- Ans**
- ☐ 1. 10 hours
 - ☐ 2. 9 hours
 - ☒ 3. 12 hours
 - ☐ 4. 11 hours

Q.10 A tank is filled in 6 hours by three pipes P, Q and R. Pipe R is thrice as fast as Q and Q is thrice as fast as P. How much time will pipe Q alone take to fill the tank?

- Ans**
- ☐ 1. 24 hours
 - ☒ 2. 26 hours
 - ☐ 3. 27 hours
 - ☐ 4. 25 hours

Q.11 Select the correct option.

- Ans
- ☐ 1. $\frac{2}{3} > \frac{3}{4}$
 - ☐ 2. $\frac{1}{2} < \frac{1}{3}$
 - ☒ 3. $\frac{1}{2} < \frac{2}{3}$
 - ☐ 4. $\frac{1}{4} > \frac{1}{3}$

Q.12 There are two stations, A and B, 1440 km apart. A train starts from station A at 7 a.m. and moves at a speed of 100 km/hr towards station B. At 1 p.m., another train starts from B towards A and moves at a speed of 110 km/hr. When do they meet?

- Ans
- ☒ 1. 5 p.m.
 - ☐ 2. 7 p.m.
 - ☐ 3. 4 p.m.
 - ☐ 4. 6 p.m.

Q.13 A student sells his old laptop at a loss of 70%. If the selling price of the laptop is ₹27,000, what is its cost price?

- Ans
- ☐ 1. ₹94,000
 - ☐ 2. ₹67,000
 - ☒ 3. ₹90,000
 - ☐ 4. ₹87,000

Q.14 A person travels 180 km at 60 km/h, rests for 30 minutes, then returns 180 km at 90 km/h. What is the average speed including the rest time? (Round off your answer to two decimal places)

- Ans
- ☐ 1. 75.35 km/h
 - ☐ 2. 60.25 km/h
 - ☒ 3. 65.45 km/h
 - ☐ 4. 68.75 km/h

Q.15 The difference between the marked price and the selling price is ₹870. If the marked price is ₹2,900, what is the discount percentage?

- Ans
- ☐ 1. 40%
 - ☒ 2. 30%
 - ☐ 3. 50%
 - ☐ 4. 20%

Q.16 The diameter of a conical pit is 7 m and its depth is 15 m. Find its capacity in kilolitres. (Use $\pi = \frac{22}{7}$)

- Ans
- ☐ 1. 185.5 kilolitres
 - ☐ 2. 182.5 kilolitres
 - ☒ 3. 192.5 kilolitres
 - ☐ 4. 172.5 kilolitres

Q.17 A boat travels 40 km downstream and 40 km upstream in the same time it would take to go 100 km downstream. If the speed of the stream is 3 km/h, find the speed of the boat in still water.

- Ans
- ☐ 1. 20 km/h
 - ☐ 2. 12 km/h
 - ☒ 3. 15 km/h
 - ☐ 4. 18 km/h

Q.16 Which nutrient deficiencies can lead to difficulty seeing in low light?

- Ans
- ☒ 1. Vitamin A
 - ☐ 2. Vitamin C
 - ☐ 3. Vitamin B
 - ☐ 4. Vitamin D

Q.17 Which structure links muscles to bones to enable movement in the human body?

- Ans
- ☐ 1. Ligaments
 - ☐ 2. Cartilage
 - ☒ 3. Tendons
 - ☐ 4. Nerves

Q.18 In which of the following years was the first urban Ropeway Project laid in India?

- Ans
- ☒ 1. 2023
 - ☐ 2. 2021
 - ☐ 3. 2024
 - ☐ 4. 2019

Q.19 Which of the following committees/commissions recommended the three-tier Panchayati Raj System in India?

- Ans
- ☐ 1. Sarkaria Commission
 - ☒ 2. Balwant Rai Mehta Committee
 - ☐ 3. Rajamannar Committee
 - ☐ 4. Swaran Singh Committee

Q.20 Wheat flour is high and primary source of which nutrient?

- Ans
- ☐ 1. Fat
 - ☐ 2. Vitamin C
 - ☐ 3. Proteins
 - ☒ 4. Carbohydrates

Section : **Arithmetical and Numerical Ability**

Q.1 The average of four numbers is 40. A fifth number is added, and the average becomes 42. What is the fifth number?

- Ans
- ☐ 1. 55
 - ☐ 2. 60
 - ☒ 3. 50
 - ☐ 4. 45

Q.2 Rohan spends 40% of his income on rent and 25% on food, and saves the rest of it. If his savings are ₹7,000, what is his total income?

- Ans
- ☐ 1. ₹18,000
 - ☒ 2. ₹20,000
 - ☐ 3. ₹22,000
 - ☐ 4. ₹24,000

Q.3 Simplify: $126 \div [(10 \div 5) \times \{9 + 9 - (9 + 6 - 4 + 7)\}]$

Ans ☒ 1. 4.5

☐ 2. 4.2

☐ 3. 4.4

☐ 4. 4.3

Q.4 In a workshop all teachers were allotted 10 minutes each for presentation. How many presentations can be done in a working day of 6 hours if setup time is 2 minutes between consecutive presentations?

Ans ☐ 1. 33

☐ 2. 32

☐ 3. 31

☒ 4. 30

Q.5 A student's marks were incorrectly entered as 37 instead of 97. Due to this, the class average got decreased by $\frac{6}{5}$. What is the number of students in the class?



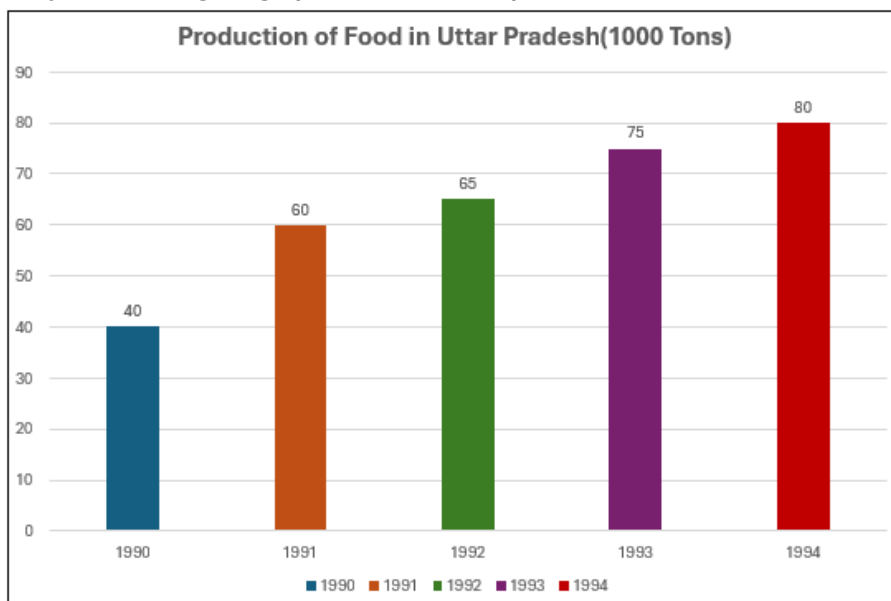
Ans ☐ 1. 54

☐ 2. 49

☒ 3. 50

☐ 4. 52

Q.6 Study the following bar graph and answer the question that follow:



What was the difference in the production of food between 1991 and 1994?

Ans ☒ 1. 20,000 tons

☐ 2. 5,000 tons

☐ 3. 20 tons

☐ 4. 5 tons

Q.7 The average income of six males in a family is ₹8,600, and the average income of six females in the same family is ₹7,400. What is the average income of all the 12 members of the family?

Ans ☐ 1. ₹7,900

☒ 2. ₹8,000

☐ 3. ₹7,700

☐ 4. ₹8,100

Q.8 R bought an item for ₹150. He sold it to S and S sold it to P. The profit percentage of R is double of the profit percentage of S. If the item had been bought by P directly from R at the same cost as paid to S, then R would have earned 32% profit. What is profit of S (in ₹)?

- Ans**
- ☐ 1. 14
 - ☐ 2. 16
 - ☐ 3. 20
 - ☒ 4. 18

Q.9 A pack of 126 pens costs ₹756. Find the price of 15 pens.

- Ans**
- ☐ 1. ₹60
 - ☐ 2. ₹80
 - ☒ 3. ₹90
 - ☐ 4. ₹70

Q.10 In a school, there were 500 students attending the science fair in 2023. In 2024, the number of students attending the fair decreased by 18%. How many students attended the science fair in 2024?¹³⁶

- Ans**
- ☐ 1. 420
 - ☐ 2. 380
 - ☐ 3. 400
 - ☒ 4. 410

Q.11 In what duration (in years) will ₹9,600 fetch a simple interest of ₹480 at 4% per annum rate of interest?¹⁵⁵⁸

- Ans**
- ☐ 1. 2.25
 - ☒ 2. 1.25
 - ☐ 3. 0.25
 - ☐ 4. 2.5

Q.12 The price of a smartphone was ₹25,000 last year. On the occasion of Independence Day, the price decreased by 5%. What is the new price?

- Ans**
- ☐ 1. ₹22,750
 - ☐ 2. ₹22,250
 - ☒ 3. ₹23,750
 - ☐ 4. ₹23,250

Q.13 A person deposited ₹6,40,000 in a bank at an interest rate of 7.5% per annum, compounded annually. What amount will he receive after 2 years?

- Ans**
- ☐ 1. ₹7,65,400
 - ☐ 2. ₹7,20,650
 - ☐ 3. ₹8,59,600
 - ☒ 4. ₹7,39,600

Q.14 Virendra deposited a certain sum of money at 20% per annum, compounded annually. At the end of 2 years, the total amount received was ₹73,548. Find the sum of money deposited by Virendra.

- Ans**
- ☒ 1. ₹51,075
 - ☐ 2. ₹50,786
 - ☐ 3. ₹51,552
 - ☐ 4. ₹51,258

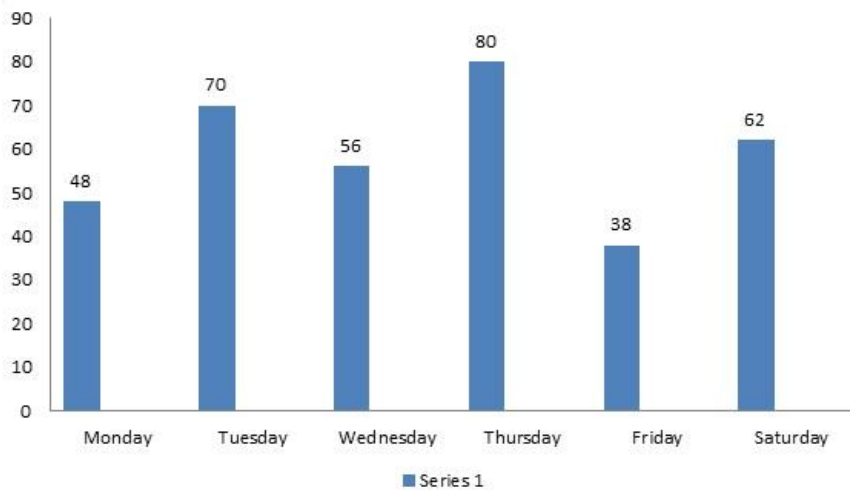
Q.15 A man spends 75% of his income. If his income increased by 20% and expenditure also increased by 10%, then by what percentage do the savings increase?

- Ans
- ☒ 1. 42.18%
 - ☒ 2. 44.18%
 - ☒ 3. 43.8%
 - ☒ 4. 50%

Q.16 A vendor sells 25 chocolates for one rupee and makes a profit of 80%. How many chocolates did he originally purchase for one rupee?

- Ans
- ☒ 1. 45
 - ☒ 2. 49
 - ☒ 3. 47
 - ☒ 4. 51

Q.17 The bar graph given below shows the number of books sold by a bookstore over 6 days. Study the graph carefully and answer the question that follows.



What is the average number of books sold per day?

- Ans
- ☒ 1. 59
 - ☒ 2. 48
 - ☒ 3. 63
 - ☒ 4. 56

Q.18 50 packets of 12 pens each cost ₹3,000. Find the cost of 65 packets of 12 pens each.

- Ans
- ☒ 1. ₹3,650
 - ☒ 2. ₹3,900
 - ☒ 3. ₹4,250
 - ☒ 4. ₹3,450

Q.19 The population of a town was 1,10,250 in the year 2021. It increases at the rate of 5% per annum. What was its population in the year 2019?

- Ans
- ☒ 1. 1,00,000
 - ☒ 2. 1,03,000
 - ☒ 3. 1,02,000
 - ☒ 4. 1,04,000

Q.20

A student's marks were incorrectly entered as 39 instead of 63. Due to

What is the number of students in the class?

Ans

✓ 1. 21

✗ 2. 13

✗ 3. 14

✗ 4. 24

Section : Arithmetical and Numerical Ability1

Q.1 A shopkeeper buys 50 identical items for ₹10,000. He sells 20 of these items at a profit of 20% and the remaining items at a loss of 10%. Find his overall profit or loss percentage.

Ans

✗ 1. Profit 2.5%

✓ 2. Profit 2%

✗ 3. Loss 2.5%

✗ 4. Loss 2%

Q.2 If $\frac{x}{y} = \frac{2}{3}$, $\frac{y}{z} = \frac{4}{5}$, find $\frac{x^2}{yz}$.

Ans

✗ 1. $\frac{8}{15}$

✗ 2. $\frac{32}{45}$

✓ 3. $\frac{16}{45}$

✗ 4. $\frac{64}{225}$

Q.3 A cylindrical water tank has a height of 6 meters and a diameter of 4 meters. If water is being pumped out at a rate of 314 liters per minute, how many minutes will it take to empty the tank completely? (1 cubic meter = 1000 liters, take $\pi = 3.14$)

Ans

✓ 1. 240

✗ 2. 150

✗ 3. 229

✗ 4. 300

Q.4 A team of 8 workers can complete a project in 15 days. After 6 days, 3 workers leave. How much time will the rest of the workers need to complete the remaining work?

Ans

✗ 1. 14 days

✗ 2. $16\frac{2}{5}$ days

✗ 3. 16 days

✓ 4. $14\frac{2}{5}$ days

Q.5 A shop offers 'Buy 3 Get 1 Free' on T-shirts priced at ₹400 each. What is the effective discount percentage when getting 4 T-shirts in all?

- Ans
- ☐ 1. 30%
 - ☐ 2. $33\frac{1}{3}\%$
 - ☒ 3. 25%
 - ☐ 4. 35%

Q.6 S and R entered into a partnership business by investing ₹3,00,000 and ₹4,00,000, respectively. After few months, R left the business, and at the same time, P joined the business with an investment of ₹2,00,000. At the end of the year of starting the business, S took 20% of the profit as his charges for being an active partner in addition to his share in the profit. The money S received is 1.5 times the combined share of R and P. After how many months, did R leave the business?

- Ans
- ☐ 1. 4
 - ☐ 2. 5
 - ☐ 3. 7
 - ☒ 4. 6

Q.7 A and B can complete a piece of work in 4 and 6 days, respectively. If they work together and complete the work, then find the portion of the work done by B.

- Ans
- ☐ 1. $\frac{4}{5}$
 - ☐ 2. $\frac{1}{5}$
 - ☒ 3. $\frac{2}{5}$
 - ☐ 4. $\frac{3}{5}$

Q.8 Seema reached her destination 30 minutes late when she travelled at a speed of 30 kmph. Next day, Seema wanted to reach on time and she travelled at a speed of 35 kmph, but still reached late by 15 minutes. What is the distance (in km) that Seema had to travel each time?

- Ans
- ☐ 1. 65
 - ☒ 2. 52.5
 - ☐ 3. 47.5
 - ☐ 4. 57.5

Q.9 A and B can finish a task in 20 hours. B and C can do the same job in 30 hours, while A and C can complete it in 24 hours. They all work together for 8 hours. After that, A and C stop working. How many hours will B need to complete the rest of the task on his own?

- Ans
- ☐ 1. 16
 - ☒ 2. 24
 - ☐ 3. 32
 - ☐ 4. 48

Q.10 A triangle ABC has vertices A(-2, 3), B(4, 7), and C(6, -1). Point D is the midpoint of BC. Find the ratio of the area of triangle ABD to the area of triangle ABC.

- Ans
- ☐ 1. 3 : 1
 - ☐ 2. 2 : 1
 - ☒ 3. 1 : 2
 - ☐ 4. 1 : 3

Q.11 A train travels at 60 km/h and takes 30 minutes less than it would have taken at 50 km/h to cover the same distance. Find the distance.

- Ans
- ☐ 1. 160 km
 - ☐ 2. 140 km
 - ☐ 3. 120 km
 - ☒ 4. 150 km

Q.12 If the lengths of two adjacent sides of a parallelogram are 42 cm and 18 cm, and the distance between the shorter sides is 21 cm, find the distance between the longer sides.

- Ans
- ☐ 1. 6 cm
 - ☐ 2. 7 cm
 - ☒ 3. 9 cm
 - ☐ 4. 8 cm

Q.13 Two pipes can fill a tank in 25 minutes and 30 minutes, respectively. In how many minutes will the tank be full if both pipes are opened together?

- Ans
- ☐ 1. $14\frac{7}{11}$
 - ☒ 2. $13\frac{7}{11}$
 - ☐ 3. $13\frac{5}{11}$
 - ☐ 4. $14\frac{6}{11}$

Q.14 A product marked at ₹1,200 is sold at 25% discount on the marked price. Find the selling price.

- Ans
- ☒ 1. ₹900
 - ☐ 2. ₹980
 - ☐ 3. ₹950
 - ☐ 4. ₹920

Q.15 Find the fourth proportional of 75, 375 and 145.

- Ans
- ☐ 1. 758
 - ☐ 2. 527
 - ☒ 3. 725
 - ☐ 4. 580

Q.16 A car runs at a speed of 120 km/h from a place A to a place B. On the return journey, its speed is 130 km/h. Find the average speed (in km/h) of the car.

- Ans
- ☐ 1. 123.6
 - ☐ 2. 125.8
 - ☒ 3. 124.8
 - ☐ 4. 126.6

Q.17 A dealer purchased a few boxes of a commodity at ₹40 per box, and the transport charge was ₹5 for 5 boxes. At what price should he sell a box to make a 20% profit?
5582

- Ans
- ☐ 1. ₹48.50
 - ☐ 2. ₹50.00
 - ☒ 3. ₹49.20
 - ☐ 4. ₹48.00

Q.17 In humans, a mother always contributes which chromosome to each of her children?

- Ans**
- ☐ 1. Z only
 - ☐ 2. X or Y
 - ☐ 3. Y only
 - ☒ 4. X only

Q.18 The plant group fungi can be categorised in which of the following trophic levels of the ecosystem?

- Ans**
- ☒ 1. Decomposers
 - ☐ 2. Producers
 - ☐ 3. Apex predators
 - ☐ 4. Primary consumers

Q.19 Which of the following rivers forms an estuary on the western coast of India?

- Ans**
- ☐ 1. Krishna
 - ☐ 2. Mahanadi
 - ☒ 3. Narmada
 - ☐ 4. Godavari

Q.20 Which among the following acids causes the sour taste in cold drinks like Coke, Pepsi, and Campa?

- Ans**
- ☐ 1. Lactic acid
 - ☐ 2. Hydrochloric acid
 - ☐ 3. Sulfuric acid
 - ☒ 4. Phosphoric acid

Section : **Arithmetical and Numerical Ability**

Q.1 If the average of 3 consecutive numbers is 5, find the three numbers.

- Ans**
- ☒ 1. 4, 5, 6
 - ☐ 2. 6, 7, 8
 - ☐ 3. 3, 4, 5
 - ☐ 4. 5, 6, 7

Q.2 Solve using BODMAS $-48 - (-2)(-8 - 3 - 1) \div [2\{20 + (-4)(6)\}]$.

- Ans**
- ☐ 1. -3
 - ☐ 2. 4
 - ☒ 3. -45
 - ☐ 4. 35

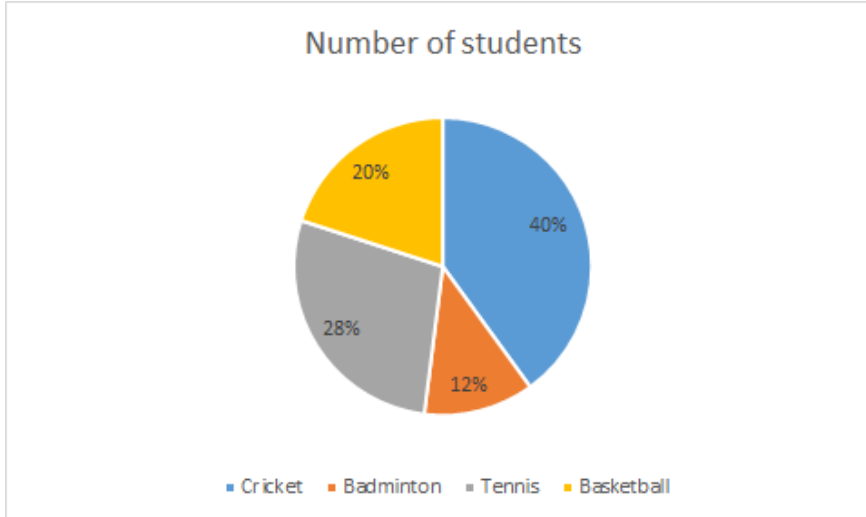
Q.3 Smitha spends 70% of her income. Her income increases by 40%, and she increases her expenditure by 15%. What is the percentage increase in her savings? (Round off your answer to two decimal places.)

- Ans**
- ☐ 1. 95.45%
 - ☐ 2. 95.55%
 - ☐ 3. 98.05%
 - ☒ 4. 98.33%

Q.4 David's salary was first reduced by 37% and subsequently raised by 28%. By how much percentage was his final salary lower compared to his initial salary?⁸¹⁹⁰

- Ans**
- ☐ 1. 10.36%
 - ☐ 2. 28%
 - ☒ 3. 19.36%
 - ☐ 4. 37%

Q.5 There are 75 students in the class. The following pie chart shows the distribution of students based on their preferred sports. How many students like tennis?



- Ans**
- ☐ 1. 30
 - ☒ 2. 21
 - ☐ 3. 25
 - ☐ 4. 15

Q.6 A student scored 80 marks in Maths (weightage 3), 69 marks in Science (weightage 2), and 90 marks in English (weightage 1). What is the weighted average score?

- Ans**
- ☒ 1. 78
 - ☐ 2. 81
 - ☐ 3. 76
 - ☐ 4. 84

Q.7 Akshat deposited a sum of ₹76700 at 20% rate of interest per annum, compounded annually. The total amount received by Akshat after 2 years is:

- Ans**
- ☐ 1. ₹110706
 - ☐ 2. ₹110139
 - ☐ 3. ₹110473
 - ☒ 4. ₹110448

Q.8 The compound interest on ₹4,000 for 2 years is ₹410. What is the rate of interest per annum if interest is compounded annually?

- Ans**
- ☐ 1. 4%
 - ☐ 2. 2%
 - ☐ 3. 3%
 - ☒ 4. 5%

Q.9 Haran purchased two bicycles at the same price and sold one at a profit of 15% and the other at a loss of 5%. If the difference between the two selling prices is ₹350, what is the cost price of each bicycle?

- Ans ☒ 1. ₹1,750
☐ 2. ₹1,730
☐ 3. ₹1,740
☐ 4. ₹1,720

Q.10 Simplify: $\sqrt{191 + \sqrt{29 - \sqrt{82 - 66}}}$

- Ans ☐ 1. 16
☒ 2. 14
☐ 3. 15
☐ 4. 13

Q.11 Simplify: $\left(\frac{9}{16}\right)^5 \div (81)^2 \times \left(\frac{25}{9}\right)^3$

- Ans ☒ 1. $(3)^{-4} (5)^6 (4)^{-10}$
☐ 2. $(3)^{-3} (5)^6 (4)^{-10}$
☐ 3. $(3)^{-3} (5)^5 (4)^{-9}$
☐ 4. $(3)^{-3} (5)^6 (4)^{-9}$

Q.12 The difference between Tarun's expenditure and savings is ₹1,600. If his total income is ₹5,000, then what is his expenditure?

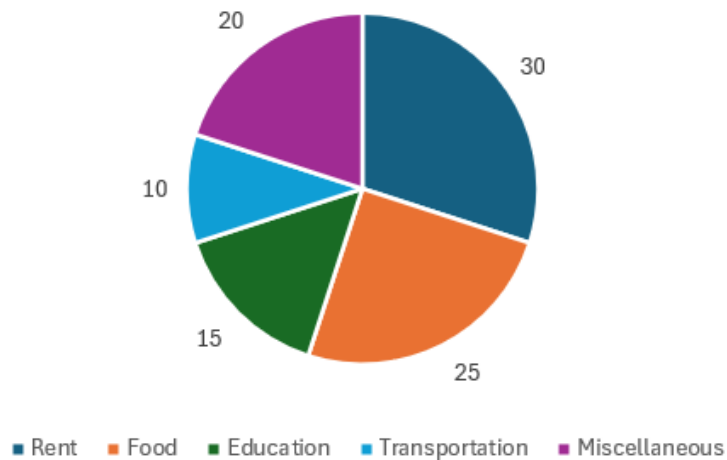
- Ans ☐ 1. ₹1,650
☐ 2. ₹1,700
☐ 3. ₹3,400
☒ 4. ₹3,300

Q.13 Find the ratio between two numbers such that one of the numbers is 68, their HCF is 34, and their LCM is 204.

- Ans ☐ 1. 3:4
☒ 2. 2:3
☐ 3. 4:5
☐ 4. 1:2

- Q.14 The pie chart shows the percentage-wise distribution of a family's monthly household expenses. If the family's total monthly income is ₹40,000, and they spend all of it, how much is spent on Rent?

Monthly Household Expenses of a Family (in %)



- Ans ☒ 1. ₹15,000
☒ 2. ₹12,000
☒ 3. ₹8,000
☒ 4. ₹10,000
- Q.15 A vendor sold 28 chocolates for a rupee, thereby gaining 75%. How many did he buy for a rupee?

- Ans ☒ 1. 49
☒ 2. 53
☒ 3. 51
☒ 4. 55

- Q.16 The monthly income of Hari was ₹12,000 and his monthly expenditure was ₹7,000. Next year, his income increased by 15% and his expenditure by 5%. What was the percentage increase in his saving?

- Ans ☒ 1. 34%
☒ 2. 32%
☒ 3. 31%
☒ 4. 29%

- Q.17 The average of three consecutive numbers is 9. Find the smallest number.

- Ans ☒ 1. 9
☒ 2. 8
☒ 3. 10
☒ 4. 7

Q.18 In what duration (in years) will ₹4,800 fetch a simple interest of ₹720 at 5% per annum rate of interest?

- Ans
- ☐ 1. 6
 - ☐ 2. 2
 - ☐ 3. 4
 - ☒ 4. 3

Q.19 Priya's test scores in four tests are 74, 80, 92, and 98. What score must she get on her fifth test to have an average of 85?

- Ans
- ☐ 1. 82
 - ☐ 2. 80
 - ☐ 3. 79
 - ☒ 4. 81

Q.20 Veer has ₹1,722 with him. He divided it between his two sons, Nitin and Pravin, and asked them to invest it at 5% rate of interest compounded annually. It was seen that Nitin and Pravin got the same amount after 17 and 18 years, respectively. How much (in ₹) did Veer give to Nitin?

- Ans
- ☐ 1. 940
 - ☐ 2. 840
 - ☐ 3. 732
 - ☒ 4. 882

Section : **Arithmetical and Numerical Ability1**

Q.1 The diagonals of a rhombus are 18 cm and 25 cm. A square is constructed whose area is equal to that of the rhombus. What is the side of the square?

- Ans
- ☒ 1. 15 cm
 - ☐ 2. 18.5 cm
 - ☐ 3. 21.5 cm
 - ☐ 4. 25 cm

Q.2 If the lengths of the sides of a triangle are 8 cm, 12 cm, and 18 cm, and a fourth proportional to these numbers is used as the length of a side of a similar triangle, what is the length of the corresponding side in the similar triangle?

- Ans
- ☐ 1. 24 cm
 - ☐ 2. 21 cm
 - ☐ 3. 30 cm
 - ☒ 4. 27 cm

Q.3 The speed of a boat downstream is 35 km/h, and the speed of the current is 7 km/h. Find the total time taken by the boat to cover 105 km upstream and 105 km downstream.

- Ans
- ☐ 1. 7 hours 54 minutes
 - ☒ 2. 8 hours
 - ☐ 3. 6 hours 38 minutes
 - ☐ 4. 6 hours

Q.4 A solid cylinder of height 252 cm and base diameter of 14 cm is melted and reshaped into a solid sphere. What is the diameter of the sphere?

- Ans
- ☐ 1. 28 cm
 - ☐ 2. 42 cm
 - ☒ 3. 21 cm
 - ☐ 4. 35 cm

Q.5 A, B, and C invested ₹70,000, ₹50,000, and ₹80,000 respectively in a business. After 4 months, B withdrew all his money and A added ₹30,000 more. If the annual profit is ₹2,10,000, what is C's share of the profit?

- Ans
- ☐ 1. ₹98,000
 - ☐ 2. ₹84,000
 - ☒ 3. ₹90,000
 - ☐ 4. ₹1,05,000

Q.6 Rajeev starts from A to B at 6:00 AM at a speed of 60 km/hr. After 2 hours, Suresh starts from B towards A at a speed of 80 km/hr. The distance between A and B is 750 km. At what time will they meet?

- Ans
- ☐ 1. 1:30 PM
 - ☐ 2. 1:00 PM
 - ☒ 3. 12:30 PM
 - ☐ 4. 2:00 PM

Q.7 The selling price of an article is ₹540, and the profit earned is one-fifth of the cost price. What is the gain per cent?

- Ans
- ☐ 1. 15%
 - ☐ 2. 25%
 - ☐ 3. 18%
 - ☒ 4. 20%

Q.8 A can complete a task in 21 days and B can do the same task in 28 days. They started working together but B left after 4 days. In how many days, A alone can finish the remaining task?

- Ans
- ☐ 1. 13
 - ☒ 2. 14
 - ☐ 3. 12
 - ☐ 4. 10

Q.9 Pipes P, Q, and R can fill a tank in 24, 36, and 48 hours, respectively. The tank is initially empty. Pipe P is opened for 3 hours, then closed. Then pipe Q is opened for 5 hours and then closed. How many hours will pipe R alone take to fill the remaining portion of the tank?

- Ans
- ☐ 1. 36 hours
 - ☐ 2. 34 hours
 - ☐ 3. $33\frac{1}{3}$ hours
 - ☒ 4. $35\frac{1}{3}$ hours

Q.10 A train 120 m long passes a platform 280 m long in 20 sec. Find the speed of the train (in km/hr).

- Ans
- ☐ 1. 65
 - ☐ 2. 63
 - ☒ 3. 72
 - ☐ 4. 70

Q.11 What is the effective discount percentage, if Ananya offers a scheme 'Buy 8 Rakhis and Get 2 Free' on the occasion of Raksha Bandhan?

- Ans
- ☐ 1. 25%
 - ☐ 2. 10%
 - ☐ 3. 15%
 - ☒ 4. 20%

Q.12 P can do a task in the same time in which Q and R together can do it. If P and Q together could do the same task in 20 days and R alone can do it in 60 days, then Q alone can do it in how many days?

- Ans
- ☒ 1. 60 days
 - ☐ 2. 20 days
 - ☐ 3. 50 days
 - ☐ 4. 40 days

Q.13 The cost price of an item is ₹6.00. If another 12% of the cost price is incurred in selling the item, what should be the retail price in order to gain a profit of 25% on the total cost price?

- Ans
- ☐ 1. ₹8.50
 - ☐ 2. ₹7.80
 - ☐ 3. ₹8.00
 - ☒ 4. ₹8.22

Q.14 A park is in the shape of a trapezium with parallel sides measuring 40 m and 28 m, and the distance between the parallel sides being 16 m. If a rectangular flower bed of length 10 m and width 4 m is to be built within the park, what will be the remaining area of the park after constructing the bed?

- Ans
- ☐ 1. 510 m²
 - ☐ 2. 540 m²
 - ☐ 3. 530 m²
 - ☒ 4. 504 m²

Q.15 A recipe for 6 people requires 300 grams of rice and 180 grams of lentils. How many grams of lentils would be needed for 10 people, keeping the same proportion?

- Ans
- ☐ 1. 280 grams
 - ☐ 2. 320 grams
 - ☐ 3. 250 grams
 - ☒ 4. 300 grams

Q.16 An electric heater is listed at ₹15,250. A dealer receives a trade discount of 15% and a cash discount of 4% on the already discounted amount. Find the final amount the dealer has to pay (in ₹).

- Ans
- ☐ 1. 12,124
 - ☐ 2. 12,414
 - ☐ 3. 12,224
 - ☒ 4. 12,444

Q.17 If $p : q = 3 : 7$ and $q : r = 5 : 7$ and $r = 196$, then find the value of $(2p + 3q)$.

- Ans
- ☒ 1. 540
 - ☐ 2. 595
 - ☐ 3. 456
 - ☐ 4. 640

Q.20 Which Indian state is known as the 'Granary of India' due to its high agricultural productivity?

- Ans**
- ☒ 1. Punjab
 - ☐ 2. Maharashtra
 - ☐ 3. Bihar
 - ☐ 4. Gujarat

Section : Arithmetical and Numerical Ability

Q.1 Jaspreet deposited a sum of ₹80,250 at 20% rate of interest per annum, compounded annually. The total amount received by Jaspreet after 2 years is:

- Ans**
- ☐ 1. ₹1,15,954
 - ☐ 2. ₹1,15,943
 - ☒ 3. ₹1,15,560
 - ☐ 4. ₹1,16,009

Q.2 Two articles cost ₹800 and ₹1200. The first is sold at a 10% profit, Find the overall profit or loss percentage on the entire transaction.

- Ans**
- ☐ 1. 2% profit
 - ☐ 2. 4% profit
 - ☐ 3. 4% loss
 - ☒ 4. 2% loss

Q.3 The price of a mobile phone is ₹25,000. It first decreases by 10%, then increases by 25%. Calculate the overall percentage change in the price.

- Ans**
- ☐ 1. 22.5% increase
 - ☐ 2. 16% decrease
 - ☐ 3. 10% decrease
 - ☒ 4. 12.5% increase

Q.4 Simplify: $(2^4 \times 2^5) \div (2^2 \times 2^3)$

- Ans**
- ☐ 1. 23
 - ☐ 2. 26
 - ☒ 3. 24
 - ☐ 4. 25

Q.5 Find the value in place of (?) in the following expression.

$$(11)^{4.5} \times (11)^? \div (11)^{\frac{-5}{2}} = (11)^9$$

- Ans**
- ☐ 1. 7
 - ☐ 2. 5
 - ☒ 3. 2
 - ☐ 4. 10

Q.6 There are two sections A and B of a class, consisting of 22 and 50 students, respectively. If the average weight of section A is 43 kg and that of section B is 33 kg, find the average weight (in kg, rounded off to two decimal place) of the whole class.306

- Ans
- ☒ 1. 35.56
 - ☒ 2. 36.06
 - ☒ 3. 37.06
 - ☒ 4. 36.56

Q.7 The present population of a town is 75,000. If the population increase first year and decreased by 10% in the second year, then the polulation

- Ans
- ☒ 1. 76,150
 - ☒ 2. 74,150
 - ☒ 3. 74,250
 - ☒ 4. 76,350

Q.8 There are two sections, A and B, of a class, consisting of 22 and 50 students, respectively. If the average weight of section A is 43 kg and that of section B is 34 kg, find the average weight (in kg, rounded off to two decimal places) of the whole class.305

- Ans
- ☒ 1. 37.75
 - ☒ 2. 37.25
 - ☒ 3. 36.75
 - ☒ 4. 36.25

Q.9 Simplify the expression: $\sqrt{147} + \sqrt{48} - \sqrt{75}$.

- Ans
- ☒ 1. $8\sqrt{3}$
 - ☒ 2. $7\sqrt{3}$
 - ☒ 3. $6\sqrt{3}$
 - ☒ 4. $5\sqrt{3}$

Q.10 The seven-digit number 4178A67 is divisible by 9. Find the value of A.

- Ans
- ☒ 1. 3
 - ☒ 2. 1
 - ☒ 3. 5
 - ☒ 4. 4

Q.11 The weight of Suresh increased by 13%. After a few months, his weight reduced by 13%. Find the net percentage change in his weight.

- Ans
- ☒ 1. 1.3% increase
 - ☒ 2. 1.69% increase
 - ☒ 3. 1.3% decrease
 - ☒ 4. 1.69% decrease

- Q.12 Study the following graph and answer the question below. The pie-chart shows the degree-wise distribution of number of students in a university playing 5 different sports (Football, Hockey, Tennis, Cricket and Basketball). Total number of students is 68000.



Find the percentage of students who play Football and Tennis.

- Ans
- ☐ 1. $11\frac{1}{9}\%$
 - ☐ 2. 15%
 - ☒ 3. $22\frac{2}{9}\%$
 - ☐ 4. 20%

- Q.13 A student's marks were incorrectly entered as 38 instead of 78. Due to this, his marks got decreased by $\frac{4}{3}$. What is the number of students in the class?

- Ans
- ☐ 1. 36
 - ☒ 2. 30
 - ☐ 3. 22
 - ☐ 4. 40

- Q.14 A dealer sold 5 coolers for ₹65,270 with a profit of 7%. For how much (in ₹) should he sell 8 such coolers if he intends to earn a 20% profit?

- Ans
- ☐ 1. 1,12,350
 - ☐ 2. 1,19,360
 - ☒ 3. 1,17,120
 - ☐ 4. 1,25,300

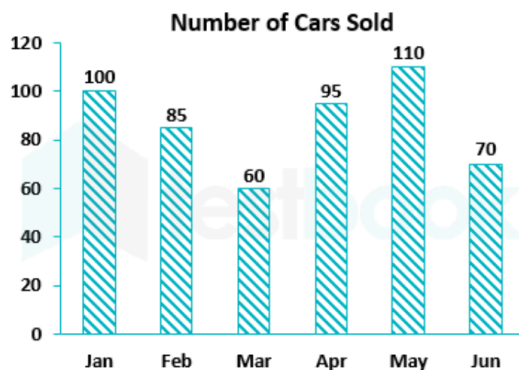
- Q.15 In what duration (in years) will ₹4,800 fetch a simple interest of ₹360 at 5% per annum rate of interest?

- Ans
- ☐ 1. 2.5
 - ☒ 2. 1.5
 - ☐ 3. 0.5
 - ☐ 4. 3

- Q.16 Atul's salary was first reduced by 30% and subsequently increased by 18%. By what percentage is his final salary lower than his initial salary?

- Ans
- ☐ 1. 15.4%
 - ☐ 2. 12%
 - ☐ 3. 18%
 - ☒ 4. 17.4%

- Q.17 The bar graph given below shows the number of cars sold by a distributor in each month from January to June in a particular year. Find the total number of cars sold by the distributor during the months of April to June in that year.



- Ans ☒ 1. 275
☐ 2. 230
☐ 3. 210
☐ 4. 195

- Q.18 The population of a village increases at the rate of 16% per annum, compounded annually. If initially, the population of the village is P and after two years it becomes 20,184, then the value of P is:485

- Ans ☐ 1. 14000
☐ 2. 13500
☐ 3. 12900
☒ 4. 15000

- Q.19 The monthly incomes of two friends, Shivam and Rupesh, are in the ratio 6 : 8, respectively and each of them saves ₹33,000 every month. If the ratio of their monthly expenditure is 2 : 3, find Shivam's monthly income (in ₹).

- Ans ☐ 1. 1,00,000
☐ 2. 98,000
☒ 3. 99,000
☐ 4. 1,38,600

- Q.20 24 litres of diluted acid solution is made by mixing concentrated acid and water in the ratio 3:5. Some concentrated acid is added to make the ratio of the concentrated acid to water as 4:5. One-third of this solution is removed from the container. What is the quantity (in litres) of concentrated acid in the solution left in the container?

- Ans ☒ 1. 8
☐ 2. 12
☐ 3. 9
☐ 4. 15

Section : Arithmetical and Numerical Ability1

- Q.1 Excluding stoppages, the speed of a train is 72 km/hr and including stoppages, it is 63 km/hr. For how many minutes does the train stop per hour?

- Ans ☒ 1. 7.5
☐ 2. 6.5
☐ 3. 8.5
☐ 4. 9.5

Q.2 A invests ₹50,000 at the beginning of a venture. B joins the venture after 6 months and invests ₹40,000. This venture runs for 12 months and earns a profit of ₹18,000. Find B's share in profit (rounded off up to next whole number).

- Ans
- ☒ 1. ₹ 5143
 - ☐ 2. ₹ 6314
 - ☐ 3. ₹ 8257
 - ☐ 4. ₹ 7582

Q.3 A shopkeeper increases the cost price of an article by 10% and sells it for ₹1331. Find the original cost price of the article.

- Ans
- ☐ 1. ₹1110
 - ☐ 2. ₹1100
 - ☒ 3. ₹1210
 - ☐ 4. ₹1200

Q.4 The volume of a cone is $96\pi \text{ cm}^3$ and its height is 8 cm. Find its base radius.

- Ans
- ☐ 1. 8 cm
 - ☐ 2. 5 cm
 - ☐ 3. 4 cm
 - ☒ 4. 6 cm

Q.5 Karan purchased a chair at a 19% discount on the printed price. Later, he sold it for ₹1,331, which is 21% more than the printed price. Find the cost price of the chair.

- Ans
- ☐ 1. ₹841
 - ☐ 2. ₹853
 - ☐ 3. ₹721
 - ☒ 4. ₹891

Q.6 A solid bronze sphere of radius 96 cm is melted and recast into small solid spheres, each of radius 12 cm, for children to play with. How many small spheres can be obtained?

- Ans
- ☐ 1. 729
 - ☐ 2. 216
 - ☒ 3. 512
 - ☐ 4. 343

Q.7 Train A and Train B are running on parallel tracks in opposite directions. Train A is 240 meters long and moves at 72 km/h, while Train B is 180 meters long and travels at 90 km/h. A person is sitting near the window in Train A. How long will Train B take to completely cross the person?

- Ans
- ☒ 1. 4 seconds
 - ☐ 2. 6 seconds
 - ☐ 3. 5 seconds
 - ☐ 4. 3 seconds

Q.8 The sum of two numbers is 84, and they are in the ratio 5 : 7. Find their product.

- Ans
- ☐ 1. 1615
 - ☐ 2. 1625
 - ☐ 3. 1725
 - ☒ 4. 1715

Q.9 Sandeep and Pradeep can do a work, working on alternate days, in 25 days, when Sandeep starts of day 1. However, they can do the same work, working on alternate days, in $25\frac{3}{4}$ days, when Pradeep starts on day 1. In how many days Sandeep alone can do the work?

- Ans
- ☐ 1. $20\frac{1}{2}$ days
 - ☐ 2. $15\frac{2}{3}$ days
 - ☐ 3. 18 days
 - ☒ 4. 16 days

Q.10 Which of the following speeds is the highest?3187

- Ans
- ☒ 1. 1.92 km/minute
 - ☐ 2. 30 m/second
 - ☐ 3. 90 km/h
 - ☐ 4. 1680 m/minute

Q.11 Pipe A can fill a tank in 6 hours, and Pipe B can fill the same tank in 3 hours. If both pipes are opened together, how long will it take to fill half the tank?

- Ans
- ☐ 1. 2 hours
 - ☒ 2. 1 hour
 - ☐ 3. 1.5 hours
 - ☐ 4. 2.5 hours

Q.12 X, Y, and Z are partners in a business. X and Y invested ₹50,000 and ₹40,000, respectively, at the beginning of the year. Z joined the partnership after 6 months with an investment of ₹60,000. The total profit for the year is ₹1,20,000. How much profit will Z receive at the end of the year?5435

- Ans
- ☒ 1. ₹30,000
 - ☐ 2. ₹24,000
 - ☐ 3. ₹18,000
 - ☐ 4. ₹20,000

Q.13 During a sale 60% of the goods are sold at 34% profit, 25% of the remaining goods are sold at 49% profit and the still remaining goods are sold at a loss of 15%. If there is an overall profit of x%, then what is the value of x?

- Ans
- ☐ 1. 22.2
 - ☐ 2. 11.5
 - ☐ 3. 30.5
 - ☒ 4. 20.8

Q.14 Raj, Aadil and John undertook a work for ₹10,152. Raj and Aadil tog

Aadil and John together completed $\frac{29}{47}$ of the work. Find the share of

- Ans
- ☒ 1. ₹3,888
 - ☐ 2. ₹3,858
 - ☐ 3. ₹3,828
 - ☐ 4. ₹3,848

Q.18 Formic acid is naturally found in _____.

- Ans**
- ☐ 1. Grapes
 - ☐ 2. Milk
 - ☐ 3. Curd
 - ☒ 4. Ant's sting

Q.19 The Right to Education in India guarantees free and compulsory education to children up to what age?

- Ans**
- ☐ 1. 16 years
 - ☐ 2. 12 years
 - ☒ 3. 14 years
 - ☐ 4. 10 years

Q.20 Executive authority of the Union, supreme command of the defence forces, and the appointment of the key constitutional functionaries are vested in which constitutional authority of India?

- Ans**
- ☐ 1. Vice-President of India
 - ☐ 2. Prime Minister of India
 - ☐ 3. Chief Justice of India
 - ☒ 4. President of India

Section : **Arithmetical and Numerical Ability**

Q.1 A merchant has 1,000 kg of sugar. He sells a portion of it at 10% profit and the remaining at 18% profit. If his overall profit is 14%, find the quantity sold at 18% profit.

- Ans**
- ☐ 1. 800 kg
 - ☒ 2. 500 kg
 - ☐ 3. 700 kg
 - ☐ 4. 600 kg

Q.2 The average of five consecutive integers is 48. Find the product of the smallest and the largest integers.

- Ans**
- ☐ 1. 2400
 - ☒ 2. 2300
 - ☐ 3. 2450
 - ☐ 4. 2350

Q.3 A vendor sold 28 chocolates for a rupee, thereby gaining 100%. How many did he buy for a rupee?

- Ans**
- ☒ 1. 56
 - ☐ 2. 62
 - ☐ 3. 58
 - ☐ 4. 60

Q.4 A stationery shop sells premium, standard, and basic pens at ₹15, ₹10, and ₹5 each, respectively. The pens are sold in the ratio 3 : 2 : 5. What is the average selling price (in ₹) of a pen?

- Ans**
- ☐ 1. 8
 - ☐ 2. 7
 - ☒ 3. 9
 - ☐ 4. 6

Q.5 Ishan has ₹1,722 with him. He divided it between his two sons, Krish and Veer, and asked them to invest it at 5% rate of interest compounded annually. It was seen that Krish and Veer got the same amount after 15 and 16 years, respectively. How much (in ₹) did Ishan give to Krish?

- Ans**
- ☐ 1. 940
 - ☐ 2. 732
 - ☐ 3. 840
 - ☒ 4. 882

Q.6 What is the least number which is divisible by 8, 12 and 18?

- Ans**
- ☒ 1. 72
 - ☐ 2. 96
 - ☐ 3. 108
 - ☐ 4. 144

Q.7 In what duration (in years) will ₹9,000 fetch a simple interest of ₹1,080 at 6% per annum rate of interest?¹⁵⁶⁰

- Ans**
- ☐ 1. 3
 - ☒ 2. 2
 - ☐ 3. 1
 - ☐ 4. 4

Q.8 The production of an instrument in a factory increases by 30% in the first year. In the second year, it decreases by 15%, and in the third year, it increases again by 20%. What is the overall percentage change in production after three years?

- Ans**
- ☐ 1. +33.8%
 - ☐ 2. -32.6%
 - ☐ 3. -33.8%
 - ☒ 4. +32.6%

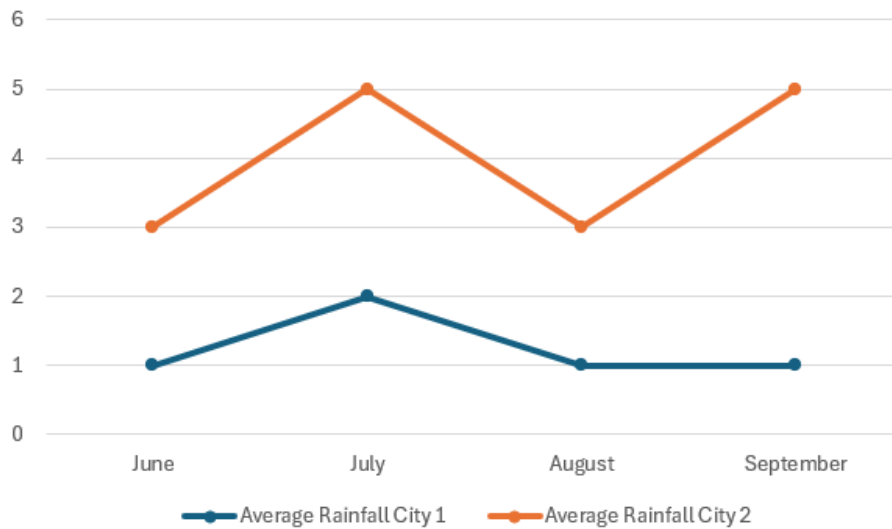
Q.9 The price of sugar falls by 22%. By how much per cent should a consumer increase its consumption so that his expenditure remains unchanged? (Rounded off to 2 decimal places)⁸⁹

- Ans**
- ☐ 1. 34.15%
 - ☐ 2. 22.04%
 - ☐ 3. 39.12%
 - ☒ 4. 28.21%

Q.10 Find the smallest number which when increased by 50 is completely divisible by 400, 800 and 1200.

- Ans**
- ☐ 1. 1500
 - ☒ 2. 2350
 - ☐ 3. 2000
 - ☐ 4. 1900

Q.11 The line graph below gives the average rainfall (in mm) of two cities in four consecutive months. Using the information provided in the graph, answer the question that follows.



What is the difference between the average rainfall in July in City 2 and in City 1?

- Ans
- ☒ 1. 3 mm
 - ☐ 2. 1 mm
 - ☐ 3. 4 mm
 - ☐ 4. 2 mm

Q.12 A student's marks were incorrectly entered as 24 instead of 52. Due to

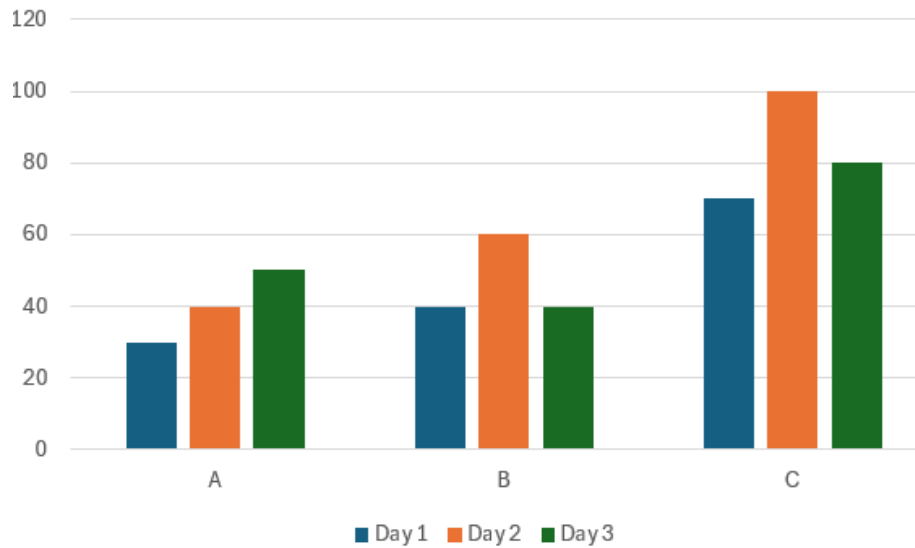
What is the number of students in the class?

- Ans
- ☒ 1. 20
 - ☐ 2. 13
 - ☐ 3. 11
 - ☐ 4. 30

Q.13 Find the product of the smallest and the largest prime numbers between 25 to 50.

- Ans
- ☐ 1. 1162
 - ☒ 2. 1363
 - ☐ 3. 1268
 - ☐ 4. 1309

Q.14 Given below is a bar graph for Companies A, B, and C showing their incomes over three days (amounts in ₹ thousand). Study the bar graph and answer the question that follows.



What is Company C's income (in ₹) on Day 2?

- Ans
- ☒ 1. 2,00,000
 - ☒ 2. 1,00,000
 - ☒ 3. 3,00,000
 - ☒ 4. 4,00,000

Q.15 Gopal has ₹1,722. He divided this sum between his two sons, Akshay and Arjun, and asked them to invest their respective shares at 5% per annum, compounded annually. It was observed that the amounts received by Akshay after 18 years and by Arjun after 19 years were equal. Find how much (in ₹) Gopal gave to Akshay.

- Ans
- ☒ 1. 732
 - ☒ 2. 940
 - ☒ 3. 840
 - ☒ 4. 882

Q.16 Find the principal which amounts to ₹31,492.80 after 3 years at 8% interest per annum, compounded annually.

- Ans
- ☒ 1. ₹26,100
 - ☒ 2. ₹24,000
 - ☒ 3. ₹25,000
 - ☒ 4. ₹26,800

Q.17 The traffic lights of three different crossings change after 24 seconds, 27 seconds and 36 seconds. If all of them change simultaneously at 09:16:00 a.m., then at what time will they again change simultaneously?

- Ans
- ☒ 1. 09:16:52 a.m.
 - ☒ 2. 09:52:03 a.m.
 - ☒ 3. 09:19:36 a.m.
 - ☒ 4. 09:22:00 a.m.

Q.18 Ramagya spent 41% of his monthly income on food, 39% on house rent, and 8% on transport, and saved ₹2,820. What is Ramagya's monthly income?

- Ans
- ☐ 1. ₹23,100
 - ☐ 2. ₹23,300
 - ☒ 3. ₹23,500
 - ☐ 4. ₹23,700

Q.19 The number of students in a class decreased from 250 to 225. What is the percentage decrease?

- Ans
- ☐ 1. 9%
 - ☐ 2. 8%
 - ☐ 3. 11%
 - ☒ 4. 10%

Q.20 Find the average of 314, 129, 96, 48, 125 and 116.

- Ans
- ☐ 1. 132
 - ☐ 2. 134
 - ☒ 3. 138
 - ☐ 4. 136

Section : **Arithmetical and Numerical Ability**¹

Q.1 Ramesh bought 15 cycles at ₹3,500 each. He spent ₹4,000 on repairing all the cycles. He sold 8 cycles at ₹4,800 each and the remaining cycles at ₹4,000 each. Find his total profit or loss percentage, correct to two decimal places.

- Ans
- ☐ 1. 17.52% loss
 - ☒ 2. 17.52% profit
 - ☐ 3. 13.36% loss
 - ☐ 4. 13.36% profit

Q.2 Team A can complete a project in 15 days, and Team B can complete the same project in 20 days. If both teams work together, but Team B leaves after 6 days, how many more days will Team A take to finish the remaining work?

- Ans
- ☐ 1. 2.5 days
 - ☐ 2. 5.5 days
 - ☐ 3. 6.5 days
 - ☒ 4. 4.5 days

Q.3 A person travelled a distance of 57 km in 9 hours. He travelled partly on foot at 5 km/hr and partly on bicycle at 8 km/hr. What is the distance travelled on foot?

- Ans
- ☐ 1. 20 km
 - ☐ 2. 10 km
 - ☐ 3. 15 km
 - ☒ 4. 25 km

Q.4 A, B, and C invested ₹12,000, ₹18,000 and ₹24,000, respectively in a business. After 6 months, A withdrew half of his capital while B and C left their investments unchanged. If the total profit at the end of the year is ₹8,415, what is C's share of the profit?

- Ans**
- ☒ 1. ₹3,900
 - ☒ 2. ₹3,960
 - ☒ 3. ₹3,920
 - ☒ 4. ₹3,940

Q.5 The ratio between the speeds of two trains is 8 : 5. If the second train runs 360 km in 4 hours, then find the speed of the first train.

- Ans**
- ☒ 1. 108 km/hr
 - ☒ 2. 144 km/hr
 - ☒ 3. 128 km/hr
 - ☒ 4. 136 km/hr

Q.6 The ratio of the areas of two triangles are 2 : 3 and the ratio of their bases is 3 : 2. Find the ratio of their heights.

- Ans**
- ☒ 1. 5 : 7
 - ☒ 2. 6 : 5
 - ☒ 3. 4 : 7
 - ☒ 4. 4 : 9

Q.7 A shopkeeper fixed the marked price of an article to include a 30% profit. He then gave a 10% discount. What is his actual profit if the selling price of the article is ₹25,740?

- Ans**
- ☒ 1. ₹3,740
 - ☒ 2. ₹4,250
 - ☒ 3. ₹3,050
 - ☒ 4. ₹2,400

Q.8 The ratio of two numbers is 9 : 5. If 11 is subtracted from the greater number and 8 is subtracted from the smaller number, then the greater number becomes twice the smaller one. Find the sum of the two numbers.

- Ans**
- ☒ 1. 98
 - ☒ 2. 56
 - ☒ 3. 70
 - ☒ 4. 84

Q.9 A product is sold under a 'Buy 13, Get 12 Free' offer. What is the effective discount percentage?

- Ans**
- ☒ 1. 48%
 - ☒ 2. 52%
 - ☒ 3. 40%
 - ☒ 4. 44%

Q.10 A boat running upstream takes 4 hours 30 minutes to cover a certain distance, while it takes 3 hours to cover the same distance downstream. What is the ratio of the speed of the boat in still water to the speed of the stream?

- Ans**
- ☒ 1. 3:2
 - ☒ 2. 5:1
 - ☒ 3. 5:4
 - ☒ 4. 4:3

Q.11 If $x : y = 5 : 8$ and $y : z = 12 : 15$, find $x : z$.

- Ans
- ☐ 1. $3 : 5$
 - ☒ 2. $1 : 2$
 - ☐ 3. $2 : 3$
 - ☐ 4. $5 : 6$

Q.12 What is the area (in cm^2) of a rhombus with side of 26 cm and one diagonal 20 cm?

- Ans
- ☐ 1. 472
 - ☒ 2. 480
 - ☐ 3. 484
 - ☐ 4. 475

Q.13 A dealer instructs his assistant to make a profit of 25% while selling a refrigerator having a cost price of ₹1,52,000. What should the selling price of the refrigerator then be?

- Ans
- ☐ 1. ₹1,45,000
 - ☒ 2. ₹1,90,000
 - ☐ 3. ₹1,52,000
 - ☐ 4. ₹1,65,000

Q.14 Anjali and Bipin can complete a job in 40 and 60 days, respectively. They work on alternate days, starting with Anjali. How many days will it take to complete the work?

- Ans
- ☒ 1. 48 days
 - ☐ 2. 52 days
 - ☐ 3. 45 days
 - ☐ 4. 50 days

Q.15 In a business, Ankit invests $\frac{3}{5}$ of the capital for four months, Chintu invests $\frac{2}{5}$ of the capital for one year. If the profit share of Ankit was ₹40,000, then the profit share of Chintu is

- Ans
- ☒ 1. 95,000
 - ☐ 2. 1,14,000
 - ☐ 3. 90,000
 - ☐ 4. 85,000

Q.16 The ratio of the volume of two metallic sphere A and B made of the same material is 1:8. If the surface area of the sphere A is 615.44 cm^2 , find the difference between the surface area of sphere A and sphere B (Use $\pi=3.14$).

- Ans
- ☐ 1. 1896.78 cm^2
 - ☐ 2. 1866.56 cm^2
 - ☒ 3. 1846.32 cm^2
 - ☐ 4. 1826.18 cm^2

Q.17 Why are green plants called autotrophs?

- Ans
- ☒ 1. Because they make their own food
 - ☐ 2. Because they eat other plants
 - ☐ 3. Because they grow in sunlight
 - ☐ 4. Because they absorb oxygen

Q.18 तमिलनाडु में स्थित एक यूनेस्को (UNESCO) विश्व धरोहर स्थल, अपने शैलकृत (rock-cut) मंदिरों और तट-मुख स्मारकों के लिए प्रसिद्ध है। यहाँ निम्नलिखित में से किस स्मारक समूह का वर्णन किया गया है?

- Ans
- ☒ 1. महाबलीपुरम के स्मारक समूह
 - ☐ 2. अजंता की गुफाएं
 - ☐ 3. होयसलेश्वर मंदिर
 - ☐ 4. श्री वेंकटेश्वर मंदिर

Q.19 कपाल मेनिन्जेस की वह परत, जो प्रत्यक्ष रूप से मस्तिष्क ऊतक के संपर्क में होती है, _____ कहलाती है।

- Ans
- ☒ 1. पिया मैटर (Pia mater)
 - ☐ 2. वल्कुट (Cortex)
 - ☐ 3. लूताजालाभ (Arachnoid)
 - ☐ 4. ड्युरा मैटर (Dura mater)

Q.20 मौलिक कर्तव्यों को किस समिति/आयोग की संस्तुति पर संविधान में शामिल किया गया था?

- Ans
- ☐ 1. अशोक मेहता समिति
 - ☐ 2. शाह आयोग
 - ☐ 3. प्रशासनिक सुधार आयोग
 - ☒ 4. स्वर्ण सिंह समिति

Section : Arithmetical and Numerical Ability

Q.1 A student's marks were incorrectly entered as 32 instead of 42. Due to

What is the number of students in the class?

- Ans
- ☒ 1. 4
 - ☐ 2. 11
 - ☐ 3. 10
 - ☐ 4. 3

Q.2 $4.85\overline{76}$ is equal to:

- Ans
- ☐ 1. $\frac{48589}{9900}$
 - ☐ 2. $\frac{48591}{9900}$
 - ☐ 3. $\frac{48581}{9900}$
 - ☒ 4. $\frac{48091}{9900}$

Q.3 A seller marked the price of a mattress 20% more than its cost price.]
If the cost price of mattress is ₹38,800, then what is the gain percent?

- Ans
- ☐ 1. 6%, and ₹2046
 - ☒ 2. 8%, and ₹3104
 - ☐ 3. 7%, and ₹3003
 - ☐ 4. 9%, and ₹4153

Q.4 Vijay's salary was first reduced by 37% and subsequently raised by 32%. By what percentage was his final salary lower compared to his initial salary?

- Ans
- ☐ 1. 37%
 - ☐ 2. 11.84%
 - ☐ 3. 32%
 - ☒ 4. 16.84%

Q.5 Find the value of $17x - 9y$ given in the following.

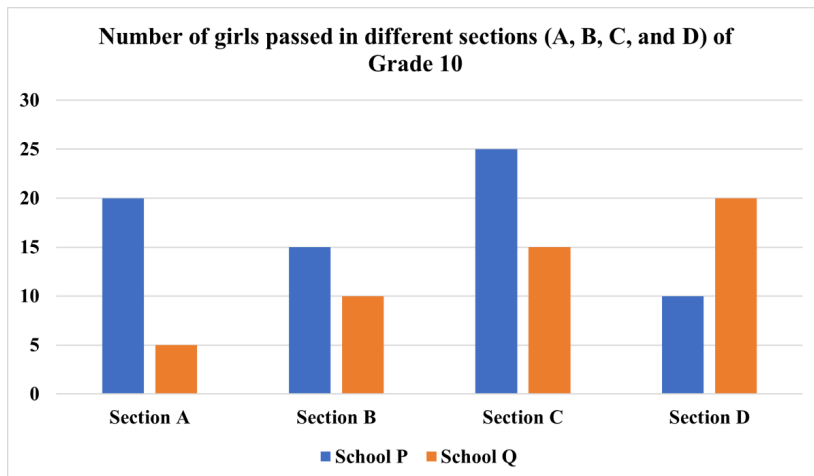
$$5^{x+y} = 3125, 3^{3x-y} = 2187$$

- Ans
- ☒ 1. 33
 - ☐ 2. 31
 - ☐ 3. 32
 - ☐ 4. 34

Q.6 राज की मासिक आय ₹10,000 थी, जिसमें से वह 80% का व्यय कर देता था और शेष की बचत कर लेता था। बाद में, उसकी आय में 25% की वृद्धि हुई और उसके मासिक व्यय में ₹1,200 की वृद्धि हुई। उसकी मासिक बचत में कितने प्रतिशत की वृद्धि हुई?

- Ans
- ☐ 1. 68%
 - ☒ 2. 65%
 - ☐ 3. 63%
 - ☐ 4. 60%

- Q.7 The following graph shows the number of girls who passed in school P and school Q in four Sections (A, B, C and D) of Grade 10. Study the graph and answer the question.



If there is a total of 30 girls in Section C of school P and a total of 28 girls in Section D of school Q, find the difference between the number of girls who failed in these two sections.

- Ans
- ☒ 1. 2
 - ☒ 2. 4
 - ☒ 3. 5
 - ☒ 4. 3

- Q.8 एक विक्रेता ने एक रुपये में 30 चॉकलेट बेचीं, जिससे उसे 30% का लाभ हुआ। उसने एक रुपये में कितनी चॉकलेट खरीदी थी?

- Ans
- ☒ 1. 43
 - ☒ 2. 45
 - ☒ 3. 41
 - ☒ 4. 39

- Q.9 In what duration (in years) will ₹9600 fetch a simple interest of ₹960 at 4% per annum rate of interest?

- Ans
- ☒ 1. 3.5
 - ☒ 2. 2.5
 - ☒ 3. 5
 - ☒ 4. 1.5

- Q.10 The average age of Sangeeta, Jatinder and Sonia is 32 years while the average age of Jatinder and Sonia is 34 years. What is the age (in years) of Sangeeta?

- Ans
- ☒ 1. 25
 - ☒ 2. 26
 - ☒ 3. 27
 - ☒ 4. 28

- Q.11 If $2^a = 3^b = 6^{-c}$, find the value of $\frac{ab + bc + ca}{abc}$

- Ans
- ☒ 1. 1
 - ☒ 2. 0
 - ☒ 3. -1
 - ☒ 4. -2

Q.12 A cafe recorded the number of cups of coffee sold from Monday to Saturday during a week.

Day	Mon	Tue	Wed	Thu	Fri	Sat
Cups Sold	40	55	50	60	65	70

What is the average number of cups sold per day from Monday to Friday?

- Ans
- ☒ 1. 54
 - ☐ 2. 50
 - ☐ 3. 52
 - ☐ 4. 55

Q.13 Yuvraj deposited a certain sum of money at 20% per annum, compounded annually. At the end of 4 years, the total amount received was ₹25,920. Find the sum of money deposited by Yuvraj.

- Ans
- ☐ 1. ₹12,999
 - ☐ 2. ₹12,808
 - ☒ 3. ₹12,500
 - ☐ 4. ₹12,043

Q.14 Abhishek lends a certain sum at the rate of 20% per annum, compounded annually for 2 years. If the interest was calculated half-yearly, he would have received ₹4,579 more. Find the sum.

- Ans
- ☐ 1. ₹1,95,000
 - ☐ 2. ₹2,00,000
 - ☐ 3. ₹1,80,000
 - ☒ 4. ₹1,90,000

Q.15 Mahesh has ₹1722 with him. He divided it between his two sons, Vijay and Ajay, and asked them to invest it at 5% rate of interest compounded annually. It was seen that Vijay and Ajay got the same amount after 13 and 14 years, respectively. How much (in ₹) did Mahesh give to Vijay?

- Ans
- ☐ 1. 840
 - ☐ 2. 732
 - ☒ 3. 882
 - ☐ 4. 940

Q.16 A store sold a shirt for ₹800. Later, the price of the shirt increased by 15%. After a week, the price was reduced by 10%. What is the final price of the shirt?

- Ans
- ☒ 1. ₹828
 - ☐ 2. ₹830
 - ☐ 3. ₹850
 - ☐ 4. ₹800

Q.17 The average of 7 numbers is 23. If one number is excluded, then the new average is 20. What is the excluded number?

- Ans
- ☒ 1. 41
 - ☐ 2. 44
 - ☐ 3. 43
 - ☐ 4. 42

Q.18 If $x = 84 \div 12 + 3$ of $15 \div 9 \times 2 + 16 \div 4 \times 8$, then x is divisible by:

- Ans
- ☐ 1. 2
 - ☐ 2. 3
 - ☒ 3. 7
 - ☐ 4. 5

Q.19 The price of an article is first increased by 20% and then decreased by 25%. If the resulting price is ₹648, find the original price of the article.

- Ans**
- ☐ 1. ₹700
 - ☐ 2. ₹750
 - ☐ 3. ₹725
 - ☒ 4. ₹720

Q.20 The average height of a group of 7 students is 154 cm. Another student joins this group and the new average height becomes 152 cm. Find the height of the 8th student.

- Ans**
- ☐ 1. 143 cm
 - ☐ 2. 136 cm
 - ☒ 3. 138 cm
 - ☐ 4. 141 cm

Section : **Arithmetical and Numerical Ability1**

Q.1 Divide ₹1,65,000 among A, B and C so that A will receive $\frac{2}{9}$ as much



- Ans**
- ☒ 1. ₹30,000; ₹44,000; ₹91,000
 - ☐ 2. ₹34,000; ₹40,000; ₹91,000
 - ☐ 3. ₹32,000; ₹42,000; ₹91,000
 - ☐ 4. ₹31,000; ₹44,000; ₹90,000

Q.2 The ratio of three numbers is 3 : 5 : 7. If the difference between the third and the second number is 24, what is the sum of the three numbers?

- Ans**
- ☐ 1. 150
 - ☐ 2. 172
 - ☐ 3. 196
 - ☒ 4. 180

Q.3 A pipe can fill a tank in 12 hours. Another pipe can fill the same tank in 18 hours. If both pipes are opened together, then how long will it take to fill the tank completely?

- Ans**
- ☒ 1. 7 hours 12 minutes
 - ☐ 2. 6 hours
 - ☐ 3. 8 hours
 - ☐ 4. 7 hours 30 minutes

Q.4 A manufacturing firm starts producing 3,000 units of a specific component and fixes the selling price at ₹30 per unit. The firm initially projected an overall profit margin of 20%, despite anticipating a 10% production loss due to quality control issues. However, the actual production process resulted in a 40% rejection rate. Assuming that the cost per unit remains constant in all situations, find the difference between the expected profit and the actual profit, expressed as a percentage of the total cost incurred.

- Ans**
- ☐ 1. 60%
 - ☐ 2. 70%
 - ☐ 3. 50%
 - ☒ 4. 40%

Q.5 Three numbers are in the ratio 2:3:4. If the sum of their squares is 1421, find the largest number.

- Ans**
- ☐ 1. 26
 - ☐ 2. 22
 - ☐ 3. 24
 - ☒ 4. 28

Q.6 A department store receives a shipment of 1000 jerseys for ₹5,00,000. The store sells 75% of the jerseys at a price 25% above the cost price during the first month. The remaining jerseys are sold later at a reduced price of 10% above the cost price. Find the profit percentage of the store on the sale of jerseys.

- Ans**
- ☐ 1. 10.75%
 - ☐ 2. 10.5%
 - ☒ 3. 21.25%
 - ☐ 4. 20.5%

Q.7 Anjali invests ₹20,000 for 15 months, Bikas invests ₹30,000 for 12 months, and Chintamani invests ₹40,000 for 9 months. If the total profit is ₹85,000, find the share of Bikas in the total profit.

- Ans**
- ☐ 1. ₹25,000
 - ☐ 2. ₹26,000
 - ☐ 3. ₹28,000
 - ☒ 4. ₹30,000

Q.8 Maya can type 60 pages in 5 hours and Priya can type the same 60 pages in 4 hours. Working together, how long will they take to type 60 pages?

- Ans**
- ☐ 1. 2 hours
 - ☒ 2. $2\frac{2}{9}$ hours
 - ☐ 3. $2\frac{4}{9}$ hours
 - ☐ 4. $2\frac{2}{3}$ hours

Q.9 A cyclist covers a certain distance in 6 hr. If his speed had been 5 km/hr more, he would have taken 2 hr less. What is the distance (in km)?

- Ans**
- ☐ 1. 65
 - ☒ 2. 60
 - ☐ 3. 70
 - ☐ 4. 55

Q.10 A shirt is marked at ₹1,200. A shopkeeper offers a discount of 10% on the marked price and then charges 5% GST on the discounted price. What is the amount of GST charged?

- Ans**
- ☐ 1. ₹56
 - ☐ 2. ₹52
 - ☐ 3. ₹58
 - ☒ 4. ₹54

Q.11 Suman covers 96 km downstream in 4 hours and returns the same distance upstream in 6 hours. Find the speed of the current.

- Ans**
- ☐ 1. 3 km/hr
 - ☐ 2. 6 km/hr
 - ☐ 3. 5 km/hr
 - ☒ 4. 4 km/hr

Q.12 What is the number of solid wax balls, each of radius 2 cm, that can be moulded from a solid sphere of wax of radius 16 cm?

- Ans
- ☐ 1. 256
 - ☐ 2. 1024
 - ☐ 3. 768
 - ☒ 4. 512

Q.13 A research scientist needs to travel 240 km to attend a conference. She estimates her travel time based on her planned speed, but due to unexpected road construction, she has to drive 20 km/hr slower than planned for the entire journey. If this delay causes her to arrive 2 hours later than her initial estimate, what was her originally planned speed?

- Ans
- ☐ 1. 50 km/hr
 - ☐ 2. 55 km/hr
 - ☒ 3. 60 km/hr
 - ☐ 4. 45 km/hr

Q.14 Two inlet pipes, A and B, are connected to a tank through an electric motor. Pipe A can fill half of the tank in 12 hours, and Pipe B can fill one-third part of the tank in 12 hours when the electric supply is 200 V. There is also an outlet pipe at the bottom of the tank that can empty the entire tank in 36 hours. If the efficiency of the inlet pipes is directly proportional to the voltage of the electric supply, then in how many hours will the tank be completely filled when all three pipes are opened and the motor operates at 400 V?

- Ans
- ☐ 1. 7
 - ☐ 2. 8
 - ☐ 3. 6
 - ☒ 4. 9

Q.15 A car travels the first part of a journey at 40 km/h and the second part at 60 km/h, spending equal time on each part. If the total distance is 200 km, find the total time taken.

- Ans
- ☒ 1. 4 hours
 - ☐ 2. 8 hours
 - ☐ 3. 2 hours
 - ☐ 4. 3 hours

Q.16 A solid sphere of radius 9 cm is melted and recast into a right circular cylinder of height 36 cm. What is the radius of the base of the cylinder?

- Ans
- ☒ 1. $3\sqrt{3}$ cm
 - ☐ 2. 3 cm
 - ☐ 3. 15 cm
 - ☐ 4. 9 cm

Q.17 Two pipes R and S can fill a tank in 10 minutes and 12 minutes, respectively. Both pipes are opened together but after 3 minutes, pipe R is turned off. What is the total time required to fill the tank?

- Ans
- ☐ 1. 10.4 minutes
 - ☒ 2. 8.4 minutes
 - ☐ 3. 11.6 minutes
 - ☐ 4. 11.4 minutes

Q.19 A diet that provides all essential nutrients needed for good health is known as ____

- Ans
- ☐ 1. Therapeutic diet
 - ☐ 2. Raw Food diet
 - ☒ 3. Balanced diet
 - ☐ 4. Crash diet

Q.20 Which style of temple architecture is popular in southern India?

- Ans
- ☐ 1. Nagara
 - ☐ 2. Vesar
 - ☐ 3. Sarvatobhadra
 - ☒ 4. Dravida

Section : Arithmetical and Numerical Ability

Q.1 In a family, monthly expenses are divided as follows:

- 1. Food: ₹9,600
- 2. Rent: ₹12,800
- 3. Other expenses: ₹6,400

What percentage of total expenses is spent on food?

- Ans
- ☒ 1. $33\frac{1}{3}\%$
 - ☐ 2. $33\frac{2}{3}\%$
 - ☐ 3. $32\frac{1}{4}\%$
 - ☐ 4. 34%

Q.2 A 96-litre container has a mixture of juice and water in the ratio 5:7. 60 litres of this mixture is removed and replaced with pure water. What is the new ratio of juice to water?

- Ans
- ☐ 1. 5 : 21
 - ☐ 2. 5 : 17
 - ☒ 3. 5 : 27
 - ☐ 4. 5 : 12

Q.3 In a 60 litre mixture of milk and water, the ratio of milk and water is 2 : 1. How much water should be added to make the ratio 1 : 1?

- Ans
- ☐ 1. 18 litres
 - ☒ 2. 20 litres
 - ☐ 3. 25 litres
 - ☐ 4. 30 litres

Q.4 A vendor sold 29 chocolates for a rupee, thereby gaining 80%. How many did he buy for a rupee?

- Ans
- ☐ 1. 52.5
 - ☐ 2. 50.2
 - ☐ 3. 50.5
 - ☒ 4. 52.2

Q.5 The population of a town is 20,000. It increases at the rate of 5% per

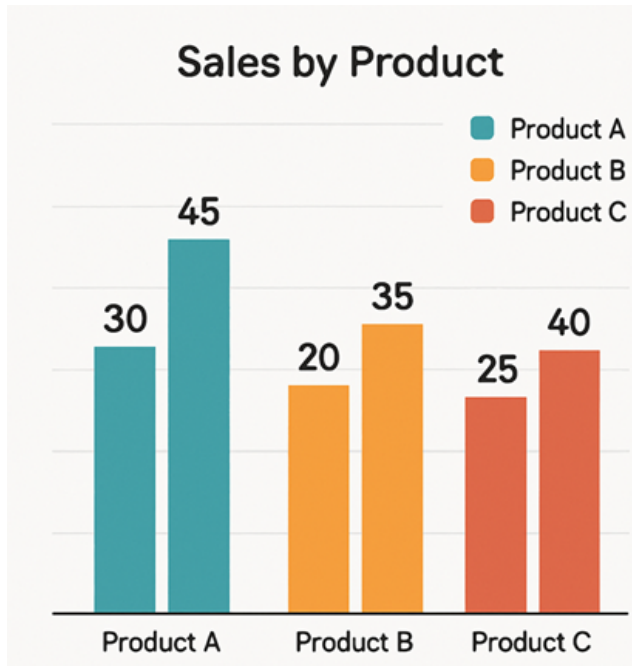
Ans ☒ 1. 22,050

☐ 2. 22,500

☐ 3. 22,505

☐ 4. 22,005

Q.6 The graph shows sales of three products (Product A, Product B, Product C) over two years (Year 1 and Year 2). The first bar of the product shows year 1 and second bar shows year 2. Study the graph and answer the question.



What is the ratio of total sales of all products in Year 1 to the total sales in Year 2?

Ans ☐ 1. 8 : 9

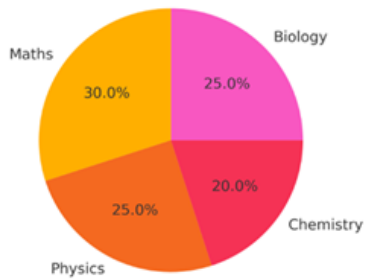
☐ 2. 6 : 7

☐ 3. 25 : 38

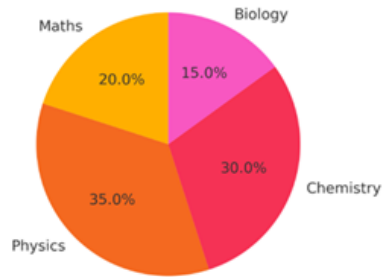
☒ 4. 5 : 8

Q.7 The charts below show the distribution of students in two classes (A and B) across different subjects. Study the charts and answer the question.

Distribution of Students in Class A



Distribution of Students in Class B



If Class A and Class B have equal number of students, which subject saw the highest increase in percentage from Class A to Class B?

- Ans**
- ☐ 1. Maths
 - ☐ 2. Physics
 - ☒ 3. Chemistry
 - ☐ 4. Biology

Q.8 The value of the expression $3\{-4 \times 0.125 + \frac{1}{4} \times 2^3 + 2 \times (-2) \div (-4)\}$ is _____.

- Ans**
- ☐ 1. 1.5
 - ☐ 2. 5.5
 - ☐ 3. 15
 - ☒ 4. 7.5

Q.9 In what duration (in years) will ₹9600 fetch a simple interest of ₹720 at 6% per annum rate of interest?

- Ans**
- ☐ 1. 2.5
 - ☐ 2. 0.25
 - ☐ 3. 2.25
 - ☒ 4. 1.25

Q.10 A man sells two chairs for ₹1,440 each. On one, he makes a profit of 20%, and on the other, he makes a loss of 20%. Find his total loss/gain in these two transactions (in ₹).

- Ans**
- ☒ 1. loss of ₹120
 - ☐ 2. gain of ₹110
 - ☐ 3. gain of ₹140
 - ☐ 4. loss of ₹122

Q.11 A student scored 70, 80, and 90 marks in three subjects with respective weights 1, 2, and 3. What is the weighted average (rounded off to two decimal places)?

- Ans**
- ☐ 1. 82.22
 - ☐ 2. 84.34
 - ☐ 3. 85.45
 - ☒ 4. 83.33

Q.12 A number, when increased by 20%, becomes 540. What is the original number?

- Ans
- ☐ 1. 470
 - ☐ 2. 460
 - ☐ 3. 480
 - ☒ 4. 450

Q.13 Mahesh deposited a certain sum of money at 8% per annum, compounded annually. At the end of 2 years, the total amount received was ₹85,293. Find the sum of money deposited by Mahesh.

- Ans
- ☐ 1. ₹73,014
 - ☐ 2. ₹73,483
 - ☐ 3. ₹73,101
 - ☒ 4. ₹73,125

Q.14 Solve using BODMAS : $156 + [7 \times (1 - 4 + 8)] \div 5$

- Ans
- ☒ 1. 163
 - ☐ 2. 160
 - ☐ 3. 161
 - ☐ 4. 162

Q.15 The length of a rectangle is increased by 28%, while its breadth is decreased by 13%. Find the percentage increase in the area of the rectangle.

- Ans
- ☐ 1. 10.09%
 - ☐ 2. 11.25%
 - ☐ 3. 12.45%
 - ☒ 4. 11.36%

Q.16 Simplify $0.75 + \frac{3}{0.4}$

- Ans
- ☐ 1. 9.25
 - ☐ 2. 7.75
 - ☐ 3. 6.5
 - ☒ 4. 8.25

Q.17 Kartik has ₹1,722. He divided this sum between his two sons, Ishan and Krish, and asked them to invest their respective shares at 10% per annum, compounded annually. It was observed that the amounts received by Ishan after 12 years and by Krish after 13 years were equal. Find how much (in ₹) Kartik gave to Ishan.

- Ans
- ☐ 1. 820
 - ☐ 2. 752
 - ☐ 3. 920
 - ☒ 4. 902

Q.18 Simplify: $\sqrt[3]{2^4 \sqrt{2^{-5} \sqrt{4^3}}}$

- Ans
- ☐ 1. 2^{-1}
 - ☐ 2. $\sqrt[3]{2}$
 - ☒ 3. 2
 - ☐ 4. $\sqrt{2}$

Q.19 A teacher has three classes with average scores 80, 85 and 90 and number of students 25, 30 and 45, respectively. What is the weighted average score?

- Ans
- ☐ 1. 87
 - ☐ 2. 86.5
 - ☐ 3. 85.5
 - ☒ 4. 86

Q.20 The ratio of a person's income to his expenditure is 7 : 3. If his expenditure is ₹21,000, find his savings.

- Ans
- ☐ 1. ₹27,500
 - ☐ 2. ₹28,500
 - ☒ 3. ₹28,000
 - ☐ 4. ₹27,000

Section : **Arithmetical and Numerical Ability1**

Q.1 A dealer set the marked price of an item 10% above its cost price and then allowed a discount of 20% on the marked price. What was his actual percentage of profit or loss?

- Ans
- ☐ 1. 12% profit
 - ☐ 2. 20% loss
 - ☒ 3. 12% loss
 - ☐ 4. 10% profit

Q.2 Two numbers are in ratio of 1 : 2. If 24 added to both the numbers, then the ratio of the two numbers becomes 11 : 16. Find the greater number.

- Ans
- ☐ 1. 30
 - ☐ 2. 60
 - ☐ 3. 20
 - ☒ 4. 40

Q.3 A trip from City A to City B takes 5 hours 40 minutes at a speed of 90 km/h. How many hours will it take if the speed is 30 m/s?

- Ans
- ☐ 1. $2\frac{13}{18}$
 - ☐ 2. $3\frac{13}{18}$
 - ☐ 3. $5\frac{13}{18}$
 - ☒ 4. $4\frac{13}{18}$

Q.4 A field is in the form of an isosceles triangle whose equal sides are 34 m and the third side is 32 m. What is its area (in m²)?

- Ans
- ☒ 1. 480
 - ☐ 2. 430
 - ☐ 3. 420
 - ☐ 4. 450

Q.5 How many solid spheres of radius 4 cm can be formed by melting a solid metallic cylinder with radius 8 cm and height 20 cm?

- Ans**
- ✓ 1. 15
 - ✗ 2. 12
 - ✗ 3. 18
 - ✗ 4. 21

Q.6 A certain number of solid conical objects, each with a radius of 5 cm and a height of 8 cm, are melted and recast into a single cylindrical object with both radius and height equal to 20 cm. How many conical objects were melted to form the cylindrical object?

- Ans**
- ✓ 1. 120
 - ✗ 2. 105
 - ✗ 3. 145
 - ✗ 4. 90

Q.7 A started a business at the beginning of a year with ₹36,000, and after 4 months, B joined him with ₹48,000. At the end of the year, in what ratio should they share the profit?

- Ans**
- ✓ 1. 9 : 8
 - ✗ 2. 12 : 11
 - ✗ 3. 5 : 3
 - ✗ 4. 3 : 2

Q.8 Pipe A can fill a water tank in 12 hours, and pipe B can empty it in 20 hours. If both are opened together, in how much time (in hrs) will the tank be filled?

- Ans**
- ✓ 1. 30
 - ✗ 2. 26
 - ✗ 3. 24
 - ✗ 4. 28

Q.9 Pipe A can fill a tank in 16 hours, and pipe B, in 24 hours. An outlet pipe C can empty the full tank in 32 hours. All three pipes are opened together but after 4 hours, pipe C is closed. How much total time will it take to fill the tank completely?

- Ans**
- ✗ 1. 9.6 hours
 - ✗ 2. 10.6 hours
 - ✗ 3. 9.8 hours
 - ✓ 4. 10.8 hours

Q.10 Two trains of lengths 240 m and 300 m are running in opposite directions at speeds 63 km/hr and 81 km/hr, respectively. Find the time (in seconds) they will take to cross each other.

- Ans**
- ✓ 1. 13.5
 - ✗ 2. 14.5
 - ✗ 3. 12.5
 - ✗ 4. 11.5

Q.11 A and B enter into a partnership by investing ₹12,000 and ₹18,000, respectively. After 6 months, C joins the partnership with an investment of ₹24,000. At the end of the year, the total profit is ₹54,000. What is C's share in the profit? (Correct to two decimal places.)

- Ans**
- ✗ 1. ₹16,228.57
 - ✓ 2. ₹15,428.57
 - ✗ 3. ₹14,728.57
 - ✗ 4. ₹17,128.57

Q.12 Three workers A, B, and C can complete a task in 10 days, 15 days, and 20 days, respectively. If A works alone for the first 5 days, and then B and C together continue the work until it is finished, in how many total days will the task be completed?

- Ans
- ☐ 1. $7\frac{2}{13}$
 - ☒ 2. $7\frac{4}{13}$
 - ☐ 3. $8\frac{5}{13}$
 - ☐ 4. $8\frac{4}{13}$

Q.13 The area of the base of a cylinder is $\frac{1}{14}$ of its total surface area. Find surface area to the curved surface area of the cylinder.

- Ans
- ☐ 1. 5 : 6
 - ☐ 2. 3 : 2
 - ☐ 3. 8 : 7
 - ☒ 4. 7 : 6

Q.14 The cost of 5 pens and 7 notebooks is ₹250. If the ratio of the cost of a pen to a notebook is 3:5, what is the total cost of 2 pens and 3 notebooks?

- Ans
- ☐ 1. ₹90
 - ☐ 2. ₹80
 - ☒ 3. ₹105
 - ☐ 4. ₹100

Q.15 A shopkeeper wants to give two successive discounts such that the net discount is 49%. If the first discount is 32%, then what should be the second discount?

- Ans
- ☐ 1. 24%
 - ☒ 2. 25%
 - ☐ 3. 22%
 - ☐ 4. 27%

Q.16 A 360 m long train crosses a 240 m long platform in 30 seconds. It then crosses a man walking in the same direction in 20 seconds. What is the speed of the man?

- Ans
- ☒ 1. 2 m/s
 - ☐ 2. 5 m/s
 - ☐ 3. 3 m/s
 - ☐ 4. 4 m/s

Q.17 A shopkeeper bought 8 biscuit packets for ₹100. How many biscuit p

3139

- Ans
- ☐ 1. 5 packets
 - ☒ 2. 6 packets
 - ☐ 3. 7 packets
 - ☐ 4. 4 packets

Q.20 Why is the Right to Constitutional Remedies called the “heart and soul” of the Constitution?

- Ans**
- ☐ 1. Because it gives power to the judiciary
 - ☐ 2. Because it provides special rights to the President
 - ☐ 3. Because it applies to Parliament only
 - ☒ 4. Because it allows citizens to protect their rights

Section : Arithmetical and Numerical Ability

Q.1 A shopkeeper buys a bicycle for ₹2,000. He marks it up by 25% and sells it at a discount of 10% to a customer. The customer then sells it to a friend at a profit of ₹200. What is the total profit made by the shopkeeper and the customer combined (in ₹)?

- Ans**
- ☐ 1. ₹600
 - ☒ 2. ₹450
 - ☐ 3. ₹550
 - ☐ 4. ₹500

Q.2 The population of a town increased from 24,000 to 27,600 in one year. What is the percentage increase in the population?

- Ans**
- ☐ 1. 13%
 - ☐ 2. 14%
 - ☐ 3. 12%
 - ☒ 4. 15%

Q.3 In what duration (in years) will ₹9600 fetch a simple interest of ₹840 at 5% per annum rate of interest?

- Ans**
- ☒ 1. 1.75
 - ☐ 2. 2.75
 - ☐ 3. 0.75
 - ☐ 4. 3.5

Q.4 Navjot deposited a sum of ₹57,500 at a rate of interest of 8% per annum, compounded annually. What will be the total amount received by Navjot after 2 years?

- Ans**
- ☐ 1. ₹66,787
 - ☐ 2. ₹67,077
 - ☐ 3. ₹67,039
 - ☒ 4. ₹67,068

Q.5 The table below shows the weekly sales (in ₹) of five stores (A, B, C, D and E).

Store	Weekly Sales (₹)
Store A	50,000
Store B	48,000
Store C	55,000
Store D	51,000
Store E	58,500

What is the average weekly sale across all five stores?

- Ans
- ☐ 1. ₹49,200
 - ☒ 2. ₹52,500
 - ☐ 3. ₹51,000
 - ☐ 4. ₹53,000

Q.6 Find the average of 315, 128, 97, 46, 33, and 23.

- Ans
- ☐ 1. 108
 - ☐ 2. 106
 - ☒ 3. 107
 - ☐ 4. 109

Q.7 Simplify: $56 \div 8 + 39 \div 13 \times 7 - 5$ of $4 + 8$

- Ans
- ☐ 1. 14
 - ☒ 2. 16
 - ☐ 3. 18
 - ☐ 4. 12

Q.8 Find the least number which when divided by 5, 6, 8, and 24 leaves the same remainder 4 in each case.

- Ans
- ☐ 1. 148
 - ☐ 2. 52
 - ☐ 3. 76
 - ☒ 4. 124

Q.9 The product of two numbers is 1280, and their HCF is 16. What will be the remainder when the number 252 is divided by the LCM of the two initial numbers whose product is given?

- Ans
- ☐ 1. 6
 - ☒ 2. 12
 - ☐ 3. 14
 - ☐ 4. 9

Q.10 Vijay's salary was first reduced by 37% and subsequently raised by 24%. By how much percentage was his final salary lower compared to his initial salary?

- Ans
- ☐ 1. 37%
 - ☒ 2. 21.88%
 - ☐ 3. 24%
 - ☐ 4. 8.88%

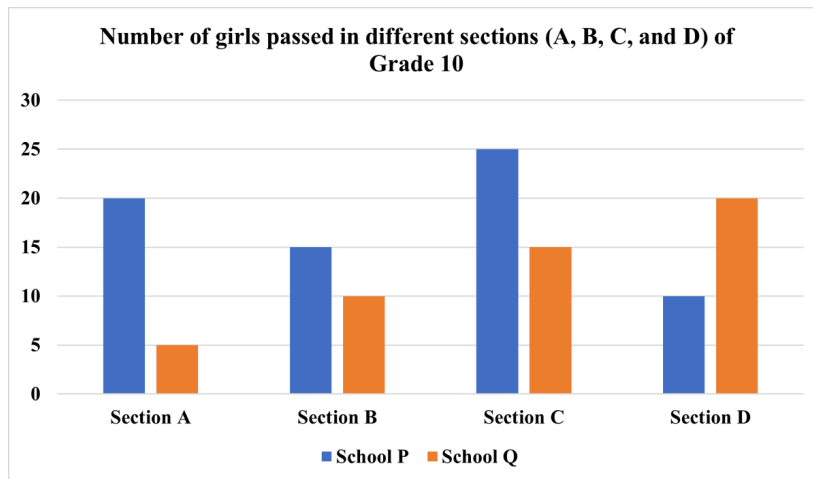
Q.11 Vijay has ₹1,722. He divided this sum between his two sons, Ajay and Prakash, and asked them to invest their respective shares at 10% per annum, compounded annually. It was observed that the amounts received by Ajay after 11 years and by Prakash after 12 years were equal. Find how much (in ₹) Vijay gave to Ajay.

- Ans**
- ☒ 1. 902
 - ☐ 2. 820
 - ☐ 3. 920
 - ☐ 4. 752

Q.12 A shopkeeper increases the price of a product by 22% and then offers a discount of 12% on the increased price. What is the net percentage change in the price of the product?

- Ans**
- ☐ 1. 10% decrease
 - ☒ 2. 7.36% increase
 - ☐ 3. 7.36% decrease
 - ☐ 4. 10% increase

Q.13 The following graph shows the number of girls who passed in school P and school Q in four sections (A, B, C and D) of Grade 10. Study the graph and answer the question.



If 23 girls appeared for the examination in Section B of school Q, find the number of girls who failed the examination.

- Ans**
- ☐ 1. 14
 - ☒ 2. 13
 - ☐ 3. 12
 - ☐ 4. 11

Q.14 The number 2616 is divisible by which of the following numbers?

- Ans**
- ☐ 1. 9
 - ☒ 2. 8
 - ☐ 3. 17
 - ☐ 4. 7

Q.15 The present population of a town is 47,500. If it increases at the rate of 6% per annum, then what will be the population of the town after 2 years?

- Ans**
- ☐ 1. 53,471
 - ☐ 2. 53,381
 - ☐ 3. 53,271
 - ☒ 4. 53,371

Q.16 A bus travels 140 km at a speed of 70 km/h. It covers another 270 km at a speed of 90 km/h. What is its average speed?

- Ans**
- ☐ 1. 83 km/h
 - ☒ 2. 82 km/h
 - ☐ 3. 80 km/h
 - ☐ 4. 81 km/h

Q.17 A student's marks were incorrectly entered as 72 instead of 78. Due to this, the average marks of the class decreased by 0.4. What is the number of students in the class?

- Ans**
- ☐ 1. 8
 - ☐ 2. 13
 - ☒ 3. 4
 - ☐ 4. 10

Q.18 In Ajay's production factory, the production of cars decreased by $\frac{7}{3}\%$ from year 2020 to 2021. If the factory produced 2930 cars in 2021, find the number of cars produced by the factory in 2020.

- Ans**
- ☐ 1. 4000
 - ☐ 2. 4500
 - ☒ 3. 3000
 - ☐ 4. 2500

Q.19 Find the average of 314, 129, 90, 48, 125 and 110.

- Ans**
- ☒ 1. 136
 - ☐ 2. 134
 - ☐ 3. 138
 - ☐ 4. 140

Q.20 A product is sold through three successive stages i.e. Manufacturer to Wholesaler, Wholesaler to Retailer, and Retailer to Customer. If the manufacturer marks the product 50% above its cost price and provides a discount of 25%, the wholesaler marks it up by 20% and offers a discount of 4%, and the retailer marks it up by 50% and provides a discount of 25%, calculate the final selling price of the product to the customer if the manufacturer's cost price is of ₹1,000.

- Ans**
- ☐ 1. ₹1,412
 - ☐ 2. ₹1,434
 - ☐ 3. ₹1,476
 - ☒ 4. ₹1,458

Section : Arithmetical and Numerical Ability1

Q.1 What is surface area of a cuboid whose dimensions are 12 cm, 16 cm and 8 cm?

- Ans**
- ☐ 1. 816 cm²
 - ☒ 2. 832 cm²
 - ☐ 3. 864 cm²
 - ☐ 4. 848 cm²

Q.2 A gardener can water a garden in 10 hours, while a helper can do the same job in 15 hours. If both of them water the garden together, then how long will it take to finish the job?

- Ans
- ☐ 1. 8 hours
 - ☒ 2. 6 hours
 - ☐ 3. 9 hours
 - ☐ 4. 5 hours

Q.3 A man travels along the three sides of an equilateral triangular field at speeds of 15 km/h, 20 km/h, and 30 km/h, respectively. Find his average speed (in km/h) for the whole trip.

- Ans
- ☐ 1. 15
 - ☐ 2. 25
 - ☒ 3. 20
 - ☐ 4. 10

Q.4 If the numbers 6, 13, 21.5, and y are in proportion, find the value of y (correct to two places after decimal).

- Ans
- ☒ 1. 46.58
 - ☐ 2. 46.18
 - ☐ 3. 46.38
 - ☐ 4. 46.78

Q.5 यदि एक दुकानदार ₹1,00,000 के क्रय मूल्य वाली प्रिंटिंग मशीन को ₹92,000 में बेचता है, तो हानि प्रतिशत ज्ञात कीजिए।

- Ans
- ☐ 1. 6.8%
 - ☐ 2. 1%
 - ☐ 3. 11%
 - ☒ 4. 8%

Q.6 A train travels 90 kilometres at a speed of 45 km/hr and another 90 kilometres at a speed of 75 km/hr. The average speed of the train for the entire journey is:

- Ans
- ☒ 1. 56.25 km/hr
 - ☐ 2. 56 km/hr
 - ☐ 3. 66 km/hr
 - ☐ 4. 66.25 km/hr

Q.7 Amit can do as much work in 6 days as Shyam in 10 days. Bela can do as much work in 6 days as Shyam can do in 4 days. What time (in days) would Bela require to do the work, if Amit takes 120 days to complete it?

- Ans
- ☒ 1. 300
 - ☐ 2. 350
 - ☐ 3. 200
 - ☐ 4. 250

Q.8 P can do a piece of work in 14 days and R can do 50% of the same work in 10.5 days. Then in how many days P and R working together complete the same work?

- Ans
- ☐ 1. 8.8
 - ☒ 2. 8.4
 - ☐ 3. 6.5
 - ☐ 4. 7.2

Q.9 If a solid metallic cuboid of measurements 56 cm, 44 cm and 14 cm is melted and is made into three equal spheres, then find the radius (in cm) for each sphere.

$\left(\text{Use } \pi = \frac{22}{7} \right)$

- Ans
- ☐ 1. 28
 - ☐ 2. 10.5
 - ☒ 3. 14
 - ☐ 4. 12.4

Q.10 A retailer marks a product at ₹2,400 and offers a discount of 12.5% on it. If the cost price of the product is ₹1,600, what is the retailer's profit percentage?

- Ans
- ☐ 1. 32%
 - ☒ 2. 31.25%
 - ☐ 3. 33.33%
 - ☐ 4. 30%

Q.11 Two trains X and Y are travelling towards each other on parallel tracks with a speed of 78 km/hr and 48 km/hr, respectively. The guard of train Y noticed that it took exactly 8 seconds for the train X to cross by him. Find the length of train X.

- Ans
- ☐ 1. 240 m
 - ☐ 2. 255 m
 - ☒ 3. 280 m
 - ☐ 4. 320 m

Q.12 A trader purchased 5 laptops and 10 desktops from a wholesale shop for ₹9,10,000 and sold them to a retailer. He made a profit of 20% on the laptops and 10% on the desktops. If the cost price of each laptop is ₹60,000, find his overall gain percentage. (Round off your answer to one decimal place.)

- Ans
- ☐ 1. 12.5%
 - ☐ 2. 15.5%
 - ☒ 3. 13.3%
 - ☐ 4. 10.3%

Q.13 Pipe A usually fills a tank in 2 hours. On account of a leak at the bottom, it takes pipe A 30 minutes more to fill the tank. How long will the leak



- Ans
- ☐ 1. 11 hours
 - ☒ 2. 10 hours
 - ☐ 3. 8 hours
 - ☐ 4. 12 hours

Q.14 Find the ratio between the fourth proportional of the numbers 48, 56 and 72, and the mean proportional between the third proportional of 4 and 8 and the fourth proportional of 6, 9 and 12.

- Ans
- ☐ 1. $5 : \sqrt{3}$
 - ☒ 2. $7 : \sqrt{2}$
 - ☐ 3. $\sqrt{2} : \sqrt{3}$
 - ☐ 4. $5 : 7$

Q.20 In which state of India 'Kolayat' festival is Celebrated?

- Ans**
- ☒ 1. Rajasthan
 - ☐ 2. Haryana
 - ☐ 3. Punjab
 - ☐ 4. Himachal Pradesh

Section : Arithmetical and Numerical Ability

Q.1 Yuvraj deposited a certain sum of money at 20% per annum, compounded annually. At the end of 2 years, the total amount received was ₹24,768. Find the sum of money deposited by Yuvraj.

- Ans**
- ☐ 1. ₹17,586
 - ☐ 2. ₹17,203
 - ☐ 3. ₹16,989
 - ☒ 4. ₹17,200

Q.2 The price of an article increases by 30% in one year and then decreases by 10% in the next year. What is the net percentage change in price over the two years?

- Ans**
- ☐ 1. 27% increase
 - ☐ 2. 20% decrease
 - ☒ 3. 17% increase
 - ☐ 4. 17% decrease

Q.3 When the price of an article was reduced by 28%, its sale increased by 74%. What was the net effect on the revenue?

- Ans**
- ☐ 1. 21.35% increase
 - ☒ 2. 25.28% increase
 - ☐ 3. 25.28% decrease
 - ☐ 4. 21.35% decrease

Q.4 A book contains 480 pages. If a person reads 30 pages per day, how much part (in percentage) of the book will he finish in 12 days?

- Ans**
- ☐ 1. 100%
 - ☐ 2. 50%
 - ☒ 3. 75%
 - ☐ 4. 25%

Q.5 Nirmal's salary was first reduced by 37% and subsequently raised by 30%. By what percentage was his final salary lower compared to his initial salary?

- Ans**
- ☐ 1. 11.1%
 - ☐ 2. 37%
 - ☐ 3. 30%
 - ☒ 4. 18.1%

Q.6 The HCF of two numbers is 18 and their LCM is 360. If one of the numbers is 90, find the other number.

- Ans**
- ☐ 1. 108
 - ☐ 2. 54
 - ☒ 3. 72
 - ☐ 4. 36

Q.7 The average of 10 numbers is 80. The average of the first 5 numbers is 60, and the average of the next 4 numbers is 65. The 10th number is 10 less than the 11th number. What is the value of the 11th number?

Ans ☒ 1. 250

☐ 2. 260

☐ 3. 230

☐ 4. 240

Q.8 Simplify: $52 \div 4 \times 5 + 7 \times 6 \div 2 - 5 \times 14 \div 5 + 4 \times 3$

Ans ☐ 1. 74

☒ 2. 84

☐ 3. 94

☐ 4. 64

Q.9 If $\sqrt{a + \frac{a}{b}} = a\sqrt{\frac{a}{b}}$, find the value of b ($a, b \neq 0$).

Ans ☐ 1. $a - 1$

☒ 2. $a^2 - 1$

☐ 3. $a + 1$

☐ 4. $a^2 + 1$

Q.10 Find the average of all prime numbers between 325 to 385.

Ans ☐ 1. 353.5

☒ 2. 357.8

☐ 3. 351.4

☐ 4. 356.7

Q.11 A vendor sold 30 chocolates for a rupee, thereby gaining 60%. How many did he buy for a rupee?

Ans ☒ 1. 48

☐ 2. 52

☐ 3. 54

☐ 4. 50

Q.12 The ratio of milk and water in a 65 litre mixture is 3 : 2. Find the quantity of water to be added to the mixture in order to make this ratio 1 : 1.

Ans ☒ 1. 13 litres

☐ 2. 21 litres

☐ 3. 22 litres

☐ 4. 14 litres

Q.13 Anand has ₹1722 with him. He divided it between his sons Anil and Ashok and asked them to invest it at 5% rate of interest compounded annually. It was seen that Anil and Ashok got the same amount after 12 and 13 years, respectively. How much (in ₹) did Anand give to Anil?

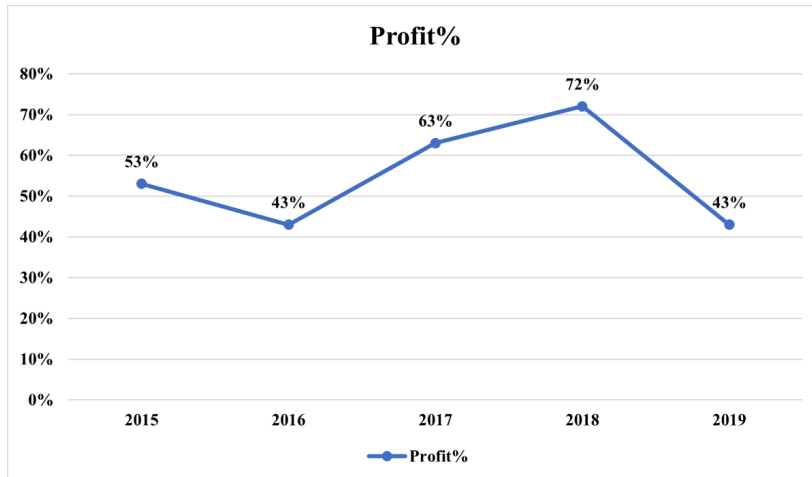
Ans ☐ 1. 732

☐ 2. 940

☒ 3. 882

☐ 4. 840

Q.14 The below line graph shows the annual profit percentage earned by a company during the years 2015 to 2019. Study the graph and answer the question that follows.



What is the average percentage profit earned during the years 2015 to 2019?

- Ans**
- ☒ 1. 54.8%
 - ☐ 2. 51.8%
 - ☐ 3. 53.8%
 - ☐ 4. 52.8%

Q.15 An amount on compound interest, compounded annually, becomes double the original amount in 2 years. In how many years will it be four times its original amount?

- Ans**
- ☐ 1. 5 years
 - ☒ 2. 4 years
 - ☐ 3. 6 years
 - ☐ 4. 3 years

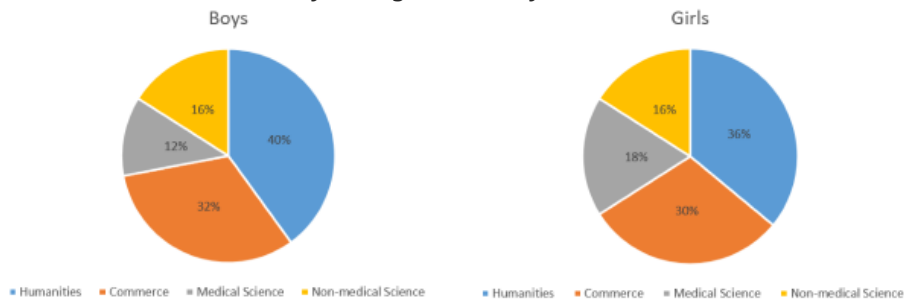
Q.16 A vendor sold 30 chocolates for a rupee, thereby gaining 80%. How many did he buy for a rupee?

- Ans**
- ☐ 1. 60
 - ☐ 2. 58
 - ☒ 3. 54
 - ☐ 4. 56

Q.17 In what duration (in years) will ₹9,600 fetch a simple interest of ₹600 at 5% per annum rate of interest?¹⁵⁵⁷

- Ans**
- ☐ 1. 0.25
 - ☒ 2. 1.25
 - ☐ 3. 2.25
 - ☐ 4. 2.5

Q.18 There are 150 boys and 150 girls in the senior secondary section of a school. The following pie charts show the percentage of boys and girls opting for different academic streams. How many more girls than boys chose Medical Science?



- Ans**
- ☒ 1. 12
 - ☒ 2. 9
 - ☒ 3. 5
 - ☒ 4. 10

Q.19 Manjit's salary was first reduced by 37% and subsequently raised by 44%. By how much percentage was his final salary lower compared to his initial salary?

- Ans**
- ☒ 1. 44%
 - ☒ 2. 9.28%
 - ☒ 3. 16.28%
 - ☒ 4. 37%

Q.20 A student's marks were incorrectly entered as 28 instead of 58. Due to

What is the number of students in the class?

- Ans**
- ☒ 1. 16
 - ☒ 2. 25
 - ☒ 3. 18
 - ☒ 4. 15

Section : Arithmetical and Numerical Ability1

Q.1 A pipe can fill a tank in 9 hours. Another pipe can empty the filled tank in 18 hours. If both the pipes are opened simultaneously, then the time (in hours) in which the tank will be filled is:

- Ans**
- ☒ 1. 19
 - ☒ 2. 21
 - ☒ 3. 18
 - ☒ 4. 20

Q.2 Find the mean proportional between 16 and 64.

- Ans**
- ☒ 1. 18
 - ☒ 2. 24
 - ☒ 3. 32
 - ☒ 4. 23

Q.3 A car travels from City A to City B, a distance of 120 km, at a speed of 40 km/h. On the return trip from City B to City A, it travels at a speed of 60 km/h. What is the car's average speed (in km/h) for the entire journey?

- Ans**
- ☐ 1. 46
 - ☒ 2. 48
 - ☐ 3. 44
 - ☐ 4. 50

Q.4 In a town, 75.8% of the population are adults, of which the men and women are in the ratio of 9:7. If the number of adult women is 4.2 lakh, what is the approximate total population of the town?

- Ans**
- ☐ 1. 10.7 lakh
 - ☒ 2. 12.7 lakh
 - ☐ 3. 11.7 lakh
 - ☐ 4. 13.7 lakh

Q.5 A sphere of diameter 18 cm is to be coated with a layer of paint that is 2 cm thick. What is the volume (in cm^3) of paint required? (Use $\pi = 3.14$.) (Round off your answer to two decimal places.)

- Ans**
- ☒ 1. 2520.37
 - ☐ 2. 2220.37
 - ☐ 3. 2420.37
 - ☐ 4. 2020.37

Q.6 A dealer gets a 20% trade discount on ₹5,000. What is the net price he pays?

- Ans**
- ☐ 1. ₹4,800
 - ☐ 2. ₹4,500
 - ☒ 3. ₹4,000
 - ☐ 4. ₹4,200

Q.7 A spherical ball has a diameter of 14 cm. What is the cost of painting it at ₹6.50 per cm^2 ? (Use $\pi = 22/7$)

- Ans**
- ☐ 1. ₹4,014
 - ☐ 2. ₹4,024
 - ☒ 3. ₹4,004
 - ☐ 4. ₹4,028

Q.8 A and B together can complete a work in 20 days. B and C together can do it in 25 days, while A and C together can finish it in 30 days. If A's efficiency increases by 30% and B's efficiency decreases by 20%, then in how many days will A and B together complete 61% part of the entire work?

- Ans**
- ☒ 1. 12
 - ☐ 2. 10
 - ☐ 3. 17
 - ☐ 4. 15

Q.9 A triangle has sides of lengths 8 cm, 6 cm, and 5 cm. Find the perimeter of the triangle.

- Ans**
- ☐ 1. 18 cm
 - ☐ 2. 20 cm
 - ☐ 3. 17 cm
 - ☒ 4. 19 cm

Q.10 A trader marks his goods at 20% above the cost price and allows a discount of 12% on it. If he gains $x\%$, then value of x is:

- Ans
- ☐ 1. 4.6
 - ☒ 2. 5.6
 - ☐ 3. 7.6
 - ☐ 4. 6.6

Q.11 A man covers the distance between his house and office by bicycle. At an average speed of 14 km/h, he is late by 20 minutes; however, at an average speed of 20 km/h, he reaches 10 minutes early. Find the distance (in km) between his house and his office.

- Ans
- ☒ 1. $23\frac{1}{3}$ km
 - ☐ 2. $24\frac{1}{3}$ km
 - ☐ 3. $26\frac{1}{3}$ km
 - ☐ 4. $25\frac{1}{3}$ km

Q.12 A painter and a helper are working together to paint a house. The painter can paint the entire house in 6 hours, while the helper can paint the same house in 8 hours. How long will it take for both of them to paint the house together?

- Ans
- ☐ 1. $\frac{1}{7}$ hours
 - ☐ 2. 7 hours
 - ☒ 3. $\frac{24}{7}$ hours
 - ☐ 4. $\frac{7}{24}$ hours

Q.13 A man buys 32 articles for ₹80 and sells them at the rate of ₹2.25 per article. Find the gain or loss percent.

3026

- Ans
- ☒ 1. 10% loss
 - ☐ 2. 10% profit
 - ☐ 3. 20% loss
 - ☐ 4. 20% profit

Q.14 Two cars start from the same point and travel in same directions. If one car travels at 49 km/hr and the other at 80 km/hr, how far apart will they be after 4 hours?

- Ans
- ☒ 1. 124 km
 - ☐ 2. 112 km
 - ☐ 3. 148 km
 - ☐ 4. 136 km

Q.15 A, B, and C run around a circular track of 420 m. Their speeds are 2 m/s, 3 m/s, and 5 m/s, respectively. B and C run in the same direction, while A runs in the opposite direction. If they all start together from the same point, after how many minutes will they meet for the first time on the track?

- Ans
- ☒ 1. 7
 - ☐ 2. 17
 - ☐ 3. 12
 - ☐ 4. 14

Q.20 Which festival in Jainism is regarded as the most significant period of self-purification, marked by fasting, meditation, and spiritual reflection over several consecutive days?

- Ans**
- ☐ 1. Diwali
 - ☐ 2. Kartik Purnima
 - ☐ 3. Mahavir Jayanti
 - ☒ 4. Paryushana

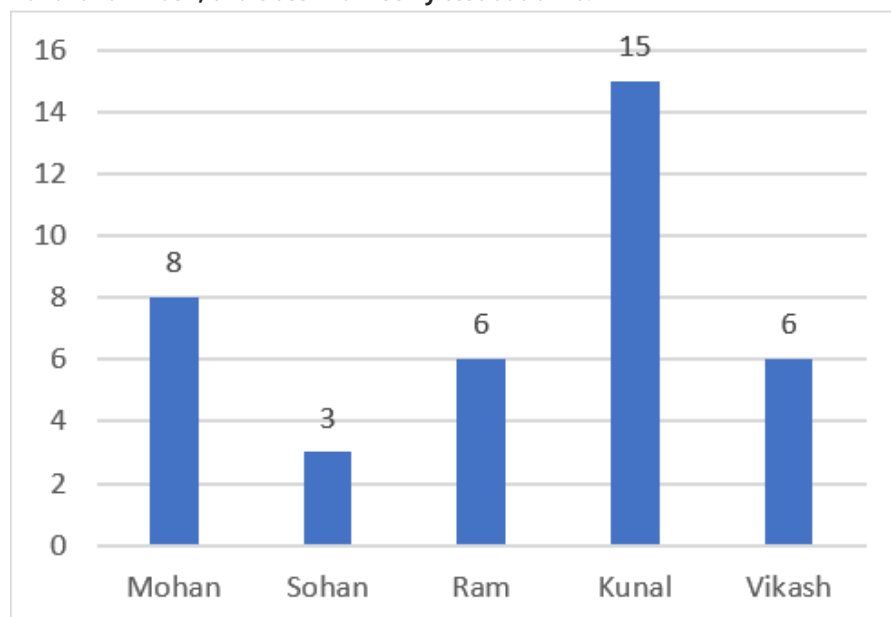
Section : Arithmetical and Numerical Ability

Q.1 At what rate (in percentage) of interest per year will a sum of money double itself in 4 years on simple interest?

- Ans**
- ☒ 1. 25
 - ☐ 2. 27
 - ☐ 3. 50
 - ☐ 4. 23

Q.2 Study the following Bar Graph and answer the question given below.

The data shown below is the marks scored by five students, Mohan, Sohan, Ram, Kunal and Vikash, of a class in a weekly test out of 20.



The marks scored by Kunal is how much percent more than the marks scored by Mohan in the weekly test?

- Ans**
- ☒ 1. 87.5%
 - ☐ 2. 72%
 - ☐ 3. 56%
 - ☐ 4. 80%

Q.3 Shivam's salary was first reduced by 37% and subsequently raised by 40%. By how much percentage was his final salary lower compared to his initial salary?

- Ans**
- ☒ 1. 11.8%
 - ☐ 2. 14.8%
 - ☐ 3. 37%
 - ☐ 4. 40%

Q.4 13 shirts and 5 pairs of shoes were bought for ₹18548. If the average is ₹2654, then what is the average cost of a shirt?

◀ ▶

- Ans
- ☒ 1. ₹446
 - ☒ 2. ₹416
 - ☒ 3. ₹413
 - ☒ 4. ₹406

Q.5 A student's marks were incorrectly entered as 33 instead of 48. Due to this, the average marks of the class was reduced by 0.5. What is the number of students in the class?

◀ ▶

- Ans
- ☒ 1. 6
 - ☒ 2. 15
 - ☒ 3. 3
 - ☒ 4. 14

Q.6 Find the least number that, when divided by 24, 90, and 120, leaves a remainder of 5.

- Ans
- ☒ 1. 365
 - ☒ 2. 465
 - ☒ 3. 485
 - ☒ 4. 360

Q.7 A salary is decreased by 20% in one year and then increased by 10% in the next year. What is the net percentage change in salary?

- Ans
- ☒ 1. 15% decrease
 - ☒ 2. 8% increase
 - ☒ 3. 12% decrease
 - ☒ 4. 12% increase

Q.8 The number of distinct prime factors of the largest six digits number is:

- Ans
- ☒ 1. 7
 - ☒ 2. 5
 - ☒ 3. 9
 - ☒ 4. 8

Q.9 If a number is increased by 36%, it becomes 680. Find the original number.

- Ans
- ☒ 1. 450
 - ☒ 2. 400
 - ☒ 3. 480
 - ☒ 4. 500

Q.10 Simplify: $\left[\left(\frac{3}{2}\right)^{-1} + \left(\frac{4}{3}\right)^2 + \left(\frac{1}{2}\right)^0 + 1\right]^{-1}$

- Ans
- ☒ 1. $\frac{9}{40}$
 - ☒ 2. $\frac{7}{40}$
 - ☒ 3. $\frac{40}{9}$
 - ☒ 4. $\frac{8}{40}$

Q.11 A vendor bought lemons at 21 for a rupee. How many must he sell for a rupee to gain 75%?

- Ans
- ☐ 1. 13
 - ☐ 2. 16
 - ☐ 3. 14
 - ☒ 4. 12

Q.12 The average of 6.5, 10.7, 20.4 and a is 15. The value of a is:2666

- Ans
- ☐ 1. 23.4
 - ☒ 2. 22.4
 - ☐ 3. 24.4
 - ☐ 4. 21.4

Q.13 Virendra deposited a certain sum of money at 20% per annum, compounded annually. At the end of 2 years, the total amount received was ₹76,392. Find the sum of money deposited by Virendra.

- Ans
- ☐ 1. ₹53,408
 - ☒ 2. ₹53,050
 - ☐ 3. ₹53,302
 - ☐ 4. ₹52,931

Q.14 A shopkeeper mixes two types of rice. The first type costs ₹40 per kg, and the second type costs ₹60 per kg. He mixes them in the ratio 3:2. What is the price per kg of the resulting mixture?

- Ans
- ☒ 1. ₹48
 - ☐ 2. ₹46
 - ☐ 3. ₹50
 - ☐ 4. ₹52

Q.15 If $a = 1.5$, $b = 2.5$, then what is the value of $\frac{\{(b-a) \times (b-a)\}}{(b+a)} \times$



- Ans
- ☐ 1. 0.93
 - ☐ 2. 0.87
 - ☒ 3. 0.94
 - ☐ 4. 0.95

Q.16 Amit's salary was first reduced by 38% and subsequently raised by 10%. By how much percentage was his final salary lower compared to his initial salary?8184

- Ans
- ☐ 1. 3.8%
 - ☐ 2. 38%
 - ☒ 3. 31.8%
 - ☐ 4. 10%

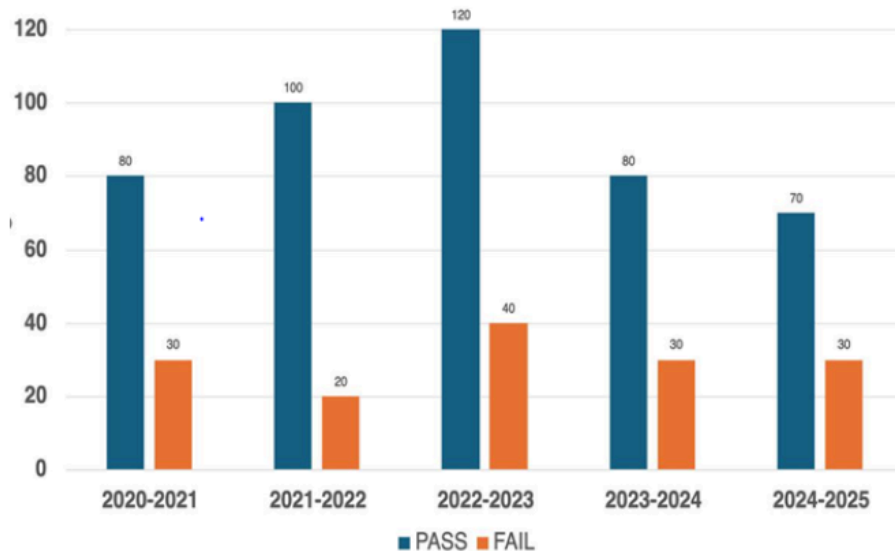
Q.17 A sum of money invested at compound interest amounts to ₹800 in 2 years and ₹842 in 3 years. Find the rate of interest per annum.

- Ans
- ☒ 1. 5.25%
 - ☐ 2. 6%
 - ☐ 3. 6.25%
 - ☐ 4. 5%

Q.18 A vendor sold 30 chocolates for a rupee, thereby gaining 70%. How many did he buy for a rupee?

- Ans**
- ☐ 1. 55
 - ☐ 2. 53
 - ☐ 3. 57
 - ☒ 4. 51

Q.19 The graph below shows the number of students who passed or failed an examination during five years (2020-2025). Study the graph and answer the question that follows.



What is the average number of students who failed in the exam during the five years?

- Ans**
- ☐ 1. 32
 - ☒ 2. 30
 - ☐ 3. 33
 - ☐ 4. 28

Q.20 Laxminarayan deposited a certain sum of money at 20% per annum, compounded annually. At the end of 2 years, the total amount received was ₹47,664. Find the sum of money deposited by Laxminarayan.

- Ans**
- ☐ 1. ₹33,437
 - ☒ 2. ₹33,100
 - ☐ 3. ₹32,984
 - ☐ 4. ₹33,064

Section : **Arithmetical and Numerical Ability1**

Q.1 A car travels 190 km at a speed of 95 km/hr and then another 150 km at a speed of 50 km/hr. The average speed of the car for the entire journey is:

- Ans**
- ☐ 1. 64 km/hr
 - ☐ 2. 50 km/hr
 - ☒ 3. 68 km/hr
 - ☐ 4. 60 km/hr

Q.2 A water purifier is marked at ₹11,999. A discount of 20% is given. What is its selling price (in ₹, round off to the nearest ₹)?

- Ans
- ☐ 1. ₹9,590
 - ☐ 2. ₹9,499
 - ☒ 3. ₹9,599
 - ☐ 4. ₹9,490

Q.3 A tank can be filled by pipe A in 12 hours and by pipe B in 18 hours. Both pipes are opened together. However, after 6 hours, pipe A is closed. How much more time will pipe B take alone to fill the remaining tank?

- Ans
- ☐ 1. 2.5 hours
 - ☒ 2. 3 hours
 - ☐ 3. 3.5 hours
 - ☐ 4. 2 hours

Q.4 A, B and C started a business together. The respective ratio of investments of A and B was 3:5 and the respective ratio of investments of B and C was 10:13. If at the end of the year, C received ₹8,814 as his share of annual profit, what was the total annual profit earned by all of them together?

- Ans
- ☒ 1. ₹19,662
 - ☐ 2. ₹18,662
 - ☐ 3. ₹16,662
 - ☐ 4. ₹17,662

Q.5 The cost of painting a spherical vessel of diameter 14 cm is ₹12,936.

(Use $\pi = \frac{22}{7}$)

- Ans
- ☐ 1. ₹20
 - ☐ 2. ₹22
 - ☒ 3. ₹21
 - ☐ 4. ₹23

Q.6 A man, a woman and a boy can finish a work in 10 days, 12 days and 15 days, respectively. In how many days will the work be finished by 2 men, 4 boys and 3 women working simultaneously?

- Ans
- ☐ 1. $\frac{50}{43}$
 - ☐ 2. $\frac{50}{33}$
 - ☒ 3. $\frac{60}{43}$
 - ☐ 4. $\frac{60}{53}$

Q.7 M and S can complete a work in 18 days and 12 days respectively. They started the work together and after 4 days S left the work. In how many days can M alone complete the remaining work?

- Ans
- ☐ 1. 7 days
 - ☐ 2. 6 days
 - ☒ 3. 8 days
 - ☐ 4. 9 days

Q.8 If the selling price of 20 items is equal to the cost price of 25 items, th

3020



- Ans
- ☒ 1. 30% profit
 - ☒ 2. 25% profit
 - ☒ 3. 15% loss
 - ☒ 4. 20% loss

Q.9 Anusha covers a certain distance between her home and college on cycle. Having a speed of 32 km/hr, she is late by 20 minutes. However, with a speed of 44 km/hr, she reaches her college 10 minutes earlier. Find the distance between her home and college. (Rounded off to one decimal place.)

- Ans
- ☒ 1. 54.6 km
 - ☒ 2. 56.8 km
 - ☒ 3. 58.7 km
 - ☒ 4. 51.5 km

Q.10 Let MNOP be a trapezium in which MN is parallel to PO and ON is perpendicular on side MN. If the length of side MN is 24 cm, length of side OP is 18 cm, and the perpendicular distance between MN and OP is 8 cm, then find the perimeter of the trapezium MNOP.

- Ans
- ☒ 1. 60 cm
 - ☒ 2. 52 cm
 - ☒ 3. 44 cm
 - ☒ 4. 56 cm

Q.11 If the ratio of the radii of the bases of two cylinders is 3 : 5 and the ratio of their heights is 4 : 7, then the ratio of their curved surface areas is:

- Ans
- ☒ 1. 12 : 35
 - ☒ 2. 10 : 33
 - ☒ 3. 11 : 32
 - ☒ 4. 13 : 35

Q.12 Two trains P and Q are running on parallel tracks in the same direction. Train P is 280 m long with a speed of 72 km/hr. Train Q is 220 m long and has a speed of 63 km/hr. In how much time (in seconds) will train P completely cross train Q?

- Ans
- ☒ 1. 100
 - ☒ 2. 200
 - ☒ 3. 180
 - ☒ 4. 150

Q.13 Water flows out through a circular pipe whose internal diameter is 2 cm, at the rate of 5 m/s into a cylindrical tank, the radius of whose base is 100 cm. By how much will the level of water rise in 25 minutes?

- Ans
- ☒ 1. 75 cm
 - ☒ 2. 84 cm
 - ☒ 3. 80 cm
 - ☒ 4. 69 cm

Q.14 The marked price of a second-hand laptop is ₹27,500. It is sold for ₹22,550. What is the percentage discount given?

- Ans
- ☒ 1. 19%
 - ☒ 2. 17%
 - ☒ 3. 16%
 - ☒ 4. 18%

Q.15 As per Census 2011, the rural population constitutes what percentage of India's total population?

- Ans**
- ☒ 1. 68.8%
 - ☐ 2. 72.5%
 - ☐ 3. 64.1%
 - ☐ 4. 55.3%

Q.16 Which Part of the Indian Constitution deals with the Panchayati Raj system?

- Ans**
- ☒ 1. Part IX
 - ☐ 2. Part IV
 - ☐ 3. Part VII
 - ☐ 4. Part XI

Q.17 During the onset of adolescence, rapid physical growth occurs primarily due to increased activity of which substances?

- Ans**
- ☒ 1. Hormones
 - ☐ 2. Proteins
 - ☐ 3. Enzymes
 - ☐ 4. Vitamins

Q.18 Which of the following nutrients is classified as a micronutrient?

- Ans**
- ☐ 1. Fat
 - ☒ 2. Vitamin
 - ☐ 3. Protein
 - ☐ 4. Carbohydrate

Q.19 Which Sikh festival commemorates the formal establishment of the Khalsa by Guru Gobind Singh in 1699 and is also observed as the Sikh New Year?

- Ans**
- ☐ 1. Bandi Chhor Divas
 - ☒ 2. Vaisakhi
 - ☐ 3. Guru Nanak Jayanti
 - ☐ 4. Hola Mohalla

Q.20 Which Article of the Indian Constitution enables an arrested person to know the grounds for arrest?

- Ans**
- ☒ 1. Article 22
 - ☐ 2. Article 21
 - ☐ 3. Article 23
 - ☐ 4. Article 20

Section : **Arithmetical and Numerical Ability**

Q.1

Class	Frequency
10-20	10
20-30	20
30-40	10
40-50	30

Find the mean of the data.

(Round off your answer to two decimal places.)

Ans

☐ 1. 35.55☐ 2. 32.50☐ 3. 30.60☒ 4. 33.57

Q.2

A student's marks were incorrectly entered as 26 instead of 40. Due to this error, the mean of the marks of the class was found to be 27.5.

What is the number of students in the class?

Ans

☐ 1. 11☐ 2. 4☐ 3. 9☒ 4. 10

Q.3

Sahil spends 20% of their income on rent, 35% on utilities, 20% on education, and saves the rest. If the total savings are ₹16,000, calculate the total income.

Ans

☐ 1. ₹67,000☐ 2. ₹70,000☒ 3. ₹64,000☐ 4. ₹60,000

Q.4 Simplify:

$$\left(\frac{3}{5} + 0.25\right)^2 - \frac{1}{4}$$

Ans

☒ 1. $\frac{189}{400}$ ☐ 2. $\frac{279}{400}$ ☐ 3. $\frac{289}{400}$ ☐ 4. $\frac{169}{400}$

Q.5

The price of a table lamp is first increased by 8% and then decreased by 12%. What will be the net percentage change in the price?

Ans

☐ 1. 4% increase☐ 2. 4.96% increase☐ 3. 4% decrease☒ 4. 4.96% decrease

Q.6 Anand has ₹1,722. He divided this sum between his two sons, Anil and Ashok, and asked them to invest their respective shares at 10% per annum, compounded annually. It was observed that the amounts received by Anil after 14 years and by Ashok after 15 years were equal. Find how much (in ₹) Anand gave to Anil.

- Ans
- ☒ 1. 820
 - ☒ 2. 902
 - ☒ 3. 752
 - ☒ 4. 920

Q.7 If 12 students can decorate a school in 20 days, how long will it take 8 students to decorate the same school?

- Ans
- ☒ 1. 30
 - ☒ 2. 28
 - ☒ 3. 32
 - ☒ 4. 25

Q.8 Laxminarayan deposited a certain sum of money at 8% per annum, compounded annually. At the end of 2 years, the total amount received was ₹11,664. Find the sum of money deposited by Laxminarayan.

- Ans
- ☒ 1. ₹10,000
 - ☒ 2. ₹10,400
 - ☒ 3. ₹9,700
 - ☒ 4. ₹9,600

Q.9 What will be the compound interest on ₹12,500 for 2 years at the rate of 12% per annum, compounded annually?

- Ans
- ☒ 1. ₹3,180
 - ☒ 2. ₹3,090
 - ☒ 3. ₹3,810
 - ☒ 4. ₹3,900

Q.10 Find the smallest digit x (where $0 \leq x \leq 9$) such that the number $234x6$



- Ans
- ☒ 1. 3
 - ☒ 2. 0
 - ☒ 3. 1
 - ☒ 4. 2

Q.11 A vendor bought lemons at 20 for a rupee. How many must he sell for a rupee to gain 100%?

- Ans
- ☒ 1. 14
 - ☒ 2. 10
 - ☒ 3. 11
 - ☒ 4. 12

Q.12 Simplify : $\frac{1}{0.8} - \frac{1}{5.6}$

- Ans
- ☐ 1. $\frac{13}{15}$
 - ☐ 2. $\frac{11}{15}$
 - ☒ 3. $\frac{15}{14}$
 - ☐ 4. $\frac{14}{15}$

Q.13 Study the table and answer the question that follows.

The table below shows the number of employees working at various departments of a company.

Department	Percentage Distribution of the Number of Employees
Production	35%
HR	10%
IT	15%
Marketing	20%
Accounts	20%

If there are a total of 4000 employees in the company, what is the difference between the number of employees in Marketing and HR departments?

- Ans
- ☐ 1. 200
 - ☐ 2. 800
 - ☐ 3. 300
 - ☒ 4. 400

Q.14 The ratio of milk and water in a 55 litre mixture is 3 : 2. Find the quantity (in litres) of water to be added to the mixture in order to make this ratio 1 : 1.

- Ans
- ☐ 1. 9
 - ☐ 2. 13
 - ☒ 3. 11
 - ☐ 4. 15

Q.15 A baker made two batches of cookies. The first batch has 10 cookies, each weighing 30 grams, and the second batch has 20 cookies, each weighing 36 grams. What is the average weight of a cookie in the combined batch?

- Ans
- ☐ 1. 35 grams
 - ☐ 2. 30 grams
 - ☐ 3. 28 grams
 - ☒ 4. 34 grams

Q.16 Mahesh's salary was first reduced by 37% and subsequently raised by 48%. By how much percentage was his final salary lower compared to his initial salary?

- Ans
- ☒ 1. 6.76%
 - ☐ 2. 48%
 - ☐ 3. 17.76%
 - ☐ 4. 37%

Q.17 A man bought a horse and a carriage for ₹3000. He sold the horse at a gain of 20% and the carriage at a loss 10%, thereby gaining 2% on the whole. Find the cost price of the horse.

- Ans
- ☐ 1. ₹1500
 - ☐ 2. ₹1300
 - ☐ 3. ₹1600
 - ☒ 4. ₹1200

Q.18 In what ratio must a grocer mix two varieties of wheat worth ₹63 per kg and ₹133 per kg so that if he sells the mixture at ₹138 per kg he may gain 50%?

- Ans
- ☐ 1. 49:39
 - ☐ 2. 51:26
 - ☐ 3. 45:23
 - ☒ 4. 41:29

Q.19 The length of a wooden stick is first decreased by 20%; the resulting length is again decreased by 30%. The overall percentage change in the length of the wooden stick is:

- Ans
- ☐ 1. 42%, Decrease
 - ☒ 2. 44%, Decrease
 - ☐ 3. 42%, Increase
 - ☐ 4. 44%, Increase

Q.20 At what rate (in percentage, rounded off to two places after decimal) of interest per year will a sum of money double itself in 6 years on simple interest?

- Ans
- ☐ 1. 33.34
 - ☒ 2. 16.67
 - ☐ 3. 18.67
 - ☐ 4. 14.67

Section : Arithmetical and Numerical Ability1

Q.1 A tank can be filled by two pipes in 6 hours. If the first pipe can fill the tank in 12 hours, how long will it take for the second pipe to fill the tank?

- Ans
- ☐ 1. 10 hours
 - ☒ 2. 12 hours
 - ☐ 3. 24 hours
 - ☐ 4. 18 hours

Q.2 A trader marks his goods at 20% above the cost price and allows a discount of 13% on it. If he gains x%, then value of x is:

- Ans
- ☒ 1. 4.4
 - ☐ 2. 3.4
 - ☐ 3. 5.4
 - ☐ 4. 6.4

Q.3 The incomes of a person between two consecutive years are in the ratio 2 : 3, and the expenses are in the ratio 4 : 5. He saved the remaining amount. His income in the second year is ₹60,000 and his expenses in the first year are ₹30,000. Find his total savings for the two years.

- Ans**
- ☐ 1. ₹28,000
 - ☐ 2. ₹22,000
 - ☐ 3. ₹25,000
 - ☒ 4. ₹32,500

Q.4 A contractor undertakes to build a house in 100 days. He employs 100 people for the same. However, after 50 days he finds that the work is only 40% complete. How many more men need to be employed to complete the work in time?

- Ans**
- ☐ 1. 55
 - ☒ 2. 50
 - ☐ 3. 45
 - ☐ 4. 65

Q.5 A product has a marked price of ₹100. Calculate the final selling price (in ₹) of the product if successive discounts of 20%, 25% and 30% are given on it?

- Ans**
- ☐ 1. 44
 - ☐ 2. 40
 - ☐ 3. 46
 - ☒ 4. 42

Q.6 Two trains are moving in the same direction at a speed of 88 km/hr and 73 km/hr. What is the relative speed between the two trains?

- Ans**
- ☒ 1. 15 km/hr
 - ☐ 2. 125 km/hr
 - ☐ 3. 161 km/hr
 - ☐ 4. 91 km/hr

Q.7 Rashi starts walking at a certain speed from place A to reach place B, which is 5 km away. Shashi starts walking at a certain speed at the same time from B to reach A. If they both meet after half an hour, and Shashi takes 25 minutes more to reach A than Rashi to reach B, find Shashi's speed (in km/h) of walking.

- Ans**
- ☒ 1. 4
 - ☐ 2. 5
 - ☐ 3. 3
 - ☐ 4. 6

Q.8 In a three-tiered supply chain, a manufacturer produces a table at a certain cost. The manufacturer then sells the table to a wholesaler at a 30% profit margin. Subsequently, the wholesaler sells the table for ₹1300 to a retailer at a 25% profit margin. Finally, the retailer sells the table to the end-consumer at a 30% profit margin. The manufacturer's cost price is ₹(800 + R) less than the retailer selling price of the table. The HCF of R and 18 is: 3126

- Ans**
- ☒ 1. 18
 - ☐ 2. 2
 - ☐ 3. 9
 - ☐ 4. 1

Q.9 Select the least ratio among the following.

- Ans ☐ 1. 7 : 10
☒ 2. 2 : 5
☐ 3. 2 : 3
☐ 4. 5 : 9

Q.10 The incomes of Rahul and Biraj are in the ratio 5:7 and their expenditures are in the ratio 3:4. If Rahul saves ₹3,000 and Biraj saves ₹2,000 more than Rahul, find the income (in ₹) of Biraj.

- Ans ☒ 1. 21,000
☐ 2. 7,000
☐ 3. 28,000
☐ 4. 14,000

Q.11 The length of a rectangle is 28 cm and its width is 14 cm. A semicircle is attached externally along one of the 14 cm sides, with its diameter equal to the rectangle's width. Find the perimeter of the resulting figure. (Use $\pi = \frac{22}{7}$).

- Ans ☐ 1. 97 cm
☐ 2. 88 cm
☒ 3. 92 cm
☐ 4. 83 cm

Q.12 If a shopkeeper offers two successive discounts of 40% and 20% on an article, then find the equivalent single discount which can be offered by the shopkeeper.

- Ans ☐ 1. 51%
☐ 2. 48%
☒ 3. 52%
☐ 4. 50%

Q.13 The area of a square is 1.96 m^2 . What is its perimeter (in m)?

- Ans ☐ 1. 4.8
☒ 2. 5.6
☐ 3. 4.2
☐ 4. 3.6

Q.14 A trapezium has parallel sides 8 cm and 14 cm. The distance between the parallel sides is equal to the side of an equilateral triangle with perimeter 102 cm. Find the area of the trapezium.

- Ans ☐ 1. 254 cm²
☐ 2. 264 cm²
☐ 3. 304 cm²
☒ 4. 374 cm²

Q.15 Priyanka travels one-fourth of the total distance at a speed of 30 km/hr, the next one-fourth at a speed of 25 km/hr, the following one-fourth at a speed of 40 km/hr, and the final one-fourth at a speed of 60 km/hr. Find the average speed of Priyanka for the entire journey. (Round off your answer to two decimal places.)

- Ans ☐ 1. 30.45 km/hr
☐ 2. 32.64 km/hr
☐ 3. 26.48 km/hr
☒ 4. 34.78 km/hr

Q.14 Which of following Indian states has its coastal plains along the Bay of Bengal?

- Ans**
- ☐ 1. Chhattisgarh
 - ☐ 2. Rajasthan
 - ☐ 3. Delhi
 - ☒ 4. Odisha

Q.15 The Right to Property under the Indian Constitution is:

- Ans**
- ☒ 1. A Legal Right under Article 300A
 - ☐ 2. A Fundamental Right under Article 19
 - ☐ 3. A Constitutional Right under Article 21
 - ☐ 4. A Directive Principle of State Policy under Article 39

Q.16 Which of the following states in India had the highest production in horticulture for the year 2023-2024?

- Ans**
- ☐ 1. Andhra Pradesh
 - ☒ 2. Uttar Pradesh
 - ☐ 3. Madhya Pradesh
 - ☐ 4. Maharashtra

Q.17 Which among the following atomic power stations is located in Tamil Nadu?

- Ans**
- ☒ 1. Kudankulam
 - ☐ 2. Kakrapar
 - ☐ 3. Kaiga
 - ☐ 4. Tarapur

Q.18 What is the entrance gateway of a Dravida temple called?

- Ans**
- ☐ 1. Mandapa
 - ☐ 2. Vimana
 - ☒ 3. Gopuram
 - ☐ 4. Shikhara

Q.19 Absence of iodine in the diet mainly causes which health problem?

- Ans**
- ☒ 1. Goitre
 - ☐ 2. Rickets
 - ☐ 3. Beriberi
 - ☐ 4. Scurvy

Q.20 Which of the following is a function of the human kidney?

- Ans**
- ☒ 1. Regulating water balance
 - ☐ 2. Pumping blood
 - ☐ 3. Transmitting impulses
 - ☐ 4. Digesting food

Section : **Arithmetical and Numerical Ability**

Q.1 Mahesh has ₹1,722. He divided this sum between his two sons, Vijay and Ajay, and asked them to invest their respective shares at 10% per annum, compounded annually. It was found that the amounts received by Vijay after 13 years and by Ajay after 14 years were equal. Find how much (in ₹) Mahesh gave to Vijay.

Ans ☒ 1. 902

☐ 2. 752

☐ 3. 920

☐ 4. 820

Q.2 Alloy A contains iron, copper and aluminum in the ratio 7:2:1 and alloy B contains same metals in the ratio 10:3:2. Equal weights of both the alloy are melted together to form a new alloy, C. The weight of aluminum in alloy C is:

Ans ☒ 1. $\frac{7}{60}$

☐ 2. $\frac{7}{30}$

☐ 3. $\frac{1}{5}$

☐ 4. $\frac{3}{25}$

Q.3 Deepti appeared for a competitive exam which consisted of 300 questions. During the first attempt, she could answer 60% of the questions correctly. She reappeared for the same exam after one year. This time, she answered 20 questions more correctly. What is the percentage increase in the number of questions answered correctly?

Ans ☐ 1. $18\frac{1}{9}\%$

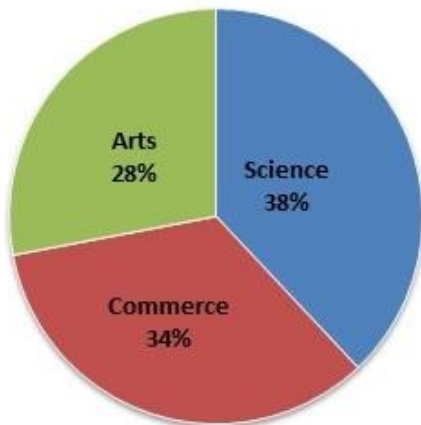
☐ 2. $20\frac{1}{9}\%$

☐ 3. $9\frac{1}{9}\%$

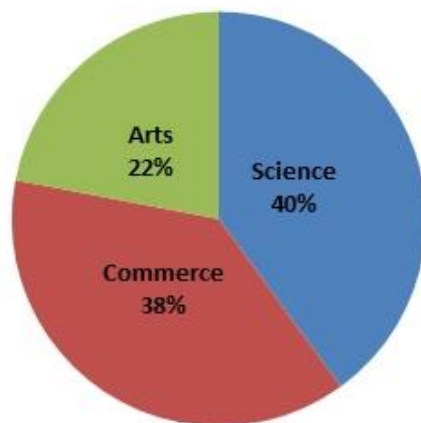
☒ 4. $11\frac{1}{9}\%$

- Q.4 The given pie charts show the distribution of students across different streams in two colleges, P and Q. The total number of students in College P is 1,000, and in College Q is 1,400.

School P



School Q



Find the total number of students of Arts stream in College P and in College Q.

Ans ☒ 1. 588

☐ 2. 485

☐ 3. 463

☐ 4. 526

- Q.5 Three typists complete 600 pages in 5 days. How many pages does one typist complete in one day?

Ans ☐ 1. 30

☐ 2. 50

☒ 3. 40

☐ 4. 20

Q.6 R sells an item to S, making a profit of 10%. S then sells the same item to T, earning a profit (in ₹) that is double the profit made by R. If T buys the item for ₹260, then what was the cost price (in ₹) of the item for R?

- Ans
- ☐ 1. 210
 - ☐ 2. 180
 - ☐ 3. 220
 - ☒ 4. 200

Q.7 If the number $81xy18$ is divisible by 99, then what is the value of $x + y$ given that x and y are non-zero digits?

- Ans
- ☒ 1. 18
 - ☐ 2. 12
 - ☐ 3. 6
 - ☐ 4. 9

Q.8 The number 4205 is divisible by which of the following numbers?

- Ans
- ☒ 1. 29
 - ☐ 2. 26
 - ☐ 3. 25
 - ☐ 4. 38

Q.9 In what duration (in years) will ₹9,600 fetch a simple interest of ₹960 at 5% per annum rate of interest?¹⁵⁵¹

- Ans
- ☐ 1. 1
 - ☐ 2. 3
 - ☐ 3. 4
 - ☒ 4. 2

Q.10 A certain sum of money amounts to ₹81,174 in 2 years at the rate of 21% per annum, when the interest is compounded every 8 months. Find the amount payable (in ₹, rounded off to the nearest rupee) on the same sum for the same period and at the same rate, if the interest is compounded annually.

- Ans
- ☐ 1. 79,648
 - ☒ 2. 80,218
 - ☐ 3. 79,607
 - ☐ 4. 79,376

Q.11 Gopal bought 51 books for ₹1,150 from one shop and 49 books for ₹905 from another. What is the average price (in ₹) did he pay per book?

- Ans
- ☒ 1. 20.55
 - ☐ 2. 23.55
 - ☐ 3. 22.55
 - ☐ 4. 21.55

Q.12 A student's marks were incorrectly entered as 43 instead of 85. Due to

What is the number of students in the class?

- Ans
- ☒ 1. 30
 - ☐ 2. 28
 - ☐ 3. 21
 - ☐ 4. 27

Q.13 If the marks scored by Rohan are 12.5% less than the marks scored by Sohan, then by what percentage are Sohan's marks more than those of Rohan?

- Ans
- ☐ 1. 10%
 - ☐ 2. 15%
 - ☒ 3. $14\frac{2}{7}\%$
 - ☐ 4. 13%

Q.14 The monthly expenditure of Reshu is 70% of their monthly income. If the monthly savings are ₹15,000, calculate the monthly income.

- Ans
- ☒ 1. ₹50,000
 - ☐ 2. ₹45,000
 - ☐ 3. ₹48,000
 - ☐ 4. ₹42,000

Q.15 Arvind bought a second-hand bike for ₹63,000. He spent ₹2,000 on its servicing and then sold it to Bhushan at a profit of 20%. Bhushan then spent ₹1,500 on repainting and sold it to Chetan at a loss of 10%. What was the cost price of the bike for Chetan?

- Ans
- ☐ 1. ₹75,550
 - ☐ 2. ₹73,850
 - ☐ 3. ₹71,800
 - ☒ 4. ₹71,550

Q.16 The average of five numbers is 20. If four of the numbers are 18, 25, 19, and 21, then the fifth number is:

- Ans
- ☐ 1. 2 more than average
 - ☐ 2. 3 more than average
 - ☐ 3. 2 less than average
 - ☒ 4. 3 less than average

Q.17 Simplify: $(((-2)^2)^{-1})^3$

- Ans
- ☐ 1. 1
 - ☒ 2. $\frac{1}{64}$
 - ☐ 3. 64
 - ☐ 4. $\frac{2}{64}$

Q.18 The monthly income of Madhusri is ₹19,500. She spends 26% of her income on rent, 13% on food, 30% on other household items, and saves the remaining income. Find her monthly savings.

- Ans
- ☐ 1. ₹7045
 - ☐ 2. ₹5545
 - ☒ 3. ₹6045
 - ☐ 4. ₹6000

Q.19 Find the compound interest on ₹500 at the rate of 20% per annum for 12 months when interest is compounded half-yearly.

- Ans
- ☐ 1. ₹115
 - ☐ 2. ₹110
 - ☐ 3. ₹120
 - ☒ 4. ₹105

Q.20 Ashok has ₹1000 and he spent ₹320 on milk, ₹80 on bread, ₹450 on flour and ₹150 on sugar. A pie chart is to be drawn for this data. What is the central angle for milk?

- Ans
- ☐ 1. 120°
 - ☐ 2. 32°
 - ☒ 3. 115.2°
 - ☐ 4. 57.6°

Section : Arithmetical and Numerical Ability1

Q.1 Sunil travels 30 km at an average speed of 20 km/hr, then 40 km at an average speed of 30 km/hr, and finally 25 km at an average speed of 40 km/hr. Find the average speed of Sunil for the entire distance. (Round off your answer to two decimal places.)

- Ans
- ☐ 1. 30.25 km/hr
 - ☐ 2. 28.62 km/hr
 - ☐ 3. 32.45 km/hr
 - ☒ 4. 27.47 km/hr

Q.2 A bioinformatics researcher is analysing the ratio of two specific genetic markers. If the ratio of markers x to y is 3 : 5, and the ratio of $(3x-1)$ to $(2y+3)$ is 8 : 15, what is the value of y?

- Ans
- ☒ 1. $\frac{39}{11}$
 - ☐ 2. $\frac{27}{7}$
 - ☐ 3. 3
 - ☐ 4. 4

Q.3 Two trains of length 150 m and 200 m are moving in opposite directions at speeds of 60 km/hr and 40 km/hr, respectively. How much time (in seconds) will they take to cross each other?

- Ans
- ☐ 1. 10
 - ☐ 2. 15.8
 - ☐ 3. 25
 - ☒ 4. 12.6

Q.4 A solid metallic sphere of radius 10 cm is melted and recast into smaller spherical balls, each of radius 2 cm. Assuming no wastage of material, what is the total surface area of all the small spherical balls formed? (Use $\pi = 3.14$)

- Ans
- ☒ 1. 6280 cm^2
 - ☐ 2. 2512 cm^2
 - ☐ 3. 3140 cm^2
 - ☐ 4. 5024 cm^2

Q.5 The odometer of a car shows 28,512 km at the beginning of the journey and 29,160 km at the end of the journey. If the journey takes 12 hours, then find the average speed of the car (in m/sec).

- Ans
- ☐ 1. 5
 - ☐ 2. 8
 - ☐ 3. 12
 - ☒ 4. 15

Q.6 A trader marks his goods at 20% above the cost price and allows a discount of 11% on it. If he gains $x\%$, then the value of x is:

- Ans
- ☒ 1. 8.8
 - ☒ 2. 7.8
 - ☒ 3. 6.8
 - ☒ 4. 5.8

Q.7 If $\sqrt{12 \times 147} : \sqrt{24 \times 54} = M:N$, find the value of $(3M + 4N) : (4M - 3$

- Ans
- ☒ 1. 7:3
 - ☒ 2. 5:2
 - ☒ 3. 7:1
 - ☒ 4. 9:2

Q.8 A and B together can complete a piece of work in 16 days. A alone can complete it in 20 days. If B does the work only half a day daily, then in how many days A and B together will complete the work?

- Ans
- ☒ 1. $17\frac{7}{9}$
 - ☒ 2. $14\frac{8}{11}$
 - ☒ 3. $15\frac{8}{11}$
 - ☒ 4. $16\frac{6}{11}$

Q.9 What will be the difference between a discount of 20% and two successive discounts of 10% each on ₹5,000?

- Ans
- ☒ 1. ₹50
 - ☒ 2. ₹19
 - ☒ 3. ₹25
 - ☒ 4. ₹100

Q.10 If the surface area of a sphere is 616 square centimeters, what is its volume (in cubic centimeters)? (Take $\pi = \frac{22}{7}$)

- Ans
- ☒ 1. $\frac{4312}{3}$
 - ☒ 2. $115\sqrt{5}$
 - ☒ 3. 1536
 - ☒ 4. 1232.25

Q.11 Calculate the volume (rounded to 2 decimal places) of a sphere having diameter 24 cm.
(Take $\pi = 3.1415$)

- Ans
- ☒ 1. 7814.02 cm³
 - ☒ 2. 7348.02 cm³
 - ☒ 3. 7238.02 cm³
 - ☒ 4. 7388.02 cm³

Q.12 A man bought an old typewriter for ₹1600 and spent ₹200 on its rep

3022



Ans

- ☐ 1. 40%
- ☐ 2. 10%
- ☐ 3. 45%
- ☒ 4. 30%

Q.13 A can build a wall in 15 days, B can build it in 10 days, and C can completely destroy the wall in 20 days. If they all start working at the same time, in how many days will the wall be completed?

Ans

- ☐ 1. $8\frac{3}{7}$
- ☐ 2. $7\frac{3}{7}$
- ☒ 3. $8\frac{4}{7}$
- ☐ 4. $7\frac{4}{7}$

Q.14 A purse contains coins of denominations ₹2, ₹1 and 50 paise in the ratio 3 : 5 : 4. If the total value of the coins is ₹91, find the number of ₹1 coins in the purse.

Ans

- ☐ 1. 28
- ☐ 2. 30
- ☐ 3. 32
- ☒ 4. 35

Q.15 The cost price of an article is ₹800. A shopkeeper allows two successive discounts of 5% each on the cost price of the article. Find his selling price.

Ans

- ☐ 1. ₹744
- ☐ 2. ₹788
- ☒ 3. ₹722
- ☐ 4. ₹766

Q.16 Two partners X and Y started a business by investing in the ratio of 9 : 8. Z joined them after 8 months, investing an amount equal to half that Y invested in the beginning. At the end of the year, 40% of the profit earned was equal to ₹53,900. Find the profit (in ₹) earned by Z.

Ans

- ☒ 1. 9,800
- ☐ 2. 8,900
- ☐ 3. 9,900
- ☐ 4. 8,800

Q.17 Sanjay left city X for city Y at 8:00 p.m., travelling at a speed of 50 km/hr. An hour later, Ramesh also left city X for city Y at a speed of 70 km/hr. If the distance between city X and city Y is 900 km, at what time will Ramesh catch up with Sanjay?

Ans

- ☐ 1. 11:20 p.m.
- ☐ 2. 11:00 p.m.
- ☒ 3. 11:30 p.m.
- ☐ 4. 11:45 p.m.

Q.20 Which plant biotechnology technique involves the fusion of cell wall-free plant cells (protoplasts) using chemical agents such as polyethylene glycol (PEG) or electrical pulses (electrofusion)?

- Ans**
- ☐ 1. Micropropagation
 - ☐ 2. Somatic embryogenesis
 - ☒ 3. Protoplast fusion
 - ☐ 4. Agrobacterium-mediated transformation

Section : Arithmetical and Numerical Ability

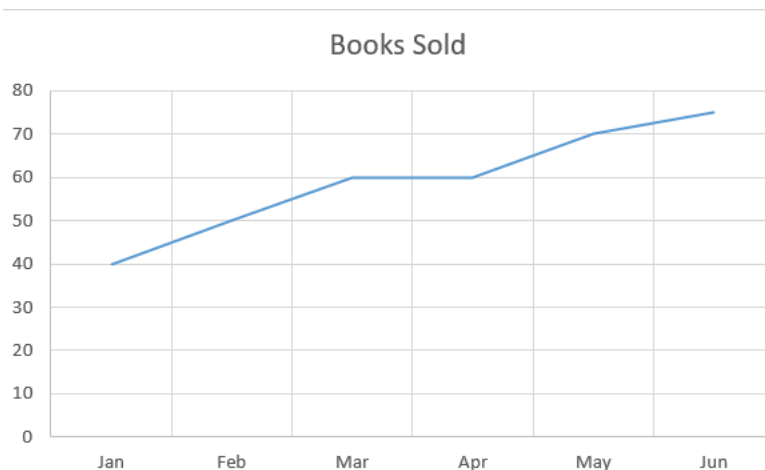
Q.1 Simplify the expression: $24 \div (4 \times 2) - 3$

- Ans**
- ☐ 1. 3
 - ☐ 2. 1
 - ☐ 3. 2
 - ☒ 4. 0

Q.2 Ajay's salary was first reduced by 38% and subsequently raised by 19%. How much percentage was his final salary lower compared to his initial salary?

- Ans**
- ☐ 1. 38%
 - ☒ 2. 26.22%
 - ☐ 3. 7.22%
 - ☐ 4. 19%

Q.3 Riya runs a small bookstore in her neighborhood. She kept track of the number of books sold each month for the first half of the year. The line graph below shows her sales trend. One month, Riya noticed that despite her efforts to promote new books, the sales didn't increase compared to the previous month. According to the graph, which month shows this situation?



- Ans**
- ☒ 1. April
 - ☐ 2. March
 - ☐ 3. May
 - ☐ 4. February

Q.4 The half life of Uranium-233 is 1,12,000 years that is Uranium-233 decays at a constant rate in such a way that it reduces 50% in 1,12,000 years. In 2,24,000 years, what percent will it reduce to?

- Ans**
- ☐ 1. 50%
 - ☐ 2. 20%
 - ☐ 3. 15%
 - ☒ 4. 25%

Q.5 A student's marks were incorrectly entered as 26 instead of 31. Due to this, the average marks of the class was reduced by 0.2. What is the number of students in the class?

- Ans**
- ☐ 1. 4
 - ☐ 2. 6
 - ☒ 3. 2
 - ☐ 4. 12

Q.6 Find the average of the given numbers.

7, 8, 10, 12, 13

- Ans**
- ☐ 1. 13
 - ☒ 2. 10
 - ☐ 3. 11
 - ☐ 4. 12

Q.7 The price of a laptop was ₹50,000 last year. This year, its price increased by 10%. However, due to a festive discount, the price was later reduced by 5%. What is the final price of the laptop?

- Ans**
- ☐ 1. ₹53,500
 - ☐ 2. ₹52,500
 - ☒ 3. ₹52,250
 - ☐ 4. ₹53,000

Q.8 In a cricket match, a batsman scored 80 runs, which included 6 fours and 3 sixes. What percentage of his total score did he make by running between the wickets?

- Ans**
- ☐ 1. 53.5%
 - ☐ 2. 52.5%
 - ☒ 3. 47.5%
 - ☐ 4. 48.5%

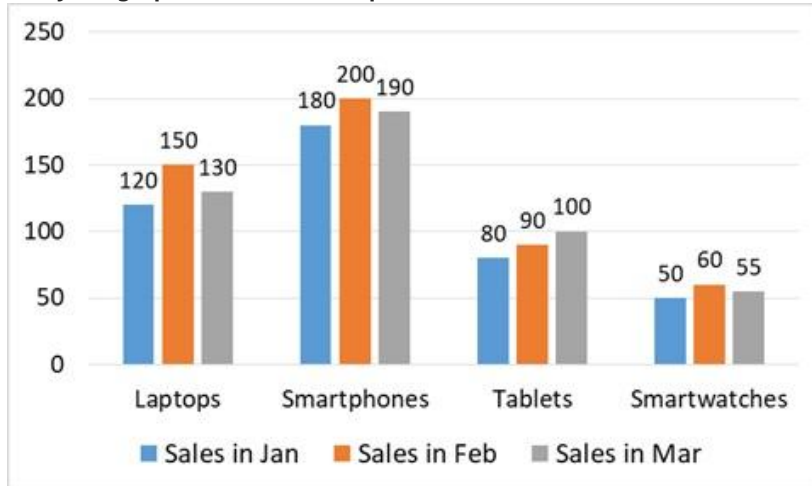
Q.9 Yuvraj deposited a certain sum of money at 20% per annum, compounded annually. At the end of 2 years, the total amount received was ₹88,056. Find the sum of money deposited by Yuvraj.

- Ans**
- ☒ 1. ₹61,150
 - ☐ 2. ₹61,282
 - ☐ 3. ₹60,775
 - ☐ 4. ₹60,731

Q.10 In what ratio must a grocer mix two varieties of rice costing ₹265 and ₹197 per kg respectively, to get a mixture of rice worth ₹245 per kg?

- Ans
- ☐ 1. 3:24
 - ☐ 2. 7:13
 - ☐ 3. 15:17
 - ☒ 4. 12:5

Q.11 The following bar graph shows monthly sales of four products over three months. Study the graph and answer the question that follows.



What is the total sales of all products in February?

- Ans
- ☒ 1. 500
 - ☐ 2. 390
 - ☐ 3. 450
 - ☐ 4. 550

Q.12 A number is decreased by 20% and then further increased by 30%. If the final value of the number is 5200, then what was the original value of the number?

- Ans
- ☐ 1. 4900
 - ☐ 2. 4680
 - ☐ 3. 5500
 - ☒ 4. 5000

Q.13 Harbhajan deposited a certain sum of money at 5% per annum, compounded annually. At the end of 2 years, the total amount received was ₹46,746. Find the sum of money deposited by Harbhajan.

- Ans
- ☐ 1. ₹42,109
 - ☐ 2. ₹42,225
 - ☐ 3. ₹42,522
 - ☒ 4. ₹42,400

Q.14 Simplify: $\frac{1}{\sqrt{2} + \sqrt{3} - \sqrt{5}} + \frac{1}{\sqrt{2} - \sqrt{3} - \sqrt{5}}$

- Ans
- ☐ 1. $\frac{1}{2\sqrt{2}}$
 - ☒ 2. $\frac{1}{\sqrt{2}}$
 - ☐ 3. $\sqrt{2}$
 - ☐ 4. $\frac{1}{2}$

Q.15 At what rate (in percentage) of interest per year will a sum of money become 3 times of itself in 5 years on simple interest?

- Ans
- ☐ 1. 80
 - ☐ 2. 38
 - ☐ 3. 42
 - ☒ 4. 40

Q.16 A trader buys a product for ₹900 and sells it at a 20% profit. He then uses the money to buy another product and sells it at a 10% loss. Find the difference between the initial and final amounts the trader has.

- Ans
- ☐ 1. ₹84
 - ☒ 2. ₹72
 - ☐ 3. ₹96
 - ☐ 4. ₹78

Q.17 Simplify: $[50 - \{18 \div (3 \times 2)\} + 4^2] \div 2$ of 7

- Ans
- ☐ 1. 63
 - ☒ 2. 4.5
 - ☐ 3. 220.5
 - ☐ 4. 36

Q.18 Find the greatest number that exactly divides 95, 38, and 57.

- Ans
- ☐ 1. 15
 - ☒ 2. 19
 - ☐ 3. 16
 - ☐ 4. 18

Q.19 A student's marks were incorrectly entered as 71 instead of 85. Due to this, the average marks of the class decreased by 1. What is the number of students in the class?

- Ans
- ☐ 1. 7
 - ☒ 2. 8
 - ☐ 3. 6
 - ☐ 4. 9

Q.20 A vendor bought lemons at 24 for a rupee. How many must he sell for a rupee to gain 20%?

- Ans
- ☐ 1. 22
 - ☐ 2. 18
 - ☐ 3. 21
 - ☒ 4. 20

Section : Arithmetical and Numerical Ability1

Q.1 A man covers half of his journey at 5 km/hr and remaining half at 3 km/hr. His average speed is:

- Ans
- ☐ 1. 4.75 km/hr
 - ☐ 2. 5.75 km/hr
 - ☐ 3. 6.75 km/hr
 - ☒ 4. 3.75 km/hr

Q.2 The numbers P, Q and R are proportional to 3, 5 and 7, respectively, and the sum of P, Q and R is 165. If the number Q is given by the equation $Q = kP - 11$, then find the value of k.

Ans

- ☐ 1. $3\frac{1}{2}$
☐ 2. 3
☒ 3. 2
☐ 4. $\frac{3}{2}$

Q.3 Work done by A in one day is half of the work done by B in one day. Work done by B is half of the work done by C in one day. If C alone can complete the work in 6 days, in how many days can A, B and C together complete the work?

Ans

- ☒ 1. $3\frac{3}{7}$
☐ 2. $2\frac{3}{7}$
☐ 3. $3\frac{4}{7}$
☐ 4. $2\frac{2}{7}$

Q.4 Two trains, A and B, start moving at the same time. Train A travels at 54 km/hr from station M to station N and train B travels at 72 km/hr from station N to station M. They meet each other after 100 minutes. What is the distance (in km) between the two stations?

Ans

- ☐ 1. 220
☐ 2. 240
☒ 3. 210
☐ 4. 230

Q.5 Let P and Q be two cylinders such that the capacity of P is the same as the capacity of Q. The ratio of the diameters of P and Q is 2 : 3. What is the ratio of the heights of P to Q?

Ans

- ☒ 1. 9 : 4
☐ 2. 4 : 7
☐ 3. 7 : 4
☐ 4. 4 : 9

Q.6 A boat moves in the upstream from city X to city Y and then it returns in the downstream from city Y to city X. If in still water the speed of the boat is 20 km/hr and the stream speed is 10 km/hr. Then what is the average speed (in km/hr) of boat in total journey?

Ans

- ☐ 1. 25
☒ 2. 15
☐ 3. 20
☐ 4. 10

Q.7 A grocer has 96 kg of rice, a part of which he sells at 7% profit, and the remaining quantity is sold at 43% profit. He gains 40% on the whole. What is the quantity of rice sold at 43% profit?

Ans

- ☐ 1. 91 kg
☐ 2. 89 kg
☐ 3. 90 kg
☒ 4. 88 kg

Q.8 Two pipes A and B can fill a cistern in 40 minutes and 45 minutes, respectively. Both pipes are opened. After how many minutes should the pipe B be turned off so that the cistern will be filled in just half an hour?

- Ans**
- ☐ 1. 9.45
 - ☒ 2. 11.25
 - ☐ 3. 12.68
 - ☐ 4. 10.34

Q.9 Two trains of lengths 125 m and 175 m moving in opposite directions at speeds of 54 km/hr and 36 km/hr, respectively, cross each other. Find the time taken.

- Ans**
- ☒ 1. 12 seconds
 - ☐ 2. 16 seconds
 - ☐ 3. 18 seconds
 - ☐ 4. 14 seconds

Q.10 The diameter of a solid metallic spherical bullet is 7 cm. 96 such bullets are melted and recast into a solid right circular cylinder of height 28 cm. What is the curved surface area (in cm^2) of the cylinder? (Use $\pi = \frac{22}{7}$)

- Ans**
- ☐ 1. 2928
 - ☒ 2. 2464
 - ☐ 3. 2080
 - ☐ 4. 2356

Q.11 A company offers a discount scheme of 'buy 3 and get 2 free'. Find the discount percentage.

- Ans**
- ☐ 1. 30%
 - ☒ 2. 40%
 - ☐ 3. 33%
 - ☐ 4. 20%

Q.12 If the length of a cuboid is 8 cm, its breadth is 11 cm, and the volume of the cuboid is 792 cm^3 , then find the height of the cuboid.

- Ans**
- ☐ 1. 6 cm
 - ☐ 2. 12 cm
 - ☐ 3. 15 cm
 - ☒ 4. 9 cm

Q.13 If the ratio of the average of two numbers to the larger number is 5 : 6, then the smaller number is what percentage less than the larger number?

- Ans**
- ☐ 1. 20%
 - ☒ 2. $33\frac{1}{3}\%$
 - ☐ 3. 40%
 - ☐ 4. 25%

Q.14 If the diagonal of a rectangular field is 26 m and its area is 240 m^2 , then find the perimeter (in metres) of the rectangular field.

- Ans**
- ☐ 1. 34 m
 - ☐ 2. 45 m
 - ☐ 3. 90 m
 - ☒ 4. 68 m

Q.17 Which river does NOT originate from the Peninsular Plateau?

- Ans**
- ☒ 1. Ganga
 - ☐ 2. Godavari
 - ☐ 3. Krishna
 - ☐ 4. Narmada

Q.18 What is the minimum percentage of seats reserved for women at each level of Panchayati Raj Institutions (PRIs) in India?

- Ans**
- ☐ 1. 50.33%
 - ☐ 2. 25%
 - ☒ 3. 33.33%
 - ☐ 4. 66.66%

Q.19 What happens if the Prime Minister of India resigns?

- Ans**
- ☐ 1. The President continues governance
 - ☐ 2. The Supreme Court takes over
 - ☒ 3. The entire Council of Ministers must resign
 - ☐ 4. Elections are held immediately

Q.20 The Tirukkural, a classical Tamil ethical text consisting of 1330 couplets and regarded as a foundational contribution to Tamil's recognition as a Classical Language, is traditionally attributed to which ancient Tamil poet?

- Ans**
- ☒ 1. Tiruvalluvar
 - ☐ 2. Ilango Adigal
 - ☐ 3. Subramania Bharati
 - ☐ 4. Kambar

Section : Arithmetical and Numerical Ability

Q.1 The average of all prime numbers between 30 and 66 is:

- Ans**
- ☐ 1. 48
 - ☐ 2. 47
 - ☐ 3. 48.6
 - ☒ 4. 46.5

Q.2 Find the square root of 0.000081.

- Ans**
- ☒ 1. 0.009
 - ☐ 2. 0.006
 - ☐ 3. 0.003
 - ☐ 4. 0.081

Q.3 The height of a tree increases at a rate of 20% per year. If it is now 25 feet tall, how tall (in feet) will it be after 2 years?

- Ans**
- ☐ 1. 34
 - ☐ 2. 30
 - ☒ 3. 36
 - ☐ 4. 32

Q.4 Harbhajan deposited a certain sum of money at 20% per annum, compounded annually. At the end of 2 years, the total amount received was ₹26,244. Find the sum of money deposited by Harbhajan.

- Ans ☒ 1. ₹18,225
☐ 2. ₹18,440
☐ 3. ₹18,065
☐ 4. ₹18,191

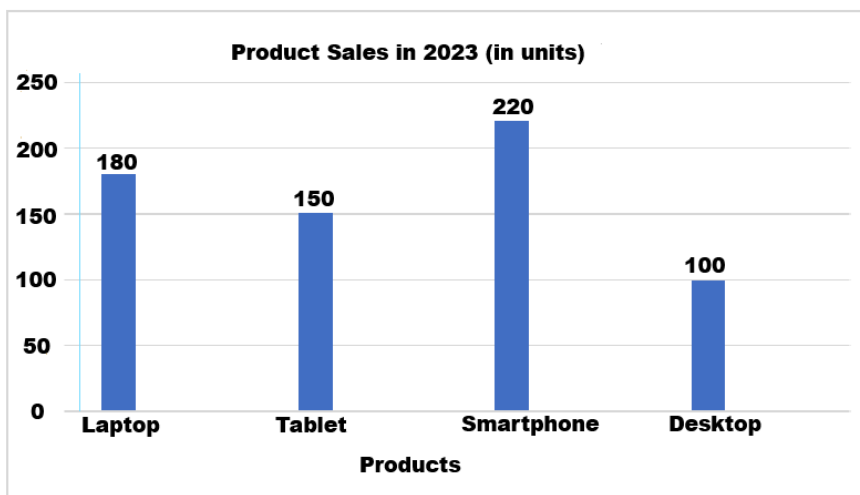
Q.5 If p and q are prime numbers such that $p^2 + q^2 = 74$. Then what is the value of $p + q$?

- Ans ☒ 1. 12
☐ 2. 9
☐ 3. 10
☐ 4. 8

Q.6 In a club where 60% of the members are male and 40% are female, what is the average age (in years) of all the members, if the average age of the men is 30 years and that of the women is 35 years?

- Ans ☒ 1. 32
☐ 2. 34
☐ 3. 33
☐ 4. 31

Q.7 The bar graph shows product sales in 2023.

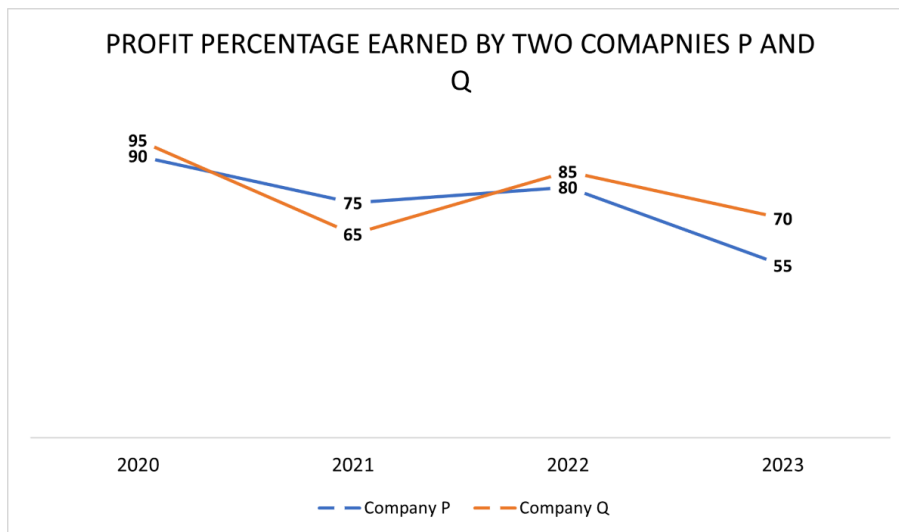


What is the difference between the maximum and minimum sales (in units)?

- Ans ☐ 1. 150
☐ 2. 200
☐ 3. 100
☒ 4. 120

Q.8 Study the given graph and answer the question that follows.

The following line graph represents the profit percentage earned by two companies P and Q on their investment.



In which year is the ratio of investment to profit maximum for company Q?

- Ans
- ☐ 1. 2020
 - ☐ 2. 2023
 - ☒ 3. 2021
 - ☐ 4. 2022

Q.9 The length of a wooden stick is first decreased by 10% and the resulting length is again decreased by 40%. The overall percentage change in the length of the wooden stick is:

- Ans
- ☐ 1. 46%, Increase
 - ☐ 2. 42%, Increase
 - ☒ 3. 46%, Decrease
 - ☐ 4. 42%, Decrease

Q.10 A cricketer had an average score over 53 innings. In his 54th inning, he was dismissed for zero, which caused his average to decrease by 5 runs. What is his new average (in runs) after 54 innings?

- Ans
- ☐ 1. 260
 - ☐ 2. 275
 - ☒ 3. 265
 - ☐ 4. 270

Q.11 A sells an article to B at 20% profit. B spends ₹400 on its maintenance and is sold to C at a 10% loss. Further, C sold this article at a 25% profit to D. If D paid ₹34,200 to C, then the amount received by A was:

- Ans
- ☐ 1. ₹32,000
 - ☐ 2. ₹30,000
 - ☐ 3. ₹27,000
 - ☒ 4. ₹25,000

Q.12 Find x, if $\frac{2^3 \times 4^5}{(0.2)^3} = 2^x \times 10^3$

- Ans ☒ 1. 10
☐ 2. 12
☐ 3. -10
☐ 4. 14

Q.13 In what duration (in years) will ₹9,600 fetch a simple interest of ₹1,080 at 3% per annum rate of interest?

- Ans ☐ 1. 2.75
☐ 2. 4.75
☒ 3. 3.75
☐ 4. 7.5

Q.14 f 79. Due to this, the average marks of the class got decreased by $\frac{5}{4}$.

- Ans ☐ 1. 31
☒ 2. 40
☐ 3. 41
☐ 4. 47

Q.15 Find x, if $0.03 \times x = \frac{121}{0.121} \times 0.21$.

- Ans ☐ 1. 70000
☒ 2. 7000
☐ 3. 70
☐ 4. 700

Q.16 Rohit deposited a certain sum of money at 20% per annum, compounded annually. At the end of 2 years, the total amount received was ₹13,824. Find the sum of money deposited by Rohit.

- Ans ☐ 1. ₹9,404
☐ 2. ₹9,603
☐ 3. ₹9,248
☒ 4. ₹9,600

Q.17 A vendor bought lemons at 21 for a rupee. How many must he sell for a rupee to gain 50%?

- Ans ☐ 1. 16
☐ 2. 18
☒ 3. 14
☐ 4. 15

Q.18 The population of a town was 1,80,000 three years ago. It increased by 2.5%, 3% and 5% in the last three years. Find the present population (rounded off to the nearest integer) of the town.

- Ans ☐ 1. 1,99,357
☐ 2. 1,97,890
☒ 3. 1,99,537
☐ 4. 1,98,357

Q.19 A factory's production in 2009 was 55,600. In 2010, the production increased by 13%. What was the production of the factory in 2010?⁵⁷

- Ans
- ☒ 1. 62,828
 - ☐ 2. 62,516
 - ☐ 3. 62,735
 - ☐ 4. 62,419

Q.20 What will be the compound interest on a sum of ₹5,000 after 2 years at the rate of 25% per annum?

- Ans
- ☐ 1. ₹2,612.5
 - ☐ 2. ₹2,912.5
 - ☒ 3. ₹2,812.5
 - ☐ 4. ₹2,712.5

Section : Arithmetical and Numerical Ability¹

Q.1 A milk distributor buys milk from three milkmen in the ratio 4:7:10. All three add water to their milk. The ratio of water to milk in the milk supplied by the three milkmen is 1:3, 2:5 and 3:7 respectively. The milk thus supplied is mixed by the distributor and sold further. What is the quantity of milk (in litres) in 105 litres of such a mixture of milk and water?

- Ans
- ☐ 1. 82
 - ☐ 2. 84
 - ☒ 3. 75
 - ☐ 4. 72

Q.2 A well with 4.3 m radius is dug 63 m deep. Find the volume (in m³) of the earth taken out of it. (Use $\pi = 22/7$)

- Ans
- ☐ 1. 3836.97
 - ☐ 2. 3344.07
 - ☐ 3. 3212.14
 - ☒ 4. 3661.02

Q.3 A cone is hollowed out from a solid cylinder, both having the same base radius and height. The height of the cylinder is 28 cm and the radius is 7 cm. The remaining solid is melted to form solid spherical balls of the same radius (7 cm) and there is no wastage in the process. If each ball is sold for ₹125 and the cost of the original cylinder is ₹175, then how much profit (in percentage) is earned by selling the spherical balls?

- Ans
- ☐ 1. $42\frac{5}{7}\%$
 - ☐ 2. $44\frac{4}{7}\%$
 - ☐ 3. $44\frac{5}{7}\%$
 - ☒ 4. $42\frac{6}{7}\%$

Q.4 A cistern is 30% full. Tap X can fill the empty cistern in 28 minutes, while tap Y can empty the full cistern in 20 minutes. If both the taps are opened together, then in how much time will it be empty?

- Ans
- ☐ 1. 18 minutes
 - ☒ 2. 21 minutes
 - ☐ 3. 15 minutes
 - ☐ 4. 20 minutes

Q.5 A man rows 56 km upstream in 8 hours and 99 km downstream in 9 hours. What is the speed (in km/h) of the man in still water?

- Ans
- ☐ 1. 10
 - ☒ 2. 9
 - ☐ 3. 8
 - ☐ 4. 11

Q.6 The ratio of Seema's to Manisha's present age is 5 : 7. After 4 years, the ratio of th

- Ans
- ☒ 1. 10 years
 - ☐ 2. 5 years
 - ☐ 3. 15 years
 - ☐ 4. 20 years

Q.7 Certain amount was distributed among Anand, Bhaskar and Sunder. After deducting a commission of ₹260, ₹280 and ₹320 from them respectively, they have their amounts in the ratio 9 : 13 : 8. If Anand has an amount of ₹63,260, what is the total amount distributed to all of them?

- Ans
- ☐ 1. ₹2,01,860
 - ☐ 2. ₹2,10,680
 - ☐ 3. ₹2,10,806
 - ☒ 4. ₹2,10,860

Q.8 Mukesh starts a business with ₹3,19,20 and, after 8 months, Nitin joins the ratio 7 : 11. What is Nitin's contribution to the capital?

- Ans
- ☐ 1. ₹3,50,480
 - ☐ 2. ₹4,50,480
 - ☒ 3. ₹1,50,480
 - ☐ 4. ₹2,50,480

Q.9 A shopkeeper marks an article 25% above the cost price. During a festival sale, he gives a discount of 20% on the marked price. If the final selling price is ₹960, what is the cost price of the article?

- Ans
- ☐ 1. ₹980
 - ☐ 2. ₹1,050
 - ☒ 3. ₹960
 - ☐ 4. ₹1,020

Q.10 A and B can do a piece of work in 18 days, B and C in 24 days and C and A in 54 days. In how many days will they finish the work together?

- Ans
- ☐ 1. $15\frac{4}{23}$
 - ☐ 2. $19\frac{8}{21}$
 - ☐ 3. $20\frac{3}{14}$
 - ☒ 4. $17\frac{7}{25}$

Q.11 Two trains of lengths 120 m and 180 m are running in opposite directions at speeds 45 km/h and 63 km/h. How much time will they take to cross each other?

- Ans
- ☒ 1. 10 seconds
 - ☐ 2. 6 seconds
 - ☐ 3. 8 seconds
 - ☐ 4. 12 seconds

Q.12 A train, 300 metres long, comes from behind and overtakes another train, $(300 - x)$ metres long and travelling in the same direction, in 30 seconds. If the speed of the slower train is 54 km/hr and that of the faster train is 114 km/hr, then what is the value of x ?

- Ans
- ☐ 1. 50
 - ☐ 2. 150
 - ☒ 3. 100
 - ☐ 4. 200

Q.13 Amit buys mangoes at the rate of 3 kg for ₹15 and sells them at 5 kg for ₹50. To earn ₹105 as profit, how many kilograms of mangoes must he sell?

- Ans
- ☐ 1. 24
 - ☐ 2. 22
 - ☐ 3. 23
 - ☒ 4. 21

Q.14 Two trains start from the same station at the same time, one going east and the other going north. The speed of the eastbound train is 54 km/hr and the speed of the northbound train is 72 km/hr. After how much time will they be 300 km apart?

- Ans
- ☒ 1. 3 hrs 20 min
 - ☐ 2. 3 hrs
 - ☐ 3. 4 hrs
 - ☐ 4. 3 hrs 40 min

Q.15 Two pipes, P and Q, when each is working alone, can fill an empty tank in 36 hours and 45 hours, respectively. A waste pipe, R, can empty the completely filled tank in 30 hours. Initially only pipes P and Q are opened. After 10 hours, R is also opened. In how much time from the start will the tank be full?"

- Ans
- ☐ 1. 35 hours
 - ☐ 2. 30 hours
 - ☐ 3. 45 hours
 - ☒ 4. 40 hours

Q.16 The volume (in m^3) of a cube, each of whose edges is 46 m, is:285

- Ans
- ☒ 1. 97336
 - ☐ 2. 97421
 - ☐ 3. 97327
 - ☐ 4. 97185

Q.14 The Santali language, spoken predominantly by the Santal tribal community in eastern and central India, belongs to which linguistic family?

- Ans**
- ☒ 1. Austroasiatic
 - ☐ 2. Indo-Aryan
 - ☐ 3. Dravidian
 - ☐ 4. Tibeto-Burman

Q.15 Which of the following NTPC-owned coal-based power stations has the highest commissioned capacity (MW)?

- Ans**
- ☐ 1. Bongaigaon
 - ☒ 2. Vindhyachal
 - ☐ 3. Gadawara
 - ☐ 4. Barauni

Q.16 The "Seven Pagodas" refer to which of the following architectural sites?

- Ans**
- ☒ 1. Mahabalipuram
 - ☐ 2. Ajanta
 - ☐ 3. Elora
 - ☐ 4. Hampi

Q.17 In which part of the Indian Constitution has protection and improvement of the natural environment — including forests, lakes, rivers and wildlife — been added as a fundamental duty?

- Ans**
- ☐ 1. Part IX
 - ☐ 2. Part VI
 - ☐ 3. Part X
 - ☒ 4. Part IV-A

Q.18 Which of the following naturally occurring monosaccharides is present in fruits, honey, and vegetables?

- Ans**
- ☐ 1. Lactose
 - ☐ 2. Trehalose
 - ☒ 3. Fructose
 - ☐ 4. Maltose

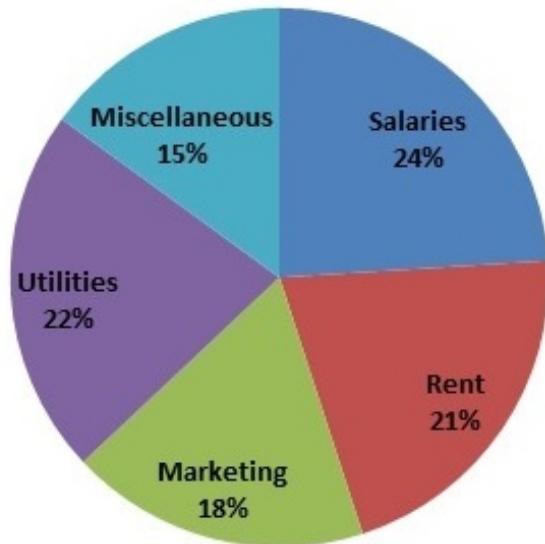
Q.19 Which type of Buddhist architecture served as a residential monastery where monks lived and meditated during the rainy season?

- Ans**
- ☐ 1. Stupa
 - ☐ 2. Pillar
 - ☒ 3. Vihara
 - ☐ 4. Chaitya

Q.20 Under which Article does the President have the power to grant pardons and commute sentences?

- Ans**
- ☐ 1. Article 52
 - ☐ 2. Article 82
 - ☐ 3. Article 62
 - ☒ 4. Article 72

- Q.1 The given pie chart shows the expenses (in percentages) of a company in different categories. The total expenses of the company are ₹11,00,000.



Find the difference between the amount spent by the company on Salaries and Utilities.

- Ans
- ☒ 1. ₹18,000
 - ☒ 2. ₹22,000
 - ☒ 3. ₹20,600
 - ☒ 4. ₹19,500

- Q.2 What is the compound interest (in ₹) on ₹5,000 for 3 years at 10% per annum, compounded annually?

- Ans
- ☒ 1. 1,655
 - ☒ 2. 1,565
 - ☒ 3. 1,656
 - ☒ 4. 1,566

- Q.3 If $\frac{574.257}{0.0041} = x$, then find the value of $\frac{574257}{41}$

- Ans
- ☒ 1. $10x$
 - ☒ 2. x
 - ☒ 3. $\frac{x}{10}$
 - ☒ 4. $100x$

- Q.4 If each side of a cube is increased by 30%, what is the percentage change in its volume?

- Ans
- ☒ 1. 119.7%
 - ☒ 2. 121.6%
 - ☒ 3. 131.6%
 - ☒ 4. 120.9%

Q.5 A person's monthly income is ₹95,000. They spend 18% on rent, 22% on education, 12% on transportation, 23% on other expenses, and remaining amount they save. Calculate the amount left for savings.

- Ans**
- ☐ 1. ₹23,150
 - ☒ 2. ₹23,750
 - ☐ 3. ₹23,350
 - ☐ 4. ₹23,550

Q.6 The average of 6.5, 10.7, 20.4 and a is 14. The value of a is:2667

- Ans**
- ☒ 1. 18.4
 - ☐ 2. 19.4
 - ☐ 3. 17.4
 - ☐ 4. 20.4

Q.7 Virendra deposited a certain sum of money at 20% per annum, compounded annually. At the end of 2 years, the total amount received was ₹84,060. Find the sum of money deposited by Virendra.

- Ans**
- ☒ 1. ₹58375
 - ☐ 2. ₹58727
 - ☐ 3. ₹58680
 - ☐ 4. ₹57959

Q.8 A vendor bought lemons at 22 for a rupee. How many must he sell for a rupee to gain 100%?

- Ans**
- ☐ 1. 13
 - ☐ 2. 12
 - ☐ 3. 15
 - ☒ 4. 11

Q.9 In what duration (in years) will ₹9,600 fetch a simple interest of ₹720 at 5% per annum rate of interest?1555

- Ans**
- ☐ 1. 3
 - ☒ 2. 1.5
 - ☐ 3. 0.5
 - ☐ 4. 2.5

Q.10 A 49-liter solution of fruit juice contains mango and orange juice in the ratio 5:2. How many liters of orange juice must be added to the mixture so that the new ratio of mango to orange juice becomes 2:1?

- Ans**
- ☐ 1. 1.5 liters
 - ☐ 2. 2.5 liters
 - ☐ 3. 4.5 liters
 - ☒ 4. 3.5 liters

Q.11 If the average of 9 consecutive numbers is 30, then find the largest of these numbers.

- Ans**
- ☐ 1. 32
 - ☐ 2. 36
 - ☒ 3. 34
 - ☐ 4. 30

Q.12 If 3 persons consume 180 kg of food in 30 days, how many people can be supported with 360 kg of food for 20 days?

- Ans ☒ 1. 9
☐ 2. 18
☐ 3. 12
☐ 4. 6

Q.13 Simplify the following expression.
 $54 \div 9 + 39 \div 13 \times 5 - 6 \text{ of } 4 + 8$

- Ans ☐ 1. 7
☐ 2. 4
☐ 3. 6
☒ 4. 5

Q.14 The sum of 6 numbers is 684. Find their average.1546

- Ans ☐ 1. 112
☐ 2. 115
☒ 3. 114
☐ 4. 113

Q.15 A vendor bought lemons at 27 for a rupee. How many must he sell for a rupee to gain 35%?

- Ans ☐ 1. 22
☐ 2. 21
☐ 3. 24
☒ 4. 20

Q.16 In the expression pq^2 , the values of both p and q are increased by 10%. By what percentage does the value of the given expression increase?

- Ans ☐ 1. 30.2%
☐ 2. 28.5%
☒ 3. 33.1%
☐ 4. 31.3%

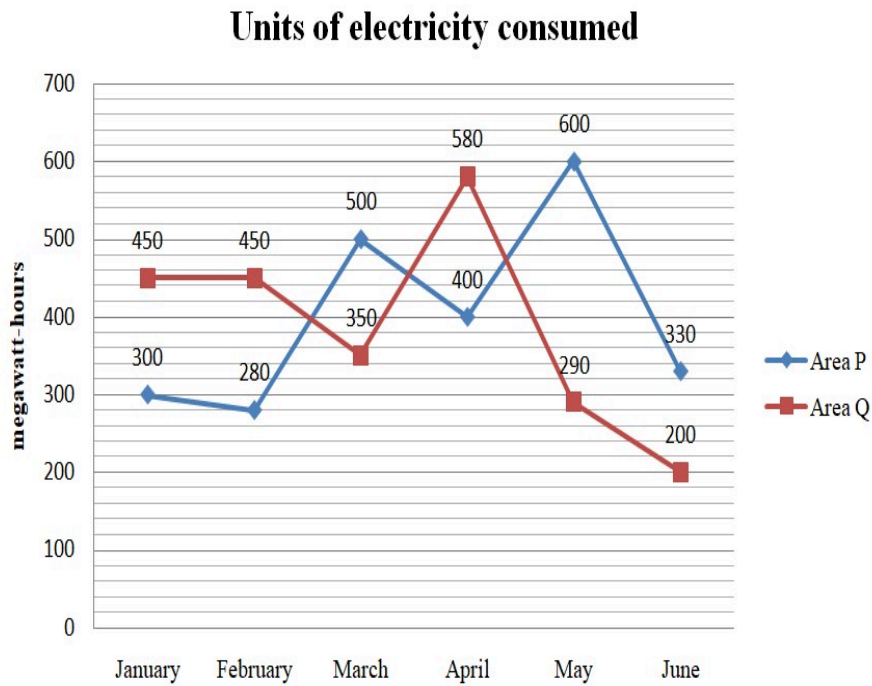
Q.17 A certain sum amounts to ₹51,712 at the rate of 33% per annum in 2 years, interest compounded 8-monthly. What will be the amount payable (in ₹, rounded off to the nearest rupee) on the same sum at the same rate and in the same time, if the interest is compounded yearly?

- Ans ☐ 1. 50,794
☒ 2. 50,375
☐ 3. 50,067
☐ 4. 50,519

Q.18 A family's monthly expenditure is ₹27,000, which is 75% of their monthly income. What is their monthly income?

- Ans ☐ 1. ₹46,000
☐ 2. ₹35,000
☒ 3. ₹36,000
☐ 4. ₹45,000

- Q.19 The line graph shows the number of units of electricity consumed (in megawatt-hours, MWh) by two residential areas (P and Q) over the first six months of a year.



What is the total electricity consumed by Area Q over the given six months?

- Ans
- ☐ 1. 2,460 MWh
 - ☒ 2. 2,320 MWh
 - ☐ 3. 2,260 MWh
 - ☐ 4. 2,120 MWh

- Q.20 If one student eats 2 apples per day, how many apples will be needed for 24 students over 5 days?

- Ans
- ☐ 1. 200
 - ☒ 2. 240
 - ☐ 3. 120
 - ☐ 4. 160

Section : Arithmetical and Numerical Ability1

- Q.1 The incomes of Praveen, Ranveer and Naveen are in the ratio of 11:14:15 and their savings are in the ratio 12:14:17. If Ranveer spent 50% of his income, what is the ratio of the expenditures of Praveen, Ranveer and Naveen?

- Ans
- ☐ 1. 7:9:13
 - ☐ 2. 4:7:9
 - ☐ 3. 7:9:11
 - ☒ 4. 10:14:13

- Q.2 A shopkeeper sold a book at a loss of 6%. If the selling price had been increased by ₹120, there would have been a gain of 18%. What was the cost price (in ₹) of the book?

- Ans
- ☐ 1. 505
 - ☒ 2. 500
 - ☐ 3. 495
 - ☐ 4. 510

Q.3 Deepak and Tappu can do a piece of work in 45 hours and 40 hours, respectively. They began the work together, but Deepak left after some hours and Tappu finished the remaining work in 23 hours. After how many hours did Deepak leave?

- Ans**
- ☒ 1. 9 hours
 - ☐ 2. 6 hours
 - ☐ 3. 15 hours
 - ☐ 4. 12 hours

Q.4 A can complete a piece of work in 12 days and B can complete it in 18 days. In how many days will they complete the work?

- Ans**
- ☐ 1. $7\frac{2}{5}$
 - ☒ 2. $7\frac{1}{5}$
 - ☐ 3. $7\frac{3}{5}$
 - ☐ 4. $7\frac{4}{5}$

Q.5 A grocer has 57 kg of rice, a part of which he sells at 23% profit, and the remaining quantity is sold at 61% profit. He gains 53% on the whole. What is the quantity of rice sold at 61% profit?

- Ans**
- ☐ 1. 43 kg
 - ☐ 2. 48 kg
 - ☐ 3. 44 kg
 - ☒ 4. 45 kg

Q.6 If $A : B = 3 : 13$ and $B : C = 7 : 24$, find $A : C$.

- Ans**
- ☒ 1. 7 : 104
 - ☐ 2. 3 : 7
 - ☐ 3. 3 : 116
 - ☐ 4. 2 : 83

Q.7 A tap M can fill a tank in 4.5 hours. But due to a leak L at the bottom of the tank, it took 6 hours to fill the tank. If the tank is full, in how much time can the leak empty it?

- Ans**
- ☐ 1. 6 hours
 - ☒ 2. 18 hours
 - ☐ 3. 9 hours
 - ☐ 4. 12 hours

Q.8 A cuboid of dimension $24\text{ cm} \times 9\text{ cm} \times 8\text{ cm}$ is melted and smaller cubes of side 6 cm are formed. Find how many such cubes can be formed.

- Ans**
- ☐ 1. 12
 - ☒ 2. 8
 - ☐ 3. 6
 - ☐ 4. 10

Q.9 Three numbers are in the ratio 4 : 7 : 11. If the sum of the first and third numbers is 184 more than the second number, find the sum of all three numbers.

- Ans**
- ☒ 1. 506
 - ☐ 2. 564
 - ☐ 3. 515
 - ☐ 4. 532

Q.10 A shopkeeper marks the price of an item at K and offers a discount of 20% on it. He What is the value of K?

- Ans**
- ☐ 1. 321.5
 - ☐ 2. 345.5
 - ☐ 3. 288.5
 - ☒ 4. 312.5

Q.11 A solid metallic sphere of radius 6 cm is melted and recast into smaller solid spheres, each of radius 2 cm. How many such smaller spheres can be formed?

- Ans**
- ☒ 1. 27
 - ☐ 2. 24
 - ☐ 3. 64
 - ☐ 4. 8

Q.12 A boat takes 200 minutes to cover a distance running upstream and takes 75 minutes to cover the same distance running downstream. Find the average speed of the boat for the round trip if the speed of the stream is 10 km/hr. (Round off your answer to two decimal places.)

- Ans**
- ☐ 1. 24.56 km/hr
 - ☒ 2. 17.45 km/hr
 - ☐ 3. 22 km/hr
 - ☐ 4. 20.42 km/hr

Q.13 Two trains start at the same time from stations P and Q towards each other at speeds of 75 km/h and 60 km/h, respectively. When they meet, one train has travelled 18 km more than the other. Find the distance between stations P and Q.

- Ans**
- ☒ 1. 162 km
 - ☐ 2. 154 km
 - ☐ 3. 175 km
 - ☐ 4. 148 km

Q.14 Find the total surface area (in cm^2) of a closed cylinder having the diameter of the base as 14 cm and a height of 4 cm. (Use $\pi = 22/7$)

- Ans**
- ☐ 1. 552
 - ☐ 2. 422
 - ☒ 3. 484
 - ☐ 4. 432

Q.15 A cyclist covers a certain distance at a certain speed. If a jogger covers three-fourths of that distance in the same amount of time, what is the ratio of the cyclist's speed to the jogger's speed?

- Ans**
- ☒ 1. 4 : 3
 - ☐ 2. 3 : 4
 - ☐ 3. 1 : 4
 - ☐ 4. 4 : 1

Q.18 Which pattern of inheritance is observed when a heterozygous individual expresses both alleles equally without blending?

- Ans**
- ☐ 1. Complete dominance
 - ☒ 2. Codominance
 - ☐ 3. Incomplete dominance
 - ☐ 4. Polygenic inheritance

Q.19 Which was the first state to implement the Panchayati Raj system in India?

- Ans**
- ☒ 1. Rajasthan
 - ☐ 2. Tamil Nadu
 - ☐ 3. Andhra Pradesh
 - ☐ 4. West Bengal

Q.20 Article 21 of the Indian Constitution envisages:

- Ans**
- ☐ 1. Right to Freedom of Religion
 - ☒ 2. Protection of life and personal liberty
 - ☐ 3. Prohibition of Untouchability
 - ☐ 4. Right to Property

Section : **Arithmetical and Numerical Ability**

Q.1 In a cricket match, a batsman scored 80 runs, which included 7 fours and 3 sixes. What percentage of his total score did he make by running between the wickets?

- Ans**
- ☐ 1. 58.5%
 - ☒ 2. 42.5%
 - ☐ 3. 43.5%
 - ☐ 4. 57.5%

Q.2 At what rate (in percentage) of interest per year will a sum of money double itself in 8 years on simple interest?

- Ans**
- ☐ 1. 25
 - ☐ 2. 10.5
 - ☒ 3. 12.5
 - ☐ 4. 14.5

Q.3 Mahesh bought 51 books for ₹1,150 from one shop and 49 books for ₹915 from another. What is the average price (in ₹) did he pay per book?

- Ans**
- ☐ 1. 22.65
 - ☐ 2. 21.65
 - ☐ 3. 23.65
 - ☒ 4. 20.65

Q.4 A man paid ₹2,000 for each of the 14 bags of rice. 10 bags of rice can be purchased for ₹3,000 each, while 16 bags are available for ₹2,400 each. What is the average cost of one bag of rice?

- Ans**
- ☐ 1. ₹ 1,410
 - ☒ 2. ₹ 2,410
 - ☐ 3. ₹ 4,410
 - ☐ 4. ₹ 3,410

Q.5 Simplify: $2\frac{2}{9} + 4\frac{1}{18} - 1\frac{1}{2}$

- Ans
- ☒ 1. $4\frac{7}{9}$
 - ☐ 2. $4\frac{2}{9}$
 - ☐ 3. $4\frac{4}{9}$
 - ☐ 4. $4\frac{1}{9}$

Q.6 A vendor bought lemons at 27 for a rupee. How many must he sell for a rupee to gain 50%?

- Ans
- ☒ 1. 18
 - ☐ 2. 19
 - ☐ 3. 16
 - ☐ 4. 20

Q.7 A student's marks were incorrectly entered as 21 instead of 89. Due to this error, the class average was lowered by 1 mark. What is the number of students in the class?

What is the number of students in the class?

- Ans
- ☐ 1. 43
 - ☐ 2. 49
 - ☐ 3. 55
 - ☒ 4. 51

Q.8 A vendor sold 30 chocolates for a rupee, thereby gaining 40%. How many did he buy for a rupee?

- Ans
- ☒ 1. 42
 - ☐ 2. 44
 - ☐ 3. 48
 - ☐ 4. 46

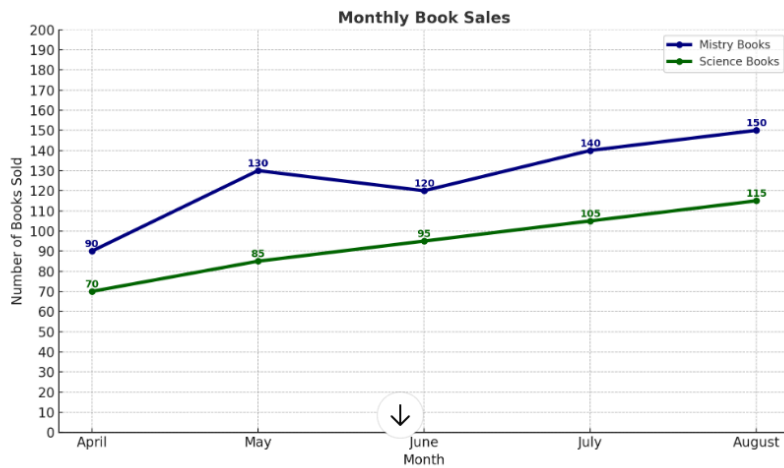
Q.9 A factory requires ₹37,500 to produce 250 units. Assuming the cost of production is directly proportional to the number of units produced, how many units—each costing ₹30 more than the previous cost per unit—can be produced with 75% of the amount required to produce 440 units?

- Ans
- ☐ 1. 250
 - ☐ 2. 300
 - ☐ 3. 225
 - ☒ 4. 275

Q.10 Simplify: $\sqrt{900} + \sqrt{0.09} + \sqrt{0.000009}$

- Ans
- ☐ 1. 30.1103
 - ☐ 2. 30.003
 - ☐ 3. 33.3003
 - ☒ 4. 30.303

Q.11 Study the following line chart, answer the following question.



If the trend continues and both categories increase in August to September by the same amount as from July to August, how many total books are expected to be sold in September?

Ans ☒ 1. 285

☐ 2. 150

☐ 3. 115

☐ 4. 160

Q.12 An amount of ₹50,000 is invested in two schemes, one offers compound interest at an annual rate of 8%, compounded semi-annually, and the other offers simple interest at the same rate for the same duration. Calculate the difference between the compound interest and the simple interest after 2 years, rounded off to two decimal places.

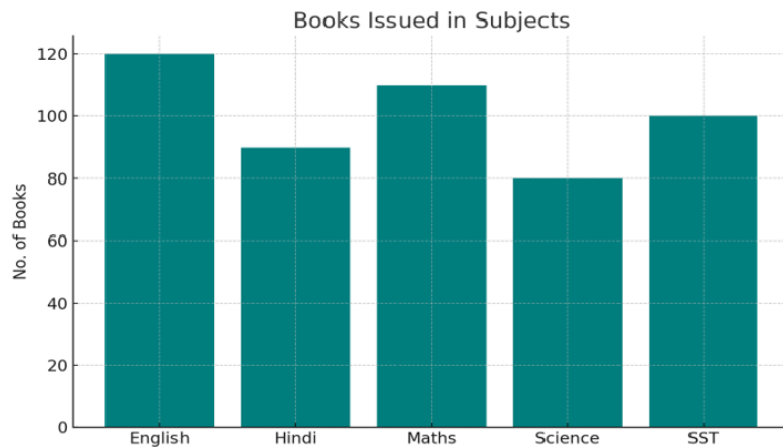
Ans ☐ 1. ₹466.48

☐ 2. ₹476.93

☐ 3. ₹448.37

☒ 4. ₹492.93

Q.13 The graph below shows the number of books issued in five subjects in a month at a library. Assume all numbers are multiples of 10.



What is the average number of books issued across all the five subjects?

- Ans
- ☐ 1. 110
 - ☐ 2. 105
 - ☐ 3. 95
 - ☒ 4. 100

Q.14 The ratio of milk and water in a 75 litre mixture is 3 : 2. Find the quantity of water (in litres) to be added to the mixture in order to make this ratio 1:1.

- Ans
- ☐ 1. 25
 - ☐ 2. 20
 - ☒ 3. 15
 - ☐ 4. 19

Q.15 The population of a village 2 years ago was 1,25,500. Due to migration to cities, it decreases at the rate of 20% every year. What is the decrease in its population in two years?

- Ans
- ☒ 1. 45,180
 - ☐ 2. 51,480
 - ☐ 3. 48,150
 - ☐ 4. 41,580

Q.16 The value of $\sqrt{400} + \sqrt{0.09} + \sqrt{0.000001}$ is

- Ans
- ☐ 1. 22.230
 - ☐ 2. 21.310
 - ☐ 3. 24.240
 - ☒ 4. 20.301

Q.17 The numerator of a fraction $\frac{15}{13}$ is diminished by 9% and the de

- Ans
- ☐ 1. $\frac{5}{4}$
 - ☒ 2. $\frac{15}{16}$
 - ☐ 3. $\frac{3}{4}$
 - ☐ 4. $\frac{16}{15}$

Q.18 Find the compound interest on ₹7,725 at 4% per annum for 2 years, compounded annually.

- Ans
- ☐ 1. ₹680.36
 - ☐ 2. ₹730.36
 - ☒ 3. ₹630.36
 - ☐ 4. ₹780.36

Q.19 The price of a shirt was first increased by 20% and later decreased by 25%. If the original price was ₹800, what is the final price of the shirt?

- Ans
- ☒ 1. ₹720
 - ☐ 2. ₹750
 - ☐ 3. ₹800
 - ☐ 4. ₹780

Q.20 In a cricket match, a batsman scored 80 runs, which included 7 fours and 4 sixes. What percentage of his total score did he make by running between the wickets?

- Ans
- ☒ 1. 35%
 - ☐ 2. 65%
 - ☐ 3. 36%
 - ☐ 4. 66%

Section : Arithmetical and Numerical Ability1

Q.1 Nitin sells two articles for ₹4,963, each with no profit, no loss in the entire transaction. If one article was sold at a gain of 75%, then the other article is sold at a loss of:1829

- Ans
- ☒ 1. 30%
 - ☐ 2. 29%
 - ☐ 3. 28%
 - ☐ 4. 32%

Q.2 Poonam covered one-fourth of a certain distance at a speed of 60 km/hr, one-third of the remaining distance at 50 km/hr, and the rest of the distance at 40 km/hr. Find Poonam's average speed for the entire journey. (Round off your answer to two decimal places.)

- Ans
- ☐ 1. 44.23 km/hr
 - ☐ 2. 42.68 km/hr
 - ☐ 3. 40.25 km/hr
 - ☒ 4. 46.15 km/hr

Q.3 A retailer offers a scheme where customer gets a 20% discount on the second item purchased. If the first item is marked at ₹800 and the second item is marked at ₹1,000, what is the total amount paid?

- Ans
- ☒ 1. ₹1,600
 - ☐ 2. ₹1,680
 - ☐ 3. ₹1,800
 - ☐ 4. ₹1,700

Q.4 The amount of concrete required to build a concrete cylindrical pillar v

(Use $\pi = \frac{22}{7}$)

- Ans
- ☐ 1. 20.64 m³
 - ☒ 2. 24.64 m³
 - ☐ 3. 22.64 m³
 - ☐ 4. 26.64 m³

Q.5 Two pipes A and B can fill a tank in 11 hours and 17 hours, respectively. If both the pipes are opened simultaneously, in how much time will the tank be full (rounded off to two decimal places)?

- Ans
- ☐ 1. 6.87 hours
 - ☐ 2. 6.53 hours
 - ☒ 3. 6.68 hours
 - ☐ 4. 6.78 hours

Q.6 Two pipes, when each is opened alone, can fill a cistern in 7 hours and 8 hours, respectively. The pipes are opened simultaneously, and it is found that due to a leakage in the bottom of the cistern, it takes 16 minutes more than otherwise for it to be filled up. When the cistern is full, in how much time will the leak empty it, if no other inlet or outlet channel is then open?

- Ans
- ☐ 1. 42 hours
 - ☒ 2. 56 hours
 - ☐ 3. 58 hours
 - ☐ 4. 60 hours

Q.7 If 60 liters of a mixture contains milk and water in the ratio 7:3, how much water should be added to make the ratio 3:2?

- Ans
- ☒ 1. 10 liters
 - ☐ 2. 18 liters
 - ☐ 3. 24 liters
 - ☐ 4. 6 liters

Q.8 A school has a student to teacher ratio of 20 : 1. If the school has 50 teachers, how many students are there?

- Ans
- ☒ 1. 1000 students
 - ☐ 2. 1200 students
 - ☐ 3. 500 students
 - ☐ 4. 800 students

Q.9 Aman travels from A to B at a speed of 30 km/hr in t minutes and from B to C at a speed of 50 km/hr in 45 minutes. Find the value of t if the average speed of Aman from A to C is 42 km/hr.

- Ans**
- ☐ 1. 45
 - ☒ 2. 30
 - ☐ 3. 35
 - ☐ 4. 40

Q.10 The length, breadth, and height of a cuboid are in the ratio 2 : 3 : 4, and its total surface area is 832 cm². What is the sum of the length, breadth, and height?

- Ans**
- ☒ 1. 36 cm
 - ☐ 2. 32 cm
 - ☐ 3. 26 cm
 - ☐ 4. 40 cm

Q.11 A shopkeeper receives scheme discounts of 15%, 10%, and ₹199 on goods worth ₹2,000. What amount does he pay?

- Ans**
- ☐ 1. ₹1,361
 - ☐ 2. ₹1,381
 - ☐ 3. ₹1,311
 - ☒ 4. ₹1,331

Q.12 In a mixture of three varieties of tea, the ratio of their weights is 3 : 5 : 7. Now 3 kg tea of the first variety, 6 kg tea of the second variety and some quantity of the third variety are added to the mixture. The ratio of the weights of three varieties of tea becomes 7 : 12 : 15. Find the quantity (in kg) of the third variety of tea in the final mixture.

- Ans**
- ☐ 1. 52
 - ☒ 2. 45
 - ☐ 3. 50
 - ☐ 4. 48

Q.13 A train with a speed of 90 km/hr crosses a pole in 30 seconds. The length of train is:

- Ans**
- ☐ 1. 950 m
 - ☒ 2. 750 m
 - ☐ 3. 850 m
 - ☐ 4. 900 m

Q.14 What is the correct increasing order of the ratios 17 : 21, 2 : 7, 5 : 9, 7 : 18?

- Ans**
- ☐ 1. 7 : 18, 2 : 7, 5 : 9, 17 : 21
 - ☒ 2. 2 : 7, 7 : 18, 5 : 9, 17 : 21
 - ☐ 3. 7 : 18, 5 : 9, 2 : 7, 17 : 21
 - ☐ 4. 2 : 7, 7 : 18, 17 : 21, 5 : 9

Q.15 If the total surface area of a cube is 216 cm², what is the length (in cm) of its diagonal?

- Ans**
- ☐ 1. $6\sqrt{2}$
 - ☒ 2. $6\sqrt{3}$
 - ☐ 3. $16\sqrt{3}$
 - ☐ 4. $16\sqrt{2}$

Section : Arithmetical and Numerical Ability

Q.1 What is the sum of the squares of each member of the first two sets of twin primes?

Ans ☒ 1. 108

☐ 2. 97

☐ 3. 112

☐ 4. 89

Q.2 Find the compound interest on ₹8,800 at 15% per annum for 2 years and 4 months, compounded annually.

Ans ☐ 1. ₹3,719.90

☐ 2. ₹3,519.90

☐ 3. ₹3,619.90

☒ 4. ₹3,419.90

Q.3 In what ratio must a grocer mix two varieties of tea powder costing him ₹220 and ₹260 per kg, respectively, so as to get a mixture worth ₹250 per kg?

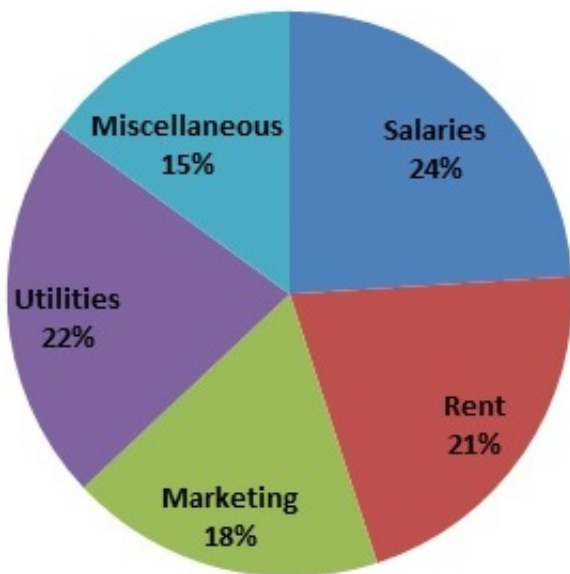
Ans ☒ 1. 1 : 3

☐ 2. 2 : 1

☐ 3. 1 : 2

☐ 4. 3 : 1

Q.4 The given pie chart shows the expenses (in percentages) of a company in different categories. The total expenses of the company are ₹11,00,000.



Find the total amount spent by company on rent and marketing.

Ans ☐ 1. ₹4,32,600

☐ 2. ₹4,29,800

☒ 3. ₹4,29,000

☐ 4. ₹4,32,000

Q.5 At what rate (in percentage) of interest per year will a sum of money become 2 times of itself in 25 years on simple interest?

- Ans
- ☐ 1. 6
 - ☐ 2. 8
 - ☐ 3. 2
 - ☒ 4. 4

Q.6 Rohit deposited a certain sum of money at 20% per annum, compounded annually. At the end of 2 years, the total amount received was ₹11,592. Find the sum of money deposited by Rohit.

- Ans
- ☒ 1. ₹8,050
 - ☐ 2. ₹7,616
 - ☐ 3. ₹8,220
 - ☐ 4. ₹7,566

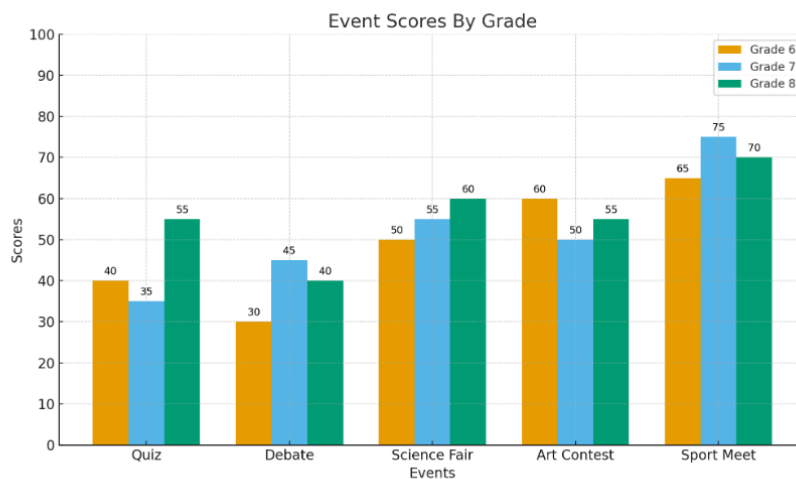
Q.7 After two successive increases of 10% each, the price of an article becomes ₹2,420. What is the original price of the article?

- Ans
- ☐ 1. ₹2,400
 - ☐ 2. ₹2,220
 - ☐ 3. ₹2,200
 - ☒ 4. ₹2,000

Q.8 The sum of 6 numbers is 708. Find their average.

- Ans
- ☐ 1. 116
 - ☒ 2. 118
 - ☐ 3. 117
 - ☐ 4. 119

Q.9 Study the following bar graph and answer the question below.



In which event was the average number of participants across all grades the lowest?

- Ans
- ☐ 1. Quiz
 - ☐ 2. Art Contest
 - ☐ 3. Science Fair
 - ☒ 4. Debate

Q.10 The sum of 6 numbers is 720. Find their average.

- Ans**
- ☐ 1. 119
 - ☐ 2. 121
 - ☒ 3. 120
 - ☐ 4. 118

Q.11 Owing to an increase by 14% of its initial price, the price of a chair becomes ₹2,850. Find the original price (in ₹) of the chair.

- Ans**
- ☐ 1. 4,500
 - ☒ 2. 2,500
 - ☐ 3. 1,500
 - ☐ 4. 3,500

Q.12 The average age of a woman and her daughter is 40 years. The ratio of their ages is 11 : 5. What is the daughter's age?

- Ans**
- ☐ 1. 26 years
 - ☐ 2. 20 years
 - ☐ 3. 24 years
 - ☒ 4. 25 years

Q.13 A vendor bought lemons at 25 for a rupee. How many must he sell for a rupee to gain 25%?

- Ans**
- ☒ 1. 20
 - ☐ 2. 21
 - ☐ 3. 18
 - ☐ 4. 22

Q.14 Find the greatest number which perfectly divides 48, 72 and 108.

- Ans**
- ☒ 1. 12
 - ☐ 2. 16
 - ☐ 3. 8
 - ☐ 4. 18

Q.15 If $\frac{7}{9}$ of a certain number is added to $\frac{11}{45}$ of the same number, the result is 1,012. Find the number.

- Ans**
- ☒ 1. 990
 - ☐ 2. 986
 - ☐ 3. 980
 - ☐ 4. 996

Q.16 A certain species of migratory birds arrives in a bird sanctuary near Lucknow every winter. Their population increases by 8% during the first month due to favorable conditions. However, due to increasing competition for resources, the population decreases by 5% during the second month. If the initial population upon arrival was 15,000, what is the population at the end of the second month?

- Ans**
- ☐ 1. 15,320
 - ☐ 2. 16,200
 - ☒ 3. 15,390
 - ☐ 4. 16,000

Q.17 A merchant purchases goods at a certain rate. Half of the goods are sold at a profit of 18%, and the other half at a price 10% less than the selling price of the first half. What is the total net profit or loss in the whole transaction?

- Ans
- ☐ 1. Profit of 14%
 - ☐ 2. Loss of 14%
 - ☐ 3. Loss of 12.1%
 - ☒ 4. Profit of 12.1%

Q.18 Simplify: $5 \times \left[9 - 2 \left\{ 3^2 + (12 \div 4 \times 3) - \left(7 + \frac{12}{2} \right) \right\} \right]$

- Ans
- ☐ 1. 75
 - ☒ 2. -5
 - ☐ 3. -75
 - ☐ 4. 5

Q.19 Ram's salary is first decreased by 6%, and then the decreased salary is increased by 24%. What is the net percentage increase in Ram's salary?

- Ans
- ☒ 1. 16.56%
 - ☐ 2. 14.24%
 - ☐ 3. 15.72%
 - ☐ 4. 12.32%

Q.20 In a cricket match, a batsman scored 80 runs, which included 6 fours and 5 sixes. What percentage of his total score did he make by running between the wickets?

- Ans
- ☐ 1. 33.5%
 - ☐ 2. 68.5%
 - ☐ 3. 67.5%
 - ☒ 4. 32.5%

Section : Arithmetical and Numerical Ability1

Q.1 If $A : B = 7 : 12$ and $B : C = 5 : 9$, find the value of $A : B : C$.

- Ans
- ☒ 1. 35 : 60 : 108
 - ☐ 2. 95 : 48 : 108
 - ☐ 3. 35 : 60 : 93
 - ☐ 4. 60 : 48 : 95

Q.2 A can do a piece of work alone in 63 days, while B can do it alone in 81 days. With the help of C, they completed the work in 27 days. Out of the total payment of ₹66,150, how much should C get?

- Ans
- ☐ 1. ₹17,550
 - ☐ 2. ₹15,560
 - ☐ 3. ₹15,570
 - ☒ 4. ₹15,750

Q.3 A shopkeeper sold a book at a loss of 6%. If the selling price had been increased by ₹132, there would have been a gain of 19%. What was the cost price (in ₹) of the book?

- Ans
- ☒ 1. 528
 - ☐ 2. 538
 - ☐ 3. 523
 - ☐ 4. 533

Q.4 Rahul can do 44% of a work in 11 days, while Raj can do 65% of the same work in 13 days. In how many days will 72% of the same work be done if they work together?

- Ans
- ☐ 1. 12 days
 - ☐ 2. 6 days
 - ☐ 3. 10 days
 - ☒ 4. 8 days

Q.5 Two trains, Train A and Train B, are running in opposite directions on parallel tracks. Train A travels at 72 km/hr, and Train B travels at 54 km/hr. The length of Train A is 150 metres, and the length of Train B is 120 metres. How much time will it take for the two trains to completely cross each other?
(Rounded off to two decimal places.)

- Ans
- ☒ 1. 7.71 seconds
 - ☐ 2. 8.35 seconds
 - ☐ 3. 9.20 seconds
 - ☐ 4. 7.52 seconds

Q.6 P and Q started a business by investing ₹2,26,000 and ₹3,68,000 respectively. If P's share in the profit earned at the end of year is ₹4,520, then what will be the total profit (in ₹) earned by them together?

- Ans
- ☐ 1. 9,525
 - ☐ 2. 10,675
 - ☒ 3. 11,880
 - ☐ 4. 7,360

Q.7 A retailer allows a trade discount of 16% and gives 2 articles free for buying every 5 articles and thus gains 35%. The marked price is above the cost price by:

- Ans
- ☒ 1. 125%
 - ☐ 2. 80%
 - ☐ 3. 105%
 - ☐ 4. 112%

Q.8 An air bubble of radius 0.8 cm is inside water. What is the volume (in $\left(\text{Given that } K = \frac{4\pi}{3}\right)$)

- Ans
- ☒ 1. $0.512 \times K$
 - ☐ 2. $0.256 \times K$
 - ☐ 3. $0.729 \times K$
 - ☐ 4. $0.64 \times K$

Q.9 The curved surface area and circumference of the base of a solid right circular cylinder are 2200 cm^2 and 110 cm, respectively. Find the volume of the cylinder.
(Take $\pi = 22/7$.)

- Ans
- ☐ 1. 21230 cm^3
 - ☐ 2. 22360 cm^3
 - ☐ 3. 20450 cm^3
 - ☒ 4. 19250 cm^3

Q.10 An athlete crosses 6000 m distance in 30 minutes. What is his speed in km/hour?

- Ans
- ☐ 1. 10
 - ☐ 2. 16
 - ☒ 3. 12
 - ☐ 4. 14

Q.11 A man can row 15 km downstream in 1.5 hour and the same distance upstream in 2 hours. What is the speed of the current?

- Ans
- ☐ 1. 10 km/h
 - ☐ 2. 7.5 km/h
 - ☒ 3. 1.25 km/h
 - ☐ 4. 2.5 km/h

Q.12 If a pipe can fill a tank in 5 hours and another pipe can empty the tank in 9 hours, then what part of the tank will be filled by both pipes in 1 hour, if both pipes are opened simultaneously?

- Ans
- ☐ 1. $\frac{1}{15}$ part
 - ☒ 2. $\frac{4}{45}$ part
 - ☐ 3. $\frac{1}{45}$ part
 - ☐ 4. $\frac{2}{45}$ part

Q.13 Two successive discounts of 20% and P% on an article are equal to a



- Ans
- ☐ 1. 16
 - ☒ 2. 10
 - ☐ 3. 14
 - ☐ 4. 12

Q.14 A number is divided into two parts in the ratio of 7 : 9. If the longer part is 108, find the number.

- Ans
- ☐ 1. 186
 - ☐ 2. 163
 - ☒ 3. 192
 - ☐ 4. 178

Q.15 A rectangular piece of cardboard 24 cm x 20 cm is made into an open box by cutting a square of 5 cm side from each corner and building up the side. Find the internal surface area (in cm^2) of the box.

- Ans
- ☐ 1. 360
 - ☐ 2. 280
 - ☒ 3. 380
 - ☐ 4. 300

Q.16 Two years ago, the ratio of the ages of A to B was 4:5. The ratio of their ages will be 8:9 two years from now. Find the present age of A.

- Ans
- ☐ 1. 4 years
 - ☐ 2. 2 years
 - ☐ 3. 3 years
 - ☒ 4. 6 years

Q.14 Which Buddhist festival commemorates the birth, enlightenment (Bodhi), and Mahaparinirvana (death) of Gautama Buddha?

- Ans**
- ☐ 1. Saga Dawa
 - ☐ 2. Magha Puja
 - ☐ 3. Asalha Puja
 - ☒ 4. Vesak

Q.15 Which vitamin is obtained almost exclusively from animal-based foods such as meat, fish, eggs, and milk?

- Ans**
- ☒ 1. Vitamin B₁₂
 - ☐ 2. Vitamin D
 - ☐ 3. Vitamin A
 - ☐ 4. Vitamin C

Q.16 Which of the following Indian festivals is also known as the "Festival of Lights"?

- Ans**
- ☐ 1. Baisakhi
 - ☐ 2. Holi
 - ☒ 3. Diwali
 - ☐ 4. Navratri

Q.17 भारतीय संविधान का अनुच्छेद 19(1)(d) संपूर्ण भारत में स्वतंत्र रूप से आवागमन का अधिकार देता है। निम्नलिखित में से किस शर्त के तहत इस अधिकार को यथोचित रूप से सीमित किया जा सकता है?

- Ans**
- ☒ 1. सार्वजनिक व्यवस्था, राज्य की सुरक्षा, या भारत की संप्रभुता और अखंडता के हित में
 - ☐ 2. शहरी विकास का प्रबंधन करने के लिए
 - ☐ 3. पर्यटन और यात्रा को बढ़ावा देने के लिए
 - ☐ 4. सांस्कृतिक विविधता को प्रोत्साहित करने के लिए

Q.18 Which Supreme Court case in 2025 held that private companies, including scheduled banks and NBFCs, are not subject to writ jurisdiction because they do not perform public functions or duties?

- Ans**
- ☒ 1. S. Shobha v. Muthoot Finance Ltd.
 - ☐ 2. Federal Bank Ltd. v. Sagar Thomas
 - ☐ 3. Zee Telefilms Ltd. v. Union of India
 - ☐ 4. Binny Ltd. v. V. Sadasivan

Q.19 As of October 2024, what is India's total renewable energy capacity?

- Ans**
- ☐ 1. 180 GW
 - ☒ 2. 203 GW
 - ☐ 3. 221 GW
 - ☐ 4. 275 GW

Q.20 Why does the President need the advice of the Council of Ministers?

- Ans**
- ☐ 1. It is a British tradition
 - ☐ 2. To ensure legal approval
 - ☒ 3. The Constitution requires it
 - ☐ 4. The President is not elected

Q.1 If 8 labourers are paid ₹4,800 for 6 days of work, how much will they be paid for 10 days of work?

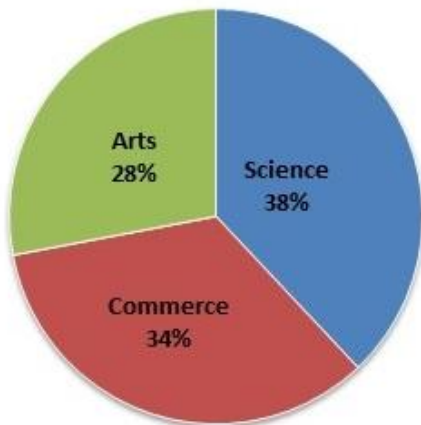
- Ans**
- ☐ 1. ₹12,000
 - ☒ 2. ₹8,000
 - ☐ 3. ₹10,000
 - ☐ 4. ₹6,000

Q.2 Mahesh's salary was first reduced by 38% and subsequently raised by 25%. How much percentage was his final salary lower compared to his initial salary?

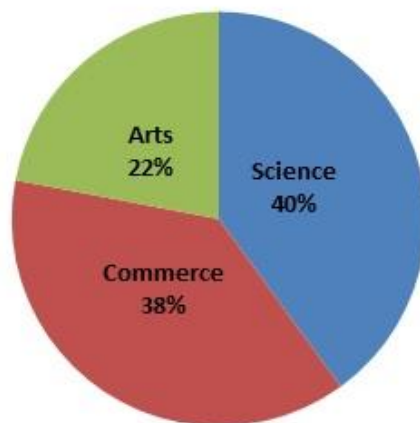
- Ans**
- ☒ 1. 22.5%
 - ☐ 2. 9.5%
 - ☐ 3. 25%
 - ☐ 4. 38%

- Q.3 The given pie charts show the distribution of students across different streams in two colleges, P and Q. The total number of students in College P is 1,000, and in College Q is 1,400.

School P



School Q



Find the difference between the number of students in the Commerce stream in College P and those in the Commerce stream in College Q.

Ans ☒ 1. 192

☐ 2. 186

☐ 3. 178

☐ 4. 166

- Q.4 The compound interest paid when a sum of ₹20,000 is invested for 1 year 4 months at the rate of $7\frac{1}{2}\%$ compound interest per annum, compounded annually, is:

Ans ☐ 1. ₹2,171.25

☐ 2. ₹2,210.40

☒ 3. ₹2,037.50

☐ 4. ₹2,185.75

Q.5 If $5^{x-y} = 3125$ and $3^{3x+y} = 2187$, then the value of $49x - 10y$ is:

- Ans
- ☐ 1. 174
 - ☐ 2. 163
 - ☒ 3. 167
 - ☐ 4. 171

Q.6 The sum of 6 numbers is 672. Find their average.1547

- Ans
- ☐ 1. 113
 - ☒ 2. 112
 - ☐ 3. 110
 - ☐ 4. 111

Q.7 A manufacturer sells a product to a wholesaler at a profit of 20%. The wholesaler, in turn, sells it to a retailer at a profit of 25%, and the retailer sells it to a customer at a profit of 25%. If the customer pays ₹135, find the cost price (in ₹) for the manufacturer.

- Ans
- ☒ 1. ₹72
 - ☐ 2. ₹71
 - ☐ 3. ₹70
 - ☐ 4. ₹73

Q.8 एक विक्रेता ने 30 चॉकलेट एक रुपये में बेची, जिससे उसे 50% का लाभ प्राप्त हुआ। उसने एक रुपये में कितनी चॉकलेट खरीदी थी?

- Ans
- ☐ 1. 47
 - ☒ 2. 45
 - ☐ 3. 49
 - ☐ 4. 51

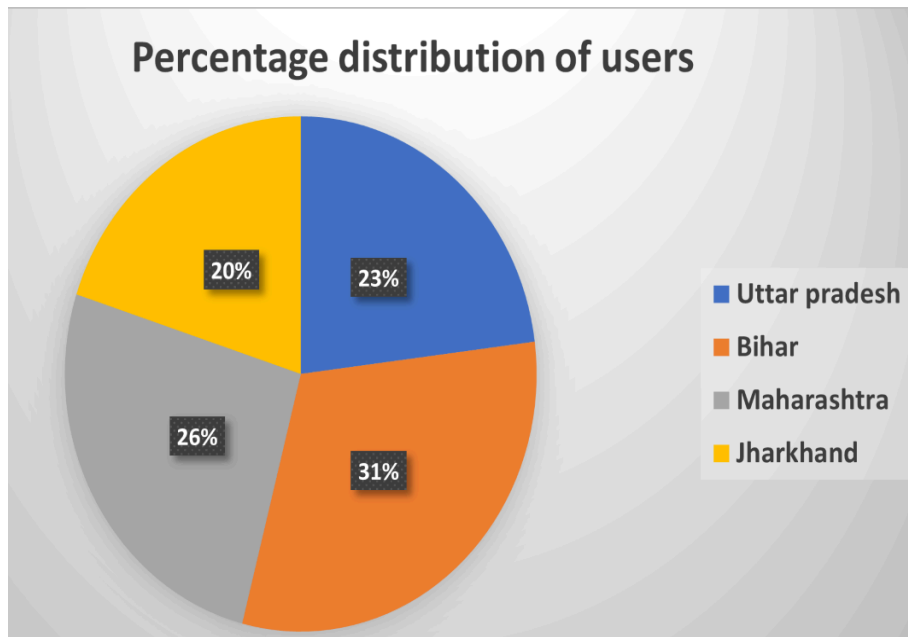
Q.9 A product's price decreased by 10% and then increased by 15%. If the original price was ₹1,000, what is the final price?

- Ans
- ☒ 1. ₹1,035
 - ☐ 2. ₹1,055
 - ☐ 3. ₹1,065
 - ☐ 4. ₹1,045

Q.10 Rameez saved 20% of his monthly salary. He spent 25% of the overall expenditure on clothes and his total expenditure except clothes was ₹7,200. Find his saving (in ₹).

- Ans
- ☐ 1. ₹2800
 - ☒ 2. ₹2400
 - ☐ 3. ₹2600
 - ☐ 4. ₹2500

- Q.11 The following pie chart shows the percentage of users of an application named 'XYZ' across four states. Study the chart and answer the question below.



If there are a total of 20 lakh users, then what is the number of total users from Uttar Pradesh, Bihar and Jharkhand?

- Ans
- ☒ 1. 13,80,000
 - ☒ 2. 14,80,000
 - ☒ 3. 15,80,000
 - ☒ 4. 12,80,000

- Q.12 A student's marks were incorrectly entered as 30 instead of 84. Due to

What is the number of students in the class?

- Ans
- ☒ 1. 50
 - ☒ 2. 42
 - ☒ 3. 35
 - ☒ 4. 32

- Q.13 The standard form of 0.000375426 is

- Ans
- ☒ 1. 3.75426×10^3
 - ☒ 2. 3.75426×10^4
 - ☒ 3. 3.75426×10^{-4}
 - ☒ 4. 3.75426×10^{-3}

- Q.14 Find the compound interest on ₹18,750 in 2 years at 4% per annum, the interest being compounded half-yearly (round off to one decimal place).

- Ans
- ☒ 1. ₹1,645.6
 - ☒ 2. ₹1,445.6
 - ☒ 3. ₹1,545.6
 - ☒ 4. ₹1,345.6

Q.15 At what rate (in percentage, rounded off to two places after decimal) of interest per year will a sum of money become 3 times of itself in 9 years on simple interest?

- Ans ☒ 1. 22.22
☐ 2. 20.22
☐ 3. 24.22
☐ 4. 44.44

Q.16 Laxminarayan deposited a certain sum of money at 20% per annum, compounded annually. At the end of 2 years, the total amount received was ₹80,496. Find the sum of money deposited by Laxminarayan.

- Ans ☐ 1. ₹55,950
☐ 2. ₹55,650
☐ 3. ₹56,100
☒ 4. ₹55,900

Q.17 5 chairs and 13 tables are purchased for ₹16,560. If the average cost of a chair is ₹2,454, then what is the average cost of a table?

- Ans ☒ 1. ₹330
☐ 2. ₹350
☐ 3. ₹360
☐ 4. ₹340

Q.18 The HCF and LCM of two natural numbers are 99 and 1386. If one of the numbers is 198, find the other number.

- Ans ☐ 1. 990
☒ 2. 693
☐ 3. 677
☐ 4. 698

Q.19 Sachin bought 52 books for ₹1,120 from one shop and 44 books for ₹900 from another. What is the average price (in ₹, rounded off to two decimal places) did he pay per book?

- Ans ☒ 1. 21.04
☐ 2. 22.04
☐ 3. 24.04
☐ 4. 23.04

Q.20 A worker's salary rises from ₹20,000 to ₹22,000. What is the percentage increase in his salary?

- Ans ☐ 1. 9%
☒ 2. 10%
☐ 3. 12%
☐ 4. 8%

Section : **Arithmetical and Numerical Ability1**

Q.1 What is the ratio of the surface area of a sphere with radius 2 cm to the surface area of a sphere with radius 5 cm?

- Ans ☐ 1. 2 : 5
☐ 2. 64 : 125
☒ 3. 4 : 25
☐ 4. 3 : 4

Q.2 A train, 500 meters long, is running at 72 km/h on one track. Another train, 200 meters long, is running on a parallel track in the opposite direction at 54 km/h. Find the time required for the two trains to completely cross each other.

- Ans**
- ☐ 1. 10 seconds
 - ☒ 2. 20 seconds
 - ☐ 3. 25 seconds
 - ☐ 4. 15 seconds

Q.3 The listed price of a book is ₹800. Find the final selling price of the book if successive discounts of 10%, 20% and 25% are given on the list price.

- Ans**
- ☐ 1. ₹440
 - ☐ 2. ₹459
 - ☐ 3. ₹540
 - ☒ 4. ₹432

Q.4 Soham can do a piece of work in 20 days, and Somesh can do the same work in 30 days. How long will they take to finish the work if both work together?

- Ans**
- ☐ 1. 15 days
 - ☒ 2. 12 days
 - ☐ 3. 20 days
 - ☐ 4. 10 days

Q.5 The length, breadth and height of a hall are in the ratio of 4 : 3 : 2. If its volume be 5184 m^3 , find the length of the hall?

- Ans**
- ☐ 1. 20 m
 - ☒ 2. 24 m
 - ☐ 3. 28 m
 - ☐ 4. 32 m

Q.6 A grocer has 96 kg of rice, a part of which he sells at 22% profit, and the remaining quantity is sold at 58% profit. He gains 46% on the whole. What is the quantity of rice sold at 58% profit?

- Ans**
- ☒ 1. 64 kg
 - ☐ 2. 63 kg
 - ☐ 3. 61 kg
 - ☐ 4. 65 kg

Q.7 A boat travels 25 km downstream in 1.25 hours and returns the same distance upstream in 2.5 hours. What is the speed of the boat in still water?

- Ans**
- ☐ 1. 12 km/hr
 - ☒ 2. 15 km/hr
 - ☐ 3. 6.25 km/hr
 - ☐ 4. 10.75 km/hr

Q.8 A, B and C together invests ₹69,000 in a business. A invests ₹7,000 more than B and B invests ₹10,000 more than C. Out of a total profit of ₹32,154, find the share of A (in ₹).

- Ans**
- ☐ 1. 12,345
 - ☐ 2. 17891
 - ☒ 3. 14,446
 - ☐ 4. 15,900

Q.9 A shopkeeper allows a 10% trade discount and a further 10% discount on the marked price. If the marked price is ₹2,000, then the selling price is:

- Ans
- ☐ 1. ₹1590
 - ☒ 2. ₹1620
 - ☐ 3. ₹1690
 - ☐ 4. ₹1560

Q.10 Three paint mixtures, M, N and O, are made by combining red, blue and white pigments in the ratio 11 : 4 : 5, 5 : 4 : 4 and 4 : 2 : 5, respectively. Which mixture has the lowest proportion of white pigment?

- Ans
- ☒ 1. M
 - ☐ 2. O
 - ☐ 3. All the mixtures have equal proportions of white pigment.
 - ☐ 4. N

Q.11 A 600 m long train running at 90 km/hr crosses a tunnel in 45 seconds, What is the length (in m) of tunnel?

- Ans
- ☒ 1. 525
 - ☐ 2. 575
 - ☐ 3. 550
 - ☐ 4. 600

Q.12 The ratio of the present ages of two boys is 4 : 9. After three years, the ratio will be 7 : 12. The ratio of their ages after 11 years will be _____.

- Ans
- ☐ 1. 4 : 7
 - ☒ 2. 3 : 4
 - ☐ 3. 6 : 7
 - ☐ 4. 5 : 6

Q.13 Three pipes, A, B and C, can fill a swimming pool in 40 hours, when operated simultaneously. After 12 hours of working, pipe A is closed and the remaining part of the pool is filled by B and C in 49 hours. How many hours would have been taken by pipe A alone to fill the empty pool completely?

- Ans
- ☐ 1. $92\frac{2}{3}$
 - ☐ 2. $88\frac{2}{5}$
 - ☐ 3. $95\frac{3}{5}$
 - ☒ 4. $93\frac{1}{3}$

Q.14 A person covers a distance of 15 km, while walking at a speed of 2.5 km/hr. How much distance would he cover in the same time if he runs at a speed of 8 km/hr?

- Ans
- ☐ 1. 42 km
 - ☐ 2. 44 km
 - ☒ 3. 48 km
 - ☐ 4. 46 km

Q.14 Which slippery material coats the inner wall of the stomach?

- Ans**
- ☐ 1. Bile
 - ☒ 2. Mucus
 - ☐ 3. Pepsin
 - ☐ 4. Saliva

Q.15 As of October 2024, which state in India has the highest installed renewable energy capacity?

- Ans**
- ☐ 1. Karnataka
 - ☒ 2. Rajasthan
 - ☐ 3. Tamil Nadu
 - ☐ 4. Gujarat

Q.16 Which of the following is a right available to every citizen under Article 21?

- Ans**
- ☒ 1. Right to life and personal liberty
 - ☐ 2. Right to property
 - ☐ 3. Right to equality
 - ☐ 4. Right to vote

Q.17 Which of the following correctly describes the composition of Parliament under Article 79 of the Constitution of India?

- Ans**
- ☒ 1. President, Rajya Sabha and Lok Sabha
 - ☐ 2. Lok Sabha and Rajya Sabha only
 - ☐ 3. President and Lok Sabha only
 - ☐ 4. Prime Minister, Lok Sabha and Rajya Sabha

Q.18 Which of the following Articles of the Indian Constitution states 'Every Judge of a High Court shall be appointed by the President'?

- Ans**
- ☐ 1. Article 88
 - ☐ 2. Article 168
 - ☒ 3. Article 217
 - ☐ 4. Article 125

Q.19 What is the primary religious focus of the Kumbh Mela?

- Ans**
- ☐ 1. Dance and Music
 - ☐ 2. Agricultural Celebration
 - ☒ 3. Pilgrimage and Ritual Bath
 - ☐ 4. Commemoration of a Historical Event

Q.20 Who is known as the father of genetics for his experiments on pea plants?

- Ans**
- ☐ 1. James Watson
 - ☐ 2. Charles Darwin
 - ☒ 3. Gregor Mendel
 - ☐ 4. Louis Pasteur

Q.1 Find the average of 311, 129, 96, 46, 125 and 103.

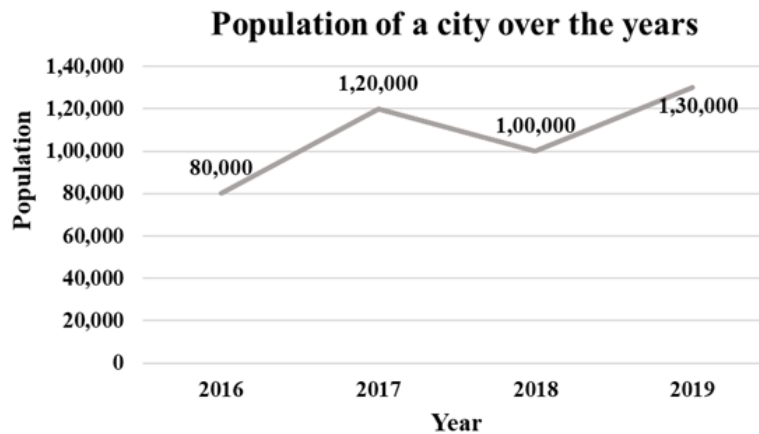
- Ans
- ☐ 1. 136
 - ☐ 2. 134
 - ☒ 3. 135
 - ☐ 4. 137

Q.2 Anuj and Rahul each invest ₹10,000 for a period of 4 years at an interest rate of 2% per annum. Anuj invests the amount at compound interest, compounded annually, while Rahul invests at simple interest. Calculate by how much value will Anuj be in profit over Rahul?

Given - $(1.02)^4 = 1.0824$

- Ans
- ☒ 1. ₹24
 - ☐ 2. ₹18
 - ☐ 3. ₹10
 - ☐ 4. ₹12

Q.3 The line graph shows the population of a city over the years. What was the population in the year 2018?



- Ans
- ☒ 1. 1,00,000
 - ☐ 2. 1,30,000
 - ☐ 3. 80,000
 - ☐ 4. 1,20,000

Q.4 Rakesh bought 51 books for ₹1,150 from one shop and 49 books for ₹920 from another. What is the average price (in ₹) did he pay per book?

- Ans
- ☐ 1. 21.7
 - ☐ 2. 23.7
 - ☐ 3. 22.7
 - ☒ 4. 20.7

Q.5 एक विक्रेता ने रुपये में 26 नींबू की दर से नींबू खरीदे। 100% का लाभ अर्जित करने के लिए उसे एक रुपये में कितने नींबू बेचने होंगे?

- Ans
- ☐ 1. 17
 - ☐ 2. 15
 - ☐ 3. 14
 - ☒ 4. 13

Q.6 A factory produces defective items at a rate of 6 for every 47 good items. If the total production in a day is 10,706 items, what is the total production of defective items from the factory in 3 days?

- Ans
- ☐ 1. 3,672
 - ☐ 2. 3,618
 - ☒ 3. 3,636
 - ☐ 4. 3,654

Q.7 In a cricket match, a batsman scored 80 runs, which included 6 fours and 4 sixes. What percentage of his total score did he make by running between the wickets?

- Ans
- ☐ 1. 61%
 - ☐ 2. 41%
 - ☐ 3. 60%
 - ☒ 4. 40%

Q.8 A number is successively increased by 10% and 15%. Now, the number is 31625. The original number before increments was ____.

- Ans
- ☐ 1. 22500
 - ☐ 2. 20000
 - ☒ 3. 25000
 - ☐ 4. 27500

Q.9 A vendor sold 30 chocolates for a rupee, thereby gaining 20%. How many did he buy for a rupee?

- Ans
- ☐ 1. 40
 - ☐ 2. 38
 - ☒ 3. 36
 - ☐ 4. 42

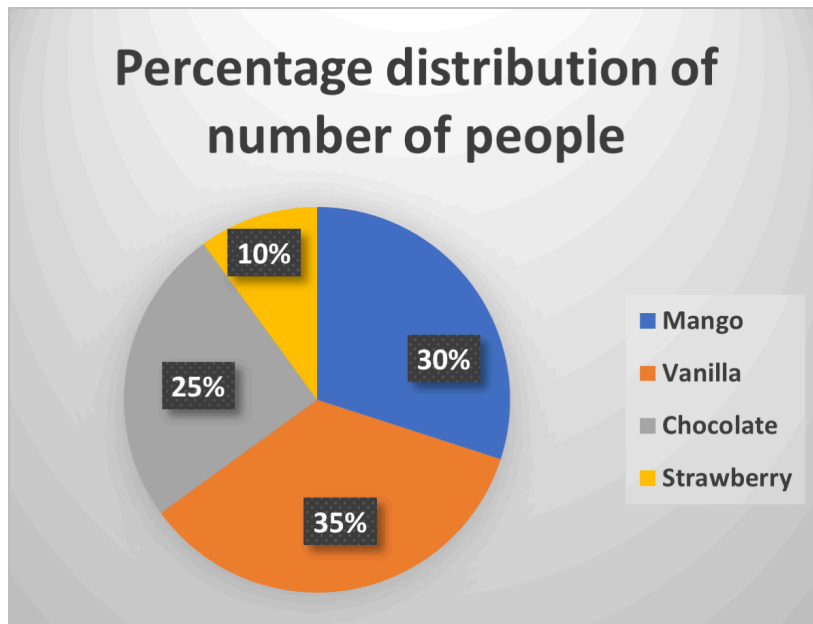
Q.10 Saurav deposited a certain sum of money at 20% per annum, compounded annually. At the end of 2 years, the total amount received was ₹62,352. Find the sum of money deposited by Saurav.

- Ans
- ☐ 1. ₹43156
 - ☐ 2. ₹43084
 - ☒ 3. ₹43300
 - ☐ 4. ₹43684

Q.11 The value of the expression $\sqrt{9x^2} \times (x^2)^2 \times (\sqrt{x^8})^{0.5}$ is ____.

- Ans
- ☒ 1. $3x^7$
 - ☐ 2. $3x^3$
 - ☐ 3. $3x^4$
 - ☐ 4. $3x^2$

- Q.12 In summer season, a survey was conducted among 120 people about their favorite ice-cream. The following pie chart shows the distribution.



What is the difference between the number of people who like Vanilla ice-cream and those who like Chocolate ice-cream?

- Ans ☒ 1. 12
☐ 2. 10
☐ 3. 11
☐ 4. 8
- Q.13 A quantity is increased by 20%. To make it the same quantity again, it should be decreased by ____%.
- Ans ☐ 1. $\frac{70}{3}$
☒ 2. $\frac{50}{3}$
☐ 3. 21
☐ 4. 20
- Q.14 An officer spends 10% of his salary on house rent. From the remaining amount, he spends 40% on conveyance, 20% of the rest on income tax, and 10% of the balance on clothes. He is left with ₹19,440. What was his total salary?
- Ans ☐ 1. ₹40,000
☐ 2. ₹70,000
☒ 3. ₹50,000
☐ 4. ₹60,000
- Q.15 Find the difference between compound interest, compounded annually and half-yearly for ₹12,000 at 10% per annum over $1\frac{1}{2}$ years.
- Ans ☐ 1. ₹37.20
☒ 2. ₹31.50
☐ 3. ₹30.25
☐ 4. ₹40.25

Q.16 What is the L.C.M of 0.726, 31.68 and 0.8712?

- Ans
- ☒ 1. 258.94
 - ☒ 2. 348.48
 - ☒ 3. 376.94
 - ☒ 4. 445.83

Q.17 At what rate (in percentage) of interest per year will a sum of money double itself in 5 years on simple interest?

- Ans
- ☒ 1. 20
 - ☒ 2. 22
 - ☒ 3. 40
 - ☒ 4. 18

Q.18 A student's marks were incorrectly entered as 49 instead of 56. Due to this, the average marks of the class were reduced by 0.4. What is the number of students in the class?

- Ans
- ☒ 1. 1
 - ☒ 2. 4
 - ☒ 3. 6
 - ☒ 4. 2

Q.19 32 workers can complete a piece of work in 16 days. In how many days can 8 workers complete the same work?

- Ans
- ☒ 1. 64
 - ☒ 2. 32
 - ☒ 3. 8
 - ☒ 4. 16

Q.20 The captain of a football team of 18 members (11 field players + 7 substitutes) is 28 years old and the goal keeper is 4 years older than him. If these two players are excluded, the average age of the team reduces by 1 year. The average age (in years) of the whole team is:

- Ans
- ☒ 1. 21
 - ☒ 2. 22
 - ☒ 3. 24
 - ☒ 4. 18

Section : Arithmetical and Numerical Ability1

Q.1 A and B can dig a pond in 13 days and 22 days, respectively. After finishing that work together, they receive an amount of ₹9,275. What is the share of A (in ₹) in that amount?

- Ans
- ☒ 1. 5,680
 - ☒ 2. 5,270
 - ☒ 3. 5,830
 - ☒ 4. 5,490

Q.2 The cost price of 18 articles is equal to the selling price of 12 articles.

3028

- Ans
- ☐ 1. 30% loss
 - ☐ 2. 50% loss
 - ☒ 3. 50% profit
 - ☐ 4. 30% profit

Q.3 In a college, the ratio of boys to girls is 5 : 2 and the ratio of girls to professors is 9 : 4. The ratio of students to professors is:

- Ans
- ☐ 1. 63 : 4
 - ☒ 2. 63 : 8
 - ☐ 3. 9 : 4
 - ☐ 4. 45 : 8

Q.4 Two trains on parallel tracks travel in the same direction. Train P is 180 m long moving at 90 km/h, and Train Q is 120 m long moving at 54 km/h. How long will P take to completely overtake Q?

- Ans
- ☐ 1. 12 seconds
 - ☐ 2. 20 seconds
 - ☒ 3. 30 seconds
 - ☐ 4. 5 seconds

Q.5 Three pipes A, B and C can fill a tank in 12, 18 and 36 minutes, respectively. If all three pipes are opened together, how long will it take to fill the tank?

- Ans
- ☒ 1. 6 minutes
 - ☐ 2. 4 minutes
 - ☐ 3. 8 minutes
 - ☐ 4. 9 minutes

Q.6 Vipul buys mangoes at the rate of 3 kg for ₹15 and sells them at 5 kg for ₹50. To earn ₹100 as profit, how many kilograms of mangoes must he sell?

- Ans
- ☐ 1. 22
 - ☐ 2. 23
 - ☒ 3. 20
 - ☐ 4. 21

Q.7 Two pipes X and Y can fill a tank in 72 minutes and 90 minutes, respectively. If both the pipes are opened simultaneously, how much time (in minutes) will it take to fill the tank?

- Ans
- ☐ 1. 30
 - ☐ 2. 35
 - ☐ 3. 45
 - ☒ 4. 40

Q.8 The volume (in m^3) of a cube, each of whose edges is 37 m, is:

- Ans
- ☐ 1. 50686
 - ☐ 2. 50776
 - ☒ 3. 50653
 - ☐ 4. 50530

Q.9 A bus travels from city A to B, B to C, and C to D. The distance between A and B is 30 km less, and the distance between C and D is 24 km more than the distance between B and C. Find the difference in the speeds (in km/h) at which the bus travelled between A and B and between C and D. The times taken from A to B, B to C, and C to D form an arithmetic progression with a common difference of 1 hour. The total time taken to travel from A to D is 12 hours, and the average speed for the whole journey is 37 km/h.

- Ans**
- ☐ 1. 2.2
 - ☐ 2. 4.3
 - ☐ 3. 2.7
 - ☒ 4. 5.2

Q.10 A and B started a business with a certain capital. A contributed one-ninth of the capital for 12 months, and B received sixteen-nineteenths of the profit. For how many months was B's money invested?

- Ans**
- ☐ 1. 9
 - ☐ 2. 7
 - ☒ 3. 8
 - ☐ 4. 6

Q.11 A product is marked at ₹1,370 and a discount of 12% is offered on the marked price. Find the selling price of the product.

- Ans**
- ☐ 1. ₹1,245.15
 - ☐ 2. ₹1,265.70
 - ☒ 3. ₹1,205.60
 - ☐ 4. ₹1,285.35

Q.12 A pipe can fill a tank in 12 hours, but due to a leak, it takes 15 hours. How long will the leak take to empty the full tank?

- Ans**
- ☐ 1. 50 hours
 - ☒ 2. 60 hours
 - ☐ 3. 40 hours
 - ☐ 4. 45 hours

Q.13 Two trains of equal length take 18 seconds and 30 seconds, respectively, to cross a pole. If the trains are running in the same direction, how long (in seconds) will they take to cross each other?

- Ans**
- ☐ 1. 96
 - ☐ 2. 93
 - ☐ 3. 100
 - ☒ 4. 90

Q.14 Which of the following ratios is the greatest?

- Ans**
- ☐ 1. 3 : 5
 - ☐ 2. 4 : 7
 - ☐ 3. 7 : 9
 - ☒ 4. 9 : 11

Q.15 If $\frac{a}{b} = \frac{3}{5}$, then find the value of $\frac{7a - 3b}{5a + 3b}$.

- Ans**
- ☐ 1. 5 : 2
 - ☒ 2. 1 : 5
 - ☐ 3. 2 : 5
 - ☐ 4. 5 : 3

Q.17 Which part of the respiratory system are the primary sites of exchange of gases?

- Ans**
- ☐ 1. Nostrils
 - ☒ 2. Alveoli
 - ☐ 3. Thoracic chamber
 - ☐ 4. Terminal bronchioles

Q.18 Which article of the Indian Constitution prohibits the duplicity of punishment for the same offence?

- Ans**
- ☐ 1. Article 21
 - ☐ 2. Article 19
 - ☒ 3. Article 20
 - ☐ 4. Article 22

Q.19 Which organ is primarily responsible for pumping blood throughout the body?

- Ans**
- ☒ 1. Heart
 - ☐ 2. Lungs
 - ☐ 3. Liver
 - ☐ 4. Kidneys

Q.20 Which language spoken in the State of Goa was included in the Eighth Schedule of the Constitution of India through the 71st Constitutional Amendment Act, 1992?

- Ans**
- ☐ 1. Marathi
 - ☐ 2. Tulu
 - ☒ 3. Konkani
 - ☐ 4. Kodava

Section : **Arithmetical and Numerical Ability**

Q.1 Find the compound interest on ₹8,000 at 10% per annum for 1 year, compounded half-yearly.

- Ans**
- ☐ 1. ₹830
 - ☐ 2. ₹800
 - ☐ 3. ₹810
 - ☒ 4. ₹820

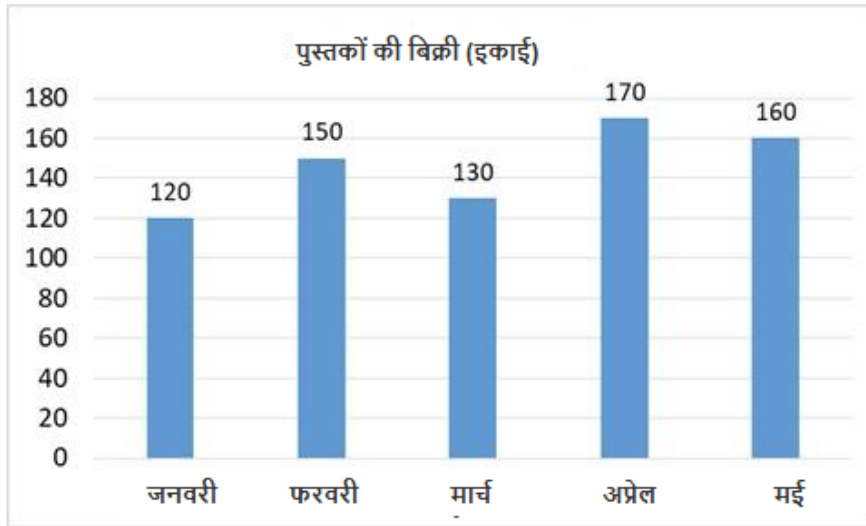
Q.2 Gopal observes a 4% increase in sales in the first year and a 20% increase in the second year. If the current sales are ₹249600, what were the sales (in ₹) two years ago?

- Ans**
- ☐ 1. 240000
 - ☒ 2. 200000
 - ☐ 3. 180000
 - ☐ 4. 208000

Q.3 In a cricket match, a batsman scored 80 runs, which included 7 fours and 5 sixes. What percentage of his total score did he make by running between the wickets?

- Ans**
- ☐ 1. 73.5%
 - ☐ 2. 72.5%
 - ☒ 3. 27.5%
 - ☐ 4. 28.5%

Q.4



बार ग्राफ से, पांच माह की अवधि में पुस्तकों की औसत मासिक बिक्री (इकाइयों में) की गणना कीजिए।

- Ans
- ☐ 1. 143
 - ☐ 2. 149
 - ☒ 3. 146
 - ☐ 4. 156

Q.5 The average of the first 91 natural numbers is:

- Ans
- ☐ 1. 47
 - ☒ 2. 46
 - ☐ 3. 45.5
 - ☐ 4. 46.5

Q.6 If the mean of p , q and r is M and $(pq + qr + rp) = 0$, then find the mean of p^2 , q^2 and r^2 .

- Ans
- ☒ 1. $3M^2$
 - ☐ 2. $9M^2$
 - ☐ 3. $3M$
 - ☐ 4. $6M$

Q.7 A salary of ₹8000 was decreased by 10%. What is the new salary?

- Ans
- ☒ 1. ₹7200
 - ☐ 2. ₹7300
 - ☐ 3. ₹7100
 - ☐ 4. ₹7000

Q.8 एक व्यक्ति को एक रुपये में 5 मिंट बेचने पर 8% की हानि होती है। 15% लाभ अर्जित करने के लिए उसे एक रुपये में कितने मिंट बेचने होंगे?

- Ans
- ☐ 1. 3
 - ☒ 2. 4
 - ☐ 3. 5
 - ☐ 4. 6

Q.9 What is the least number, which, when divided by 12, 18, 21 and 27 leaves the same remainder of 7, respectively?

- Ans
- ☐ 1. 693
 - ☐ 2. 645
 - ☒ 3. 763
 - ☐ 4. 563

Q.10 A sum becomes ₹8,517.6 in two years when interest is compounded annually at the rate of 4% per annum. What was the sum?

- Ans**
- ☐ 1. ₹7,760
 - ☐ 2. ₹7,995
 - ☒ 3. ₹7,875
 - ☐ 4. ₹7,658

Q.11 A milk tank holds 1000 liters of milk, which is leaking at the rate of 4 liters per minute. How long will it take to become empty?

- Ans**
- ☐ 1. 252 minutes
 - ☐ 2. 254 minutes
 - ☐ 3. 248 minutes
 - ☒ 4. 250 minutes

Q.12 The value of a car worth ₹25,60,000 is depreciating at the rate of 25% per annum. In how many years will its value be reduced to ₹8,10,000?

- Ans**
- ☐ 1. 2
 - ☐ 2. 1
 - ☒ 3. 4
 - ☐ 4. 3

Q.13 Find the greatest number which on dividing 52, 196 and 436 leaves equal remainder.

- Ans**
- ☐ 1. 24
 - ☒ 2. 48
 - ☐ 3. 60
 - ☐ 4. 36

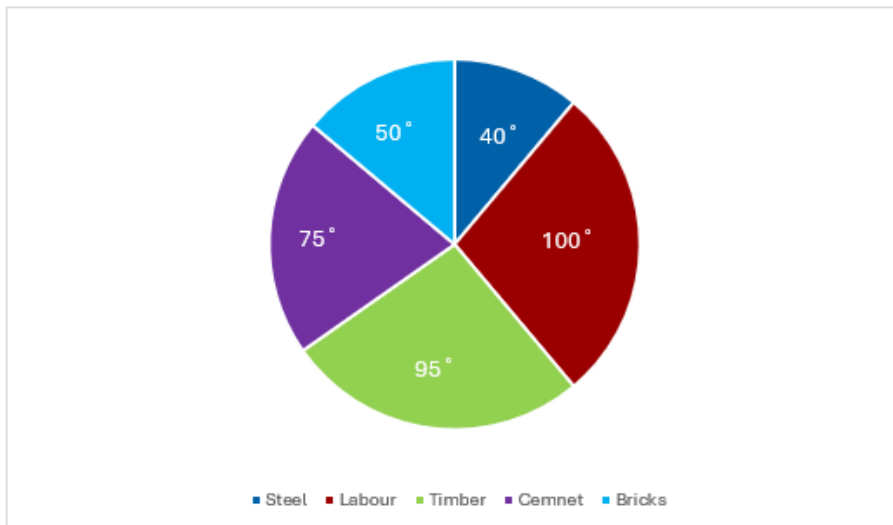
Q.14 A number when decreased by $90\frac{1}{2}\%$, results in 665. The number is:

- Ans**
- ☒ 1. 7000
 - ☐ 2. 7600
 - ☐ 3. 7200
 - ☐ 4. 7300

Q.15 A vendor bought lemons at 23 for a rupee. How many must he sell for a rupee to gain 15%?

- Ans**
- ☐ 1. 22
 - ☒ 2. 20
 - ☐ 3. 21
 - ☐ 4. 18

- Q.16 Study the pie chart and answer the question that follows.
The following pie chart represents a total expenditure of ₹8,10,000 on different items in constructing a flat in a town.



The expenditure(in ₹) on Timber is:

- Ans ☒ 1. ₹2,14,750
☒ 2. ₹2,11,750
☒ 3. ₹2,13,750
☒ 4. ₹2,12,750
- Q.17 A cricket coach recorded the runs scored by a player in 5 matches as follows: 42, 36, 51, 39 and 52. What is the average number of runs scored per match?
- Ans ☒ 1. 42
☒ 2. 43
☒ 3. 44
☒ 4. 45
- Q.18 In what duration (in years) will ₹9,600 fetch a simple interest of ₹1,080 at 5% per annum rate of interest?¹⁵⁴⁹
- Ans ☒ 1. 1.25
☒ 2. 4.5
☒ 3. 2.25
☒ 4. 3.25
- Q.19 A milk vendor mixes 45 liters of milk at ₹25 per liter with 35 liters of milk at ₹32 per liter. The average cost per liter is:
(Round off your answer to two decimal places.)
- Ans ☒ 1. ₹28.84
☒ 2. ₹28.58
☒ 3. ₹28.33
☒ 4. ₹28.06

Q.20 $0.\overline{297} \times 0.\overline{13}$ का मान ज्ञात कीजिए।

Ans

☐ 1. $\frac{11}{666}$

☐ 2. $\frac{26}{343}$

☒ 3. $\frac{13}{333}$

☐ 4. $\frac{23}{333}$

Section : Arithmetical and Numerical Ability1

Q.1 A store sells apples and oranges in the ratio of 5 : 3. If they sell 150 apples, how many oranges do they sell?

Ans

☐ 1. 50 less than apples

☒ 2. 60 less than apples

☐ 3. 60 more than apples

☐ 4. 50 more than apples

Q.2 A alone can do a piece of work worth ₹600 in 6 days. By taking the help of B, he can complete it in 4 days. Find the share of B.

Ans

☐ 1. ₹150

☐ 2. ₹250

☒ 3. ₹200

☐ 4. ₹100

Q.3 Aman, Anam and Arman started a business, each investing ₹60,000. After 4 months Aman withdrew ₹9,000, Anam withdrew ₹8,000 and Arman invested ₹12,000 more. At the end of the year, a total profit of ₹1,28,790 was recorded. Find Arman's share of the profit.

Ans

☐ 1. ₹54,650

☒ 2. ₹49,572

☐ 3. ₹61,728

☐ 4. ₹40,685

Q.4 A train of length 80 meters passes a man walking at 5 m/s in the same direction in 8 seconds. Another train of length 120 meters passes the same man walking at 5 m/s in the opposite direction in 4 seconds. What is the ratio of the speeds of the two trains?

Ans

☐ 1. 3:4

☐ 2. 2:3

☐ 3. 1:2

☒ 4. 3:5

Q.5 If A : B = 5 : 9 and B : C = 7 : 12, find the value of A : B : C.

Ans

☐ 1. 63:108:178

☒ 2. 35:63:108

☐ 3. 27:81:119

☐ 4. 35:57:91

Q.6 A taxi goes from City A to City B at a speed of 120 km/hr. On the return journey, due to traffic, the speed of the taxi falls to 80 km/hr. Find the average speed of the taxi (in km/hr) for the total journey.

- Ans
- ☐ 1. 105
 - ☐ 2. 89
 - ☐ 3. 95
 - ☒ 4. 96

Q.7 A wholesaler offers a trade discount of 20% on a product marked ₹2,500. What is the net price the retailer pays?

- Ans
- ☐ 1. ₹2,200
 - ☐ 2. ₹2,100
 - ☒ 3. ₹2,000
 - ☐ 4. ₹2,400

Q.8 Nitin sells two articles for ₹5,484, each with no profit, no loss in the entire transaction. If one article was sold at a gain of 50%, then the other article is sold at a loss of: 1828

- Ans
- ☐ 1. 23%
 - ☒ 2. 25%
 - ☐ 3. 27%
 - ☐ 4. 26%

Q.9 If $A : B = 2 : 3$, then the ratio of $(2A + 3B) : (3A + 2B)$ is equal to

- Ans
- ☐ 1. 12:13
 - ☐ 2. 13:11
 - ☒ 3. 13:12
 - ☐ 4. 11:13

Q.10 Two pipes, A and B, can fill a tank in 20 and 30 hours, respectively. Pipe C can empty the full tank in 15 hours. In the beginning, all the pipes are opened into the empty tank. After 10 hours, pipe C is turned off. What is the total time (in hours) required to fill the tank?

- Ans
- ☐ 1. 25
 - ☐ 2. 15
 - ☐ 3. 40
 - ☒ 4. 20

Q.11 Find the surface area of a sphere whose radius is twice the side of a square having area 12.25 cm^2 (Use $\pi = 22/7$).

- Ans
- ☐ 1. 308 cm^2
 - ☐ 2. 599 cm^2
 - ☐ 3. 297 cm^2
 - ☒ 4. 616 cm^2

Q.12 Water flows out through a circular pipe whose internal diameter is 2 cm, at the rate of 2 metres per second, into a cylindrical tank, the radius of whose base is 60 cm. By how much will the level of water rise in 27 minutes?

- Ans
- ☒ 1. 90 cm
 - ☐ 2. 89 cm
 - ☐ 3. 83 cm
 - ☐ 4. 99 cm

Q.13 Sanjay bought two pens, the first one at ₹250 and the second one at ₹270. He wanted to sell the first pen at a 20% profit, but the buyer bargained and was offered a discount of 82% on its initially intended selling price. However, the second pen was sold at a profit of 78%. Find the total profit he had in this transaction.

Ans ☒ 1. ₹14.60

☐ 2. ₹16.17

☐ 3. ₹18.34

☐ 4. ₹15.59

Q.14 Rahul travelled from Town X to Town Y at an average speed of 60 km/hr. He covered the first three-fourths of the distance in four-fifths of the total travel time. What was his average speed (in km/hr) during the remaining part of the journey?

Ans ☐ 1. 80 km/hr

☐ 2. 90 km/hr

☐ 3. 72 km/hr

☒ 4. 75 km/hr

Q.15 The area of a rectangle is three-fourth the area of a square of side 24 cm. Find the length of the rectangle, if its breadth is 16 cm.

Ans ☐ 1. 27.5 cm

☐ 2. 26.8 cm

☒ 3. 27 cm

☐ 4. 26 cm

Q.16 A rectangular piece of paper is 88 cm long and 13 cm wide. A cylinder is formed by rolling the paper along its length. Find the curved surface area of the cylinder.

Ans ☐ 1. 1189 cm²

☒ 2. 1144 cm²

☐ 3. 1177 cm²

☐ 4. 1159 cm²

Q.17 Pipe A can fill a tank in 15 hours and Pipe B can fill the same tank in 25 hours. Both pipes are opened together, but Pipe B is closed after 5 hours. Find the total time required to fill the tank.

Ans ☐ 1. 7 hours

☒ 2. 12 hours

☐ 3. 8 hours

☐ 4. 10 hours

Q.18 Two pipes P and Q can fill a tank in 68 minutes and 34 minutes, respectively. If both are opened together, in how much time will the tank be full?

Ans ☐ 1. $17\frac{1}{2}$ minutes

☐ 2. $21\frac{1}{4}$ minutes

☐ 3. $19\frac{1}{3}$ minutes

☒ 4. $22\frac{2}{3}$ minutes

Q.18 Which state is Majuli island situated in?

- Ans**
- ☒ 1. Assam
 - ☐ 2. Kerala
 - ☐ 3. Gujarat
 - ☐ 4. Tamil Nadu

Q.19 Which of the following languages is mainly spoken by tribal communities in Meghalaya and belongs to the Austro-Asiatic language family?

- Ans**
- ☐ 1. Bodo
 - ☒ 2. Khasi
 - ☐ 3. Mizo
 - ☐ 4. Garo

Q.20 Which Buddhist site in Uttar Pradesh marks the location where Lord Buddha passed away into Parinirvana?

- Ans**
- ☒ 1. Kushinagar, with its reclining Buddha
 - ☐ 2. Bodh Gaya, with its temple
 - ☐ 3. Lumbini, with its birth pillar
 - ☐ 4. Sarnath, with its sermon stupa

Section : **Arithmetical and Numerical Ability**

Q.1 The cost price of 60 oranges is equal to the selling price of 25 oranges. Find the profit percentage.

- Ans**
- ☒ 1. 140%
 - ☐ 2. 180%
 - ☐ 3. 90%
 - ☐ 4. 40%

Q.2 A number when decreased by $87\frac{1}{2}\%$, results in 799. The number is:

- Ans**
- ☒ 1. 6392
 - ☐ 2. 6452
 - ☐ 3. 6292
 - ☐ 4. 6864

Q.3 The population of a city increases at the rate of 2% per annum. If the present population of the city is 1,50,000, then the population after two years will be:

- Ans**
- ☐ 1. 1,66,060
 - ☐ 2. 1,56,660
 - ☐ 3. 1,66,660
 - ☒ 4. 1,56,060

Q.4 A trader marks his goods 50% above the cost price and allows a discount of 11% on it. If his gain is x%, find the value of x.

- Ans**
- ☐ 1. 32.5
 - ☐ 2. 34.5
 - ☒ 3. 33.5
 - ☐ 4. 35.5

Q.5 A class has 20 students. The average marks of the class in a test is 72. If the marks of the teacher (who also took the test) are included, the new average becomes 73. What are the marks scored by the teacher?

- Ans**
- ☒ 1. 93
 - ☐ 2. 89
 - ☐ 3. 95
 - ☐ 4. 88

Q.6 Find the simple interest if ₹1,800 is lent at 8% per annum for 3 years.

- Ans**
- ☐ 1. ₹454
 - ☐ 2. ₹443
 - ☒ 3. ₹432
 - ☐ 4. ₹421

Q.7 A set of sensors recorded data over five days with values 35, 42, 38, 40, and 45. After adding a new sensor, the overall average increases to 41. What reading did the new sensor report?

- Ans**
- ☒ 1. 46
 - ☐ 2. 50
 - ☐ 3. 48
 - ☐ 4. 44

Q.8 The average marks secured by 32 students were 52. But it was found that an item 86 was misread as 68. What is the correct average marks?

- Ans**
- ☐ 1. 52.5758
 - ☒ 2. 52.5625
 - ☐ 3. 52.2516
 - ☐ 4. 53.4582

Q.9 Vipul's salary was first reduced by 40% and subsequently raised by 46%. How much percentage was his final salary lower compared to his initial salary?

- Ans**
- ☒ 1. 12.4%
 - ☐ 2. 46%
 - ☐ 3. 40%
 - ☐ 4. 18.4%

- Q.10 Study the following table and answer the questions based on it.
Given table shows that the number of units of a product manufactured and sold by a company in six years.

Years	Number of units manufactured (in 1000)	Number of units Sold (in 1000)
2013	3550	2250
2014	3450	3210
2015	5560	2560
2016	5640	2800
2017	5850	3650
2018	4250	3250

In which of the following year the number of units sold is maximum?

- Ans ☒ 1. 2017
☐ 2. 2013
☐ 3. 2018
☐ 4. 2015

- Q.11 A number when decreased by $72\frac{1}{2}\%$, gives 605. The number is:

72

- Ans ☐ 1. 2400
☐ 2. 2800
☐ 3. 2600
☒ 4. 2200

- Q.12 Reena bought 35 kg of rice costing ₹185 per five kg, 40 kg of rice costing ₹175 per five kg, and 25 kg of rice costing ₹160 per five kg. Find the average cost of the rice per 10 kg (nearest to ₹).

- Ans ☐ 1. ₹300
☒ 2. ₹350
☐ 3. ₹280
☐ 4. ₹390

- Q.13 If $\frac{9}{13}$ of a certain number is added to $\frac{17}{78}$ of the same number, the re



- Ans ☒ 1. 702
☐ 2. 772
☐ 3. 712
☐ 4. 732

- Q.14 Salil observes a 10% increase in the sales in the first year and 25% in the second year. If the current sales are ₹145200, what was the sales (in ₹) two years ago?

- Ans ☐ 1. 85600
☒ 2. 105600
☐ 3. 116160
☐ 4. 132000

Q.15 The half-life of Uranium-233 is 1,95,000 years that is Uranium-233 decays at a constant rate such a way that it reduces 50% in 1,95,000 years. In how many years will it reduce to 25%?

- Ans
- ☐ 1. 4,00,000 years
 - ☐ 2. 3,70,000 years
 - ☐ 3. 3,80,000 years
 - ☒ 4. 3,90,000 years

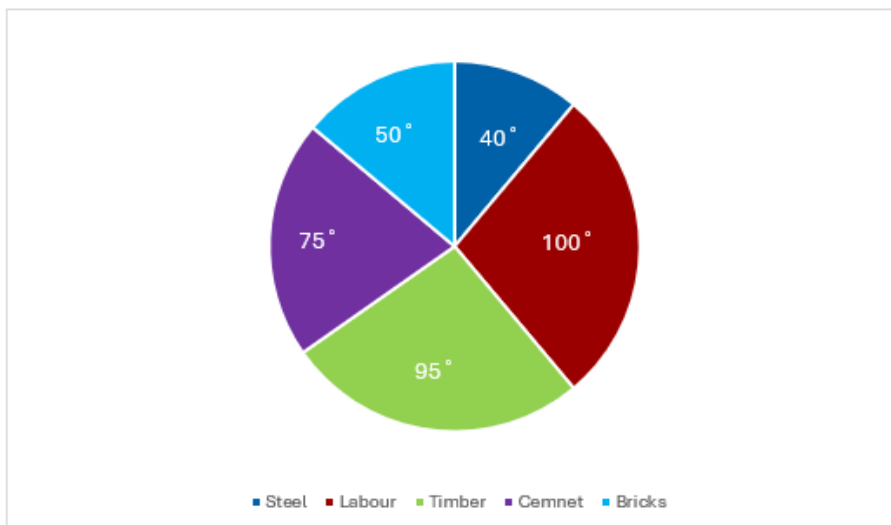
Q.16 Simplify: $\left(9.4 \times 3.5 \div 7 + 11.4 \text{ of } \frac{1}{19} - \frac{1}{50}\right)$

- Ans
- ☐ 1. 7.28
 - ☐ 2. 8.28
 - ☒ 3. 5.28
 - ☐ 4. 6.28

Q.17 What is the greatest four-digit number, which is divisible by 16, 24, 48, and 64?

- Ans
- ☐ 1. 9982
 - ☒ 2. 9984
 - ☐ 3. 9981
 - ☐ 4. 9980

Q.18 Study the pie chart and answer the question that follows.
The following pie chart represents a total expenditure of ₹8,10,000 on different items in constructing a flat in a town.



The percentage of the total expenditure spent on steel and bricks is:

- Ans
- ☐ 1. 20%
 - ☒ 2. 25%
 - ☐ 3. 35%
 - ☐ 4. 30%

Q.19 Simplify: $\sqrt{139 + \sqrt{22 + \sqrt{3 + \sqrt{36}}}}$

- Ans
- ☐ 1. 15
 - ☒ 2. 12
 - ☐ 3. 13
 - ☐ 4. 14

Q.20 ₹30,098.25 is received as the amount after 3 years when a sum of money was deposited at compound interest at 5% per annum compounded annually. Find the principal amount.

- Ans
- ✓ 1. ₹26,000
 - ✗ 2. ₹27,000
 - ✗ 3. ₹25,500
 - ✗ 4. ₹24,500

Section : Arithmetical and Numerical Ability1

Q.1 The volume of a sphere is 38808 cm^3 . If the value of π is $\frac{22}{7}$, then the radius is

- Ans
- ✓ 1. 21 cm
 - ✗ 2. 28 cm
 - ✗ 3. 23 cm
 - ✗ 4. 24 cm

Q.2 A trader marks his products 42% above the cost price and allows his customers 25% discount on their bills. What percentage of profit does he make?

- Ans
- ✗ 1. 5.5%
 - ✗ 2. 7.8%
 - ✗ 3. 7.4%
 - ✓ 4. 6.5%

Q.3 Find the fourth proportional to $4\sqrt{3}$, $6\sqrt{2}$ and $9\sqrt{3}$

- Ans
- ✓ 1. $\frac{27}{\sqrt{2}}$
 - ✗ 2. $\frac{27\sqrt{3}}{\sqrt{2}}$
 - ✗ 3. $\frac{18\sqrt{3}}{\sqrt{2}}$
 - ✗ 4. $\frac{18}{\sqrt{2}}$

Q.4 A van travels from town A to town B in three stages: the first 120 km at 80 km/h, the next 90 km at 90 km/h, and the last 50 km at 100 km/h. Due to traffic, the journey was delayed by 45 minutes. Find the average speed of the van for the entire journey.

- Ans
- ✓ 1. $69\frac{1}{3} \text{ km/h}$
 - ✗ 2. $92\frac{1}{4} \text{ km/h}$
 - ✗ 3. $82\frac{3}{4} \text{ km/h}$
 - ✗ 4. $88\frac{2}{3} \text{ km/h}$

Q.5 When the selling price of a music system is ₹18,000, the shopkeeper incurs a loss of 10%. At what selling price (in ₹) should the music system be sold to make a profit of 16%?

- Ans**
- ☒ 1. 23,200
 - ☐ 2. 23,800
 - ☐ 3. 23,400
 - ☐ 4. 23,600

Q.6 Find the surface area of a cuboid 20 m long, 1000 cm broad and 8 m high.

- Ans**
- ☒ 1. 880 m²
 - ☐ 2. 860 m²
 - ☐ 3. 800 m²
 - ☐ 4. 840 m²

Q.7 P can do a work 3 times faster than Q and therefore takes 42 days less than Q. Find the time in which P and Q can complete the work individually.

- Ans**
- ☐ 1. 23 days, 69 days
 - ☒ 2. 21 days, 63 days
 - ☐ 3. 20 days, 60 days
 - ☐ 4. 22 days, 66 days

Q.8 The ratio of two numbers is 3 : 5. If the sum of the numbers is 80, then find the smaller number.

- Ans**
- ☒ 1. 30
 - ☐ 2. 36
 - ☐ 3. 24
 - ☐ 4. 40

Q.9 A person is to reach a destination 50 km away. If he covers the first 35 km in 4 hours, then at what constant speed should he go so that the average speed for the whole journey becomes 10 km/hr?

- Ans**
- ☐ 1. 12 km/hr
 - ☐ 2. 21 km/hr
 - ☒ 3. 15 km/hr
 - ☐ 4. 18 km/hr

Q.10 A, B, and C started a business with investments in the ratio 4:6:5. After 4 months, A withdrew half of his capital. After another 4 months, B withdrew one-third of his capital. C invested for the whole year. If the total profit at the end of 12 months is ₹78,000, what is C's share of the profit?

- Ans**
- ☐ 1. ₹36,800
 - ☒ 2. ₹30,000
 - ☐ 3. ₹24,000
 - ☐ 4. ₹32,800

Q.11 A cuboid has a length of 6 cm, breadth of 4 cm, and height of 3 cm. What is its volume (in cm³)?

- Ans**
- ☐ 1. 62
 - ☒ 2. 72
 - ☐ 3. 81
 - ☐ 4. 70

- Q.12** A person travels a certain distance from one place to another at a speed of 60 km/h. He returns by the same route at a speed of 45 km/h. The total time taken for the whole trip is 2 hours more than the time he would have taken if he had travelled both ways at 60 km/h. Find the distance between the two places.
- Ans** ☒ 1. 475 km
☒ 2. 360 km
☒ 3. 120 km
☒ 4. 250 km
- Q.13** Working alone, A, B and C can complete a piece of work in 20 days, 30 days and 120 days, respectively. A and B work together for 8 days and then leave. How many more days will C take to complete the remaining work?
- Ans** ☒ 1. 35 days
☒ 2. 45 days
☒ 3. 50 days
☒ 4. 40 days
- Q.14** A solid iron sphere of radius 16 cm is melted and recast into small spheres of radius 4 cm. If the density of iron is 8.4 gram per cm^3 , find the total weight of 50% small spheres which formed in kg (rounded off to two places of decimal and use $\pi = 3.14$).
- Ans** ☒ 1. 74.03 kg
☒ 2. 72.02 kg
☒ 3. 66.06 kg
☒ 4. 69.08 kg
- Q.15** Lalit travels from point A to point B at 18 km/hr and returns from point B to point A at 34 km/hr. Find the average speed for the entire trip, approximately up to two decimal places.
- Ans** ☒ 1. 23.94 km/h
☒ 2. 23.89 km/h
☒ 3. 23.17 km/h
☒ 4. 23.54 km/h
- Q.16** Pipe A can fill a tank in 10 hours. Pipe B can fill it in 15 hours. Pipe C can empty it in 20 hours. All three pipes are opened together. After 2 hours, Pipe C is closed. How long will the tank take to get completely filled?
- Ans** ☒ 1. 7.6 hours
☒ 2. 4.6 hours
☒ 3. 6.6 hours
☒ 4. 5.6 hours
- Q.17** The ratio of two numbers is 3 : 5. If the smaller number is 21, find the larger number.
- Ans** ☒ 1. 45
☒ 2. 37
☒ 3. 35
☒ 4. 53
- Q.18** There is a pipe attached with a tank of 5000 liters. The inlet pipe can fill the tank in 12 hours. There is a leak in the tank due to which it takes 12 hours more to fill the tank. In what time can the leak empty the completely filled tank?
- Ans** ☒ 1. 28 hours
☒ 2. 22 hours
☒ 3. 24 hours
☒ 4. 20 hours

Q.14 Which Article of the Indian Constitution ensures equality before law and equal protection of laws?

- Ans**
- ☐ 1. Article 15
 - ☒ 2. Article 14
 - ☐ 3. Article 32
 - ☐ 4. Article 21

Q.15 As per the Census 2011, which of the following northern Indian states recorded the highest population density?

- Ans**
- ☐ 1. Rajasthan
 - ☐ 2. Uttarakhand
 - ☒ 3. Bihar
 - ☐ 4. Himachal Pradesh

Q.16 Which festival celebrates the birth of Prophet Muhammad?

- Ans**
- ☐ 1. Eid-ul-Adha
 - ☒ 2. Mawlid al-nabi
 - ☐ 3. Shab-e-Barat
 - ☐ 4. Eid-ul-Fitr

Q.17 Which of the following was incorporated on September 26, 2000, with the aim of modernizing the existing telecom system for train control, operation, and safety?

- Ans**
- ☐ 1. Airtel
 - ☐ 2. Vodafone
 - ☒ 3. RailTel
 - ☐ 4. BSNL

Q.18 Which statement best describes the solubility of lipids?

- Ans**
- ☐ 1. Soluble in both water and organic solvents
 - ☐ 2. Insoluble in both water and organic solvents
 - ☐ 3. Soluble in water, insoluble in organic solvents
 - ☒ 4. Insoluble in water, soluble in organic solvents

Q.19 Gautama Buddha delivered his first sermon (Dharmachakra Pravartana) at which of the following places, where the Dhamek Stupa is also located?

- Ans**
- ☐ 1. Bodh Gaya
 - ☐ 2. Lumbini
 - ☒ 3. Sarnath
 - ☐ 4. Kushinagar

Q.20 What is the process called when pulses like moong or channa develop white shoots after soaking and wrapping in a moist cloth?

- Ans**
- ☐ 1. Fermentation
 - ☐ 2. Pasteurization
 - ☐ 3. Roasting
 - ☒ 4. Germination

Q.1 A trader marks his goods 50% above the cost price and allows a discount of 12% on it. If his gain is x%, find the value of x.

- Ans
- ☐ 1. 34
 - ☐ 2. 31
 - ☐ 3. 33
 - ☒ 4. 32

Q.2 The average age of 11 persons of a group is 25 years. If a new member is added to the group, their average age becomes 30 years. What is the age of the new member?

- Ans
- ☐ 1. 70 years
 - ☐ 2. 30 years
 - ☒ 3. 85 years
 - ☐ 4. 55 years

Q.3 If the dividend is 2369, remainder is 17, and divisor is one-third of the quotient, then what is the divisor?

- Ans
- ☐ 1. 27
 - ☐ 2. 29
 - ☒ 3. 28
 - ☐ 4. 26

Q.4 Simplify the expression: $5 \times 2 + 12 \div (3 - 1)$

- Ans
- ☐ 1. 20
 - ☒ 2. 16
 - ☐ 3. 14
 - ☐ 4. 18

Q.5 Find the amount on ₹6,000 at 8% per annum for 2 years compounded annually.

- Ans
- ☐ 1. ₹6,989.40
 - ☒ 2. ₹6,998.40
 - ☐ 3. ₹6,999.40
 - ☐ 4. ₹6,698.40

Q.6 A shopkeeper mixes two varieties of rice costing ₹68 per kg and ₹95 per kg respectively. In what ratio should he mix them so that the average cost becomes ₹80 per kg?

- Ans
- ☐ 1. 3 : 5
 - ☐ 2. 4 : 5
 - ☒ 3. 5 : 4
 - ☐ 4. 5 : 3

Q.7 Two varieties of red lentils at ₹80 per kg and ₹95 per kg are mixed together in the ratio of 3:4. Find the price of the resulting mixture. (Round off the answer to two decimal places.)

- Ans
- ☐ 1. ₹91.05
 - ☐ 2. ₹85.50
 - ☐ 3. ₹92.62
 - ☒ 4. ₹88.57

Q.8 If 36 workers can complete a job in 17 days, how many workers are required to complete the same job in 9 days?

- Ans ☒ 1. 68
☐ 2. 66
☐ 3. 64
☐ 4. 61

Q.9 A merchant has two types of sugar: one costing ₹45 per kg and the other ₹25 per kg. He mixes them in a certain ratio and sells the mixture at ₹35 per kg, making neither a profit nor a loss. What is the ratio in which the two types of sugar are mixed?

- Ans ☐ 1. 3 : 1
☒ 2. 1 : 1
☐ 3. 4 : 3
☐ 4. 2 : 1

Q.10 Find x : $30^{x-1} = 125 \times 15 \times 2^4 \times 27$

- Ans ☐ 1. 6
☐ 2. 4
☒ 3. 5
☐ 4. 9

Q.11 What percentage of the numbers from 1 to 60 have 1 or 8 in the unit's digit?

- Ans ☐ 1. 16%
☐ 2. 17%
☒ 3. 20%
☐ 4. 21%

Q.12 A mixture of two solutions, A and B, with concentrations 30% and 70%, respectively, is created. If A and B are mixed in the ratio 1:3, what is the concentration of the resulting mixture?

- Ans ☒ 1. 60%
☐ 2. 65%
☐ 3. 55%
☐ 4. 50%

Q.13 In how many years will the sum of ₹380 become ₹684, if the rate of simple interest is 8% per annum?

- Ans ☒ 1. 10
☐ 2. 8
☐ 3. 9
☐ 4. 7

Q.14 Arman borrowed ₹18,000 from Arun at 16% per annum compound interest. Will Arman pay to Arun after $1\frac{1}{2}$ years?

- Ans ☐ 1. ₹22,674.82
☒ 2. ₹22,550.40
☐ 3. ₹22,124.32
☐ 4. ₹22,248.64

Q.15 A trader marks his goods 49% above the cost price and allows a discount of 18% on it. If his gain is $x\%$, find the value of x .

- Ans**
- ☐ 1. 24.18
 - ☐ 2. 21.18
 - ☐ 3. 23.18
 - ☒ 4. 22.18

Q.16 The number 33124 is divisible by which of the following numbers?

- Ans**
- ☐ 1. 86
 - ☐ 2. 87
 - ☐ 3. 94
 - ☒ 4. 91

Q.17 Two students appeared in an examination. One of them secured 7 marks more than the other and his marks were 68% of the sum of their marks. The sum of the marks obtained by them (rounded off to two decimal place) was:4523

- Ans**
- ☒ 1. 19.44
 - ☐ 2. 26.44
 - ☐ 3. 12.44
 - ☐ 4. 20.44

Q.18 The length and the breadth of a rectangle are x and y cm, respectively. If the length is increased by 20% and the breadth is decreased by 20%, by how much does the area of the rectangle change?

- Ans**
- ☐ 1. 5% increase
 - ☒ 2. 4% decrease
 - ☐ 3. 4% increase
 - ☐ 4. 5% decrease

Q.19 A sum of money invested at compound interest triples itself in 5 years, interest being payable annually. In how much time (in years) will it be 27 times?

- Ans**
- ☐ 1. 24
 - ☐ 2. 27
 - ☒ 3. 15
 - ☐ 4. 20

Q.20 Two plumbers, X and Y, are paid a total of ₹440 per day by their employer. If X is paid 200% of the sum paid to Y, then how much is Y paid (in ₹, rounded off to two decimal place) per day?

- Ans**
- ☐ 1. 46.67
 - ☒ 2. 146.67
 - ☐ 3. 96.67
 - ☐ 4. 196.67

Section : Arithmetical and Numerical Ability1

Q.1 A cyclist covers a distance of 50 km at a speed of 25 km/h and another distance of 70 km at a speed of 17.5 km/h. What is his average speed (in km/h) for the whole journey?

- Ans**
- ☐ 1. 25
 - ☐ 2. 22
 - ☒ 3. 20
 - ☐ 4. 16

Q.2 A right circular cone has a base radius of 5 cm and a height of 12 cm. Find the total surface area of this cone (rounded off to the nearest integer). (Use $\pi = 22/7$)

- Ans
- ☐ 1. 278 cm²
 - ☐ 2. 245 cm²
 - ☐ 3. 275 cm²
 - ☒ 4. 283 cm²

Q.3 A man buys a tractor for ₹4,00,000 and spends ₹50,000 on its repairs. He sells it for ₹5,55,000. What is the gain percentage? (Rounded off to two decimal places)

- Ans
- ☒ 1. 23.33%
 - ☐ 2. 22.22%
 - ☐ 3. 21.22%
 - ☐ 4. 24.24%

Q.4 An aeroplane flies 7200 km in 1 hour 40 minutes. What is its speed in km/h?

- Ans
- ☒ 1. 4320
 - ☐ 2. 4250
 - ☐ 3. 4032
 - ☐ 4. 4230

Q.5 A solid hemispherical object with radius 7 cm is melted and reshaped into a cone having a height of 14 cm. Determine the radius of the cone.

- Ans
- ☒ 1. 7 cm
 - ☐ 2. 5 cm
 - ☐ 3. 3.5 cm
 - ☐ 4. 14 cm

Q.6 A man travels from town A to town B by car at a speed of 60 km/h. On his return journey, he travels partly by bus at a speed of 40 km/h and partly by car at a speed of 80 km/h. The distance between A and B is 240 km. If the total time taken to travel from town A to town B is equal to the total time taken to travel from town B back to town A, find the distance he travelled by bus during the return journey.

- Ans
- ☐ 1. 160 km
 - ☐ 2. 40 km
 - ☒ 3. 80 km
 - ☐ 4. 120 km

Q.7 What is the difference between the total surface area and the lateral su

- Ans
- ☐ 1. 642 cm²
 - ☒ 2. 648 cm²
 - ☐ 3. 640 cm²
 - ☐ 4. 644 cm²

Q.8 A और B ने क्रमशः ₹64,000 और ₹96,000 का निवेश करके एक व्यवसाय शुरू किया। 4 महीने बाद A ने अपने निवेश में ₹36,000 की वृद्धि की, B ने ₹16,000 की आहरण (withdrew) किया। शुरुआत से 8 महीने बाद C, ₹1,20,000 के साथ व्यवसाय में शामिल हुआ। 12 महीने के अंत में अर्जित कुल लाभ ₹3,36,000 था। A और C के लाभ के हिस्से के बीच का अंतर ज्ञात कीजिए।

- Ans
- ☒ 1. ₹75,600
 - ☐ 2. ₹75,160
 - ☐ 3. ₹75,300
 - ☐ 4. ₹75,780

Q.9 The length of a rectangle is 5 cm more than its breadth. If the perimeter is 50 cm, find the length of the rectangle.

- Ans
- ☐ 1. 18 cm
 - ☒ 2. 15 cm
 - ☐ 3. 12 cm
 - ☐ 4. 14 cm

Q.10 The marked price of a fan is ₹3,000 and a discount of 25% is offered on the marked price. What additional discount must be offered to the customer now to bring the net price to ₹1,800?

- Ans
- ☐ 1. 25%
 - ☒ 2. 20%
 - ☐ 3. 24%
 - ☐ 4. 18%

Q.11 Pipe A can fill a tank in 12 hours and Pipe B can fill the same tank in 18 hours. Pipe C can empty the full tank in 36 hours. If all three pipes are opened together, in how many hours will the tank be filled?

- Ans
- ☐ 1. 10 hours
 - ☐ 2. 7 hours
 - ☐ 3. 12 hours
 - ☒ 4. 9 hours

Q.12 Two trains of equal length are running on parallel tracks in the same direction at a speed of 66 km/hour and 48 km/hour. The faster train passes the slower train in 35 seconds. Find the length of each train.

- Ans
- ☐ 1. 92.5 m
 - ☒ 2. 87.5 m
 - ☐ 3. 115 m
 - ☐ 4. 106 m

Q.13 A laptop is marked at a price 20% above its cost price. At what discount

- Ans
- ☒ 1. $4\frac{1}{6}\%$
 - ☐ 2. $4\frac{1}{4}\%$
 - ☐ 3. $4\frac{1}{12}\%$
 - ☐ 4. $4\frac{1}{3}\%$

Q.14 A and B started a business with investment in the ratio 5:6. After one year, the earned total profit was ₹95,172. Find the profit share of B.

- Ans
- ☐ 1. ₹51,682
 - ☐ 2. ₹51,322
 - ☒ 3. ₹51,912
 - ☐ 4. ₹51,212

Q.16 Which among the following organs in humans is mainly responsible for filtering nitrogenous wastes from the bloodstream?

- Ans**
- ☐ 1. Heart
 - ☐ 2. Lungs
 - ☐ 3. Liver
 - ☒ 4. Kidney

Q.17 The Veer Savarkar International Airport is located at:

- Ans**
- ☐ 1. Guwahati
 - ☒ 2. Port Blair
 - ☐ 3. Nagpur
 - ☐ 4. Calicut

Q.18 Which of the following railway zones is headquartered in Gorakhpur?

- Ans**
- ☐ 1. East Central Railway
 - ☒ 2. North Eastern Railway
 - ☐ 3. Northeast Frontier Railway
 - ☐ 4. Northern Railway

Q.19 Under Article 22(3)(b) of the Indian Constitution, what is preventive detention?

- Ans**
- ☐ 1. Detention after committing an offence
 - ☒ 2. Detention to prevent future offences
 - ☐ 3. Detention after police investigation
 - ☐ 4. Detention after court punishment

Q.20 Which Indian monument was originally built as a victory tower by the ruler Qutb-ud-din Aibak?

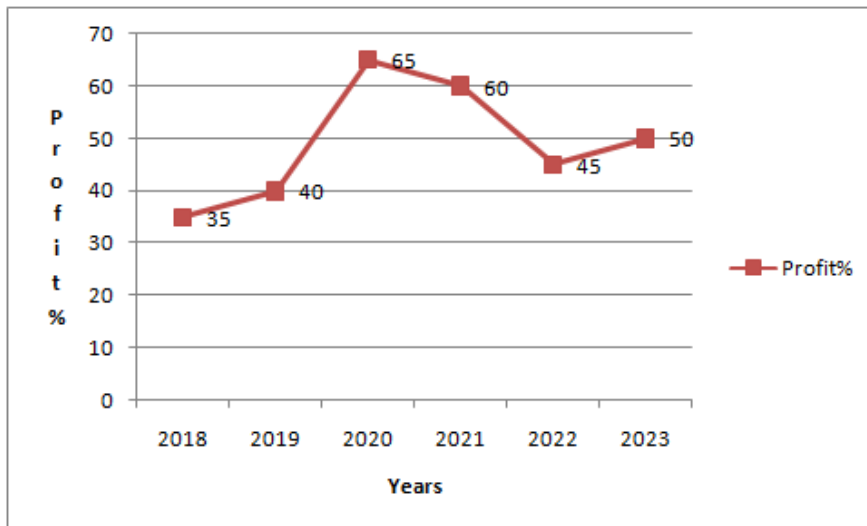
- Ans**
- ☐ 1. Charminar
 - ☒ 2. Qutub Minar
 - ☐ 3. Jama Masjid
 - ☐ 4. Sun Temple Konark

Section : **Arithmetical and Numerical Ability**

Q.1 By selling an article for ₹120, a man incurs a loss of 20%. At what price (in ₹) should he sell it to gain 6%?

- Ans**
- ☐ 1. 179
 - ☐ 2. 169
 - ☒ 3. 159
 - ☐ 4. 149

Q.2 Below is a line graph. Read the graph and answer the following question.



What is the difference between the maximum and the minimum percentage of profit?

- Ans
- ☐ 1. 20%
 - ☐ 2. 25%
 - ☐ 3. 32%
 - ☒ 4. 30%

Q.3 The average of five consecutive natural numbers is 50. What is the product of the smallest and the greatest number in this group?

- Ans
- ☐ 1. 2396
 - ☒ 2. 2496
 - ☐ 3. 2300
 - ☐ 4. 2400

Q.4 What will be the compound interest on a sum of ₹50,500 after 2 years at the rate of 12% per annum?

- Ans
- ☒ 1. ₹12,847.2
 - ☐ 2. ₹12,247.2
 - ☐ 3. ₹12,347.2
 - ☐ 4. ₹12,147.2

Q.5 A milkman has milk costing ₹60 per litre. How many litres of water should he add to 30 litres of milk so that he can sell the mixture at ₹50 per litre without any profit or loss?

- Ans
- ☐ 1. 4
 - ☒ 2. 6
 - ☐ 3. 8
 - ☐ 4. 10

Q.6 The total amount calculated at a certain rate on a certain sum of money compounded annually, after 2nd year and 3rd year is ₹1,210 and ₹1,331, respectively. Find the sum of money.

- Ans
- ☐ 1. ₹900
 - ☒ 2. ₹1,000
 - ☐ 3. ₹1,200
 - ☐ 4. ₹950

Q.7 A sum of ₹1,000 is invested at 10% per annum compounded annually for 2 years. What is the amount?

- Ans**
- ☐ 1. ₹1,120
 - ☒ 2. ₹1,210
 - ☐ 3. ₹1,222
 - ☐ 4. ₹1,100

Q.8 David spends 55% of his income. If he saves ₹36,000, then his income (in ₹) is:106

- Ans**
- ☐ 1. 79,000
 - ☒ 2. 80,000
 - ☐ 3. 81,000
 - ☐ 4. 19,800

Q.9 What percentage of the numbers from 1 to 60 have 1 or 7 in the unit's digit?

- Ans**
- ☐ 1. 14%
 - ☒ 2. 20%
 - ☐ 3. 21%
 - ☐ 4. 15%

Q.10 By selling an article for ₹120, a man incurs a loss of 10%. At what price (in ₹) should he sell the article to gain 32%?

- Ans**
- ☐ 1. 196
 - ☐ 2. 186
 - ☒ 3. 176
 - ☐ 4. 166

Q.11 The average temperature of the first 20 days of a month is 28°C, and the average temperature of the next 10 days is x°C. If the average temperature of all 30 days of the same month is 29°C, then what is the value of x?

- Ans**
- ☐ 1. 28.5
 - ☐ 2. 32
 - ☐ 3. 29.8
 - ☒ 4. 31

Q.12 A store sells a shirt for ₹800. The price is first increased by 10%, and then a further 15% increase is applied to the new price. What is the final price of the shirt?21

- Ans**
- ☒ 1. ₹1012
 - ☐ 2. ₹960
 - ☐ 3. ₹980
 - ☐ 4. ₹1080

Q.13 A class of 360 students was surveyed about their favourite sports and the outcome was displayed in a pie chart. If the slice for cricket in the pie chart spans 90°, how many students chose cricket?

- Ans**
- ☒ 1. 90 students
 - ☐ 2. 120 students
 - ☐ 3. 60 students
 - ☐ 4. 45 students

Q.14 Find the value of $\sqrt{576} + \sqrt{484}$

- Ans
- ☐ 1. 50
 - ☐ 2. 23
 - ☒ 3. 46
 - ☐ 4. 48

Q.15 Neetha bought 25 books at the rate of ₹22 each, 40 pens at the rate of ₹10 each and 15 pencils at the rate of ₹10 each. Calculate the average price of all the stationary goods.

- Ans
- ☒ 1. ₹13.75
 - ☐ 2. ₹11.75
 - ☐ 3. ₹12.75
 - ☐ 4. ₹14.75

Q.16 Akshay observes a 10% increase in sales in the first year and a 25% increase in the second year. If the current sales are ₹1,71,600, what were the sales (in ₹) two years ago?

- Ans
- ☐ 1. 1,56,000
 - ☐ 2. 1,04,800
 - ☐ 3. 1,37,280
 - ☒ 4. 1,24,800

Q.17 The number a is four times the number b . If the least common multiple of a and b is 48, then the value of b is ____.

- Ans
- ☐ 1. 18
 - ☒ 2. 12
 - ☐ 3. 24
 - ☐ 4. 6

Q.18 Simplify: $\sqrt{819 + \sqrt{465 + \sqrt{516 - 155}}}$

- Ans
- ☐ 1. 28
 - ☒ 2. 29
 - ☐ 3. 27
 - ☐ 4. 26

Q.19 At what rate (in percentage, rounded off to two places after decimal) of interest per year will a sum of money become 3 times of itself in 6 years on simple interest?

- Ans
- ☒ 1. 33.33
 - ☐ 2. 35.33
 - ☐ 3. 31.33
 - ☐ 4. 66.66

Q.20 Simplify $\left[30\frac{5}{7} + \left\{ 4\left(11\frac{11}{21} - \frac{4}{7} \right) - 3\left(8\frac{9}{14} - \frac{16}{21} \right) \right\} \right]$

- Ans
- ☐ 1. $\frac{2183}{42}$
 - ☐ 2. $\frac{1983}{42}$
 - ☐ 3. $\frac{2987}{42}$
 - ☒ 4. $\frac{2137}{42}$

Section : Arithmetical and Numerical Ability1

Q.1 Find the difference between a discount of 30% on ₹1600 and two successive discounts of 25% and 8% on the same amount.

- Ans
- ☐ 1. ₹12
 - ☐ 2. ₹23
 - ☐ 3. ₹14
 - ☒ 4. ₹16

Q.2 Three friends start a toy shop and invest in the ratio 1 : 2 : 3. If the total profit is ₹60, what is the share of the second friend?

- Ans
- ☐ 1. ₹30
 - ☒ 2. ₹20
 - ☐ 3. ₹40
 - ☐ 4. ₹10

Q.3 Which fraction is the greatest among the given options?

- Ans
- ☐ 1. $\frac{7}{13}$
 - ☐ 2. $\frac{5}{19}$
 - ☒ 3. $\frac{9}{13}$
 - ☐ 4. $\frac{6}{19}$

Q.4 Two taps, M and N, can fill a tank in 12 minutes and 15 minutes, respectively. When an outlet tap O is also opened, then the three taps together can fill the tank in 10 minutes. In how many minutes can O alone empty the full tank?

- Ans
- ☒ 1. 20
 - ☐ 2. 18
 - ☐ 3. 25
 - ☐ 4. 22

Q.5 A helicopter flies along the four sides of a square field at speeds of 250 km/h, 450 km/h, 650 km/h, and 850 km/h. Find the average speed of the helicopter. (Round off the answer to the nearest integer.)

- Ans
- ☒ 1. 448 km/h
 - ☐ 2. 412 km/h
 - ☐ 3. 496 km/h
 - ☐ 4. 420 km/h

Q.6 If $(a+b) : (b+c) : (c+a) = 6:7:8$, find $a:b:c$.

- Ans
- ☐ 1. 3 : 4 : 5
 - ☐ 2. 1 : 2 : 3
 - ☒ 3. 7 : 5 : 9
 - ☐ 4. 5 : 4 : 3

Q.7 A solid metal cylinder with a diameter of 3 cm and height 16 cm is melted and recast into spheres of radius 1 cm each. How many spheres are formed?

- Ans
- ☐ 1. 36
 - ☐ 2. 21
 - ☒ 3. 27
 - ☐ 4. 28

Q.8 If a sphere has a diameter of 14 cm, what is its surface area? (Use $\pi = 22/7$)

- Ans**
- ☒ 1. 616 cm²
 - ☐ 2. 592 cm²
 - ☐ 3. 196 cm²
 - ☐ 4. 154 cm²

Q.9 A man jogs to work at 8 km/h and returns home by bicycle at 16 km/h. If his total time for the round trip is 3 hours, what is the distance (in km) between his home and work?

- Ans**
- ☒ 1. 16
 - ☐ 2. 18
 - ☐ 3. 12
 - ☐ 4. 8

Q.10 A solid sphere is melted into a wire with the same radius as the sphere. What is the ratio of the length of the wire formed to the radius of sphere?

- Ans**
- ☐ 1. 2:3
 - ☐ 2. 3:4
 - ☒ 3. 4:3
 - ☐ 4. 3:2

Q.11 Ramesh marks the price of his bicycle 25% above the cost price, but allows 16% discount on cash payment. Find the net profit percentage for buying the bicycle in cash.

- Ans**
- ☐ 1. 4%
 - ☐ 2. 3%
 - ☐ 3. 6%
 - ☒ 4. 5%

Q.12 Two villages, Village X and Village Z, are located on the same bank along a straight river that flows uniformly. Village Y is exactly midway between them. A motorboat travels along the river from Village X to Village Y and back to Village X in a total of 10 hours. On another trip, the same boat goes from Village X to Village Z in 4 hours. Find the ratio of the boat's speed in still water to the speed of the river's current.

- Ans**
- ☒ 1. 5 : 3
 - ☐ 2. 2 : 1
 - ☐ 3. 4 : 1
 - ☐ 4. 3 : 1

Q.13 An 18 cm solid metallic cube, and a solid metallic cuboid having dimensions 10 cm, 26 cm, 62 cm, are melted and recast into a single cube. What is the total surface area (in cm²) of the new cube?

- Ans**
- ☐ 1. 5050
 - ☐ 2. 5525
 - ☐ 3. 4510
 - ☒ 4. 4704

Q.14 Pipes C and D can fill a drum in 7.5 minutes and 5 minutes, respectively. A waste pipe E can remove water at the rate of 21 liters per minute. If all three pipes are open, the drum is emptied in 1 hour. Find the capacity of the drum (in liters).

- Ans**
- ☐ 1. 70
 - ☐ 2. 40
 - ☐ 3. 55
 - ☒ 4. 60

Q.17 Article 243F of the Constitution of India deals with which of the following matters related to Panchayats?

- Ans**
- ☒ 1. Duration of Panchayat Membership
 - ☒ 2. Disqualification of Panchayat members
 - ☒ 3. Reservation of seats in Panchayats
 - ☒ 4. Audit of accounts of Panchayats

Q.18 Which Indian language is widely spoken as a major language in the Union Territory of Dadra and Nagar Haveli and Daman and Diu in everyday communication?

- Ans**
- ☒ 1. Tamil
 - ☒ 2. Telugu
 - ☒ 3. Gujarati
 - ☒ 4. Kannada

Q.19 Which of the following southern states has the highest Christian population according to the Census of India 2011?

- Ans**
- ☒ 1. Tamil Nadu
 - ☒ 2. Kerala
 - ☒ 3. Telangana
 - ☒ 4. Karnataka

Q.20 As per Article 77 of the Indian Constitution, who shall make rules for the more convenient transaction of the business of the Government of India, and for the allocation among Ministers of the said business?

- Ans**
- ☒ 1. President of India
 - ☒ 2. Prime Minister
 - ☒ 3. Vice President
 - ☒ 4. Attorney General

Section : Arithmetical and Numerical Ability

Q.1 If ₹1250 is invested for two years at simple interest at the rate of 12.5% per annum, then what is the amount receivable on maturity?

- Ans**
- ☒ 1. ₹1562.5
 - ☒ 2. ₹1462.5
 - ☒ 3. ₹1502.5
 - ☒ 4. ₹1402.5

Q.2 A number when decreased by $77\frac{1}{2}\%$, results in 540. The number is:

- Ans**
- ☒ 1. 2200
 - ☒ 2. 2800
 - ☒ 3. 2400
 - ☒ 4. 2500

Q.3 The average age of a group of 16 students is 19 years. If two students left the group, the average age decreases by one year, then the sum of the ages of the two students is:

- Ans**
- ☒ 1. 50 years
 - ☒ 2. 51 years
 - ☒ 3. 52 years
 - ☒ 4. 48 years

Q.4 A student borrows ₹1,000 at 10% per annum for 1 year. What is the difference between the simple interest and compound interest (compounded annually)?

- Ans**
- ☒ 1. ₹0
 - ☐ 2. ₹150
 - ☐ 3. ₹50
 - ☐ 4. ₹200

Q.5 The sum of three distinct prime numbers is 46. What is the largest possible prime number?

- Ans**
- ☐ 1. 37
 - ☐ 2. 43
 - ☒ 3. 41
 - ☐ 4. 31

Q.6 A number, when decreased by 4%, gives 3600. The number is: 6102

- Ans**
- ☐ 1. 11250
 - ☒ 2. 3750
 - ☐ 3. 7500
 - ☐ 4. 1875

Q.7 Two plumbers, X and Y, are paid a total of ₹550 per day by their employer. If X is paid 140% of the sum paid to Y, then how much is Y paid (in ₹, rounded off to two decimal place) per day? 4515

- Ans**
- ☐ 1. 179.17
 - ☐ 2. 129.17
 - ☒ 3. 229.17
 - ☐ 4. 279.17

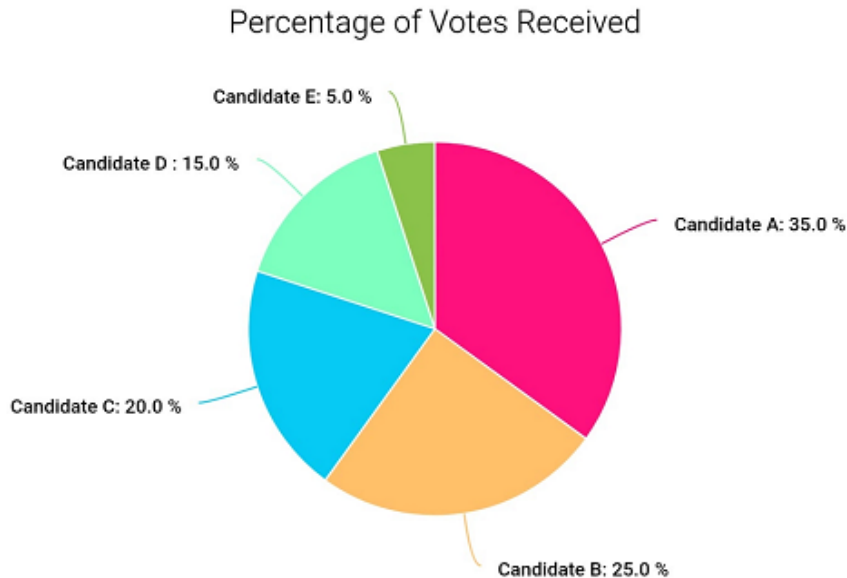
Q.8 Amit invested an equal sum of money at both simple interest and compound interest, compounded annually. The time period for each investment was 2 years, and the rate of interest was the same at 5% per annum. At the end of 2 years, he noticed a difference of ₹89 between the two interests earned. What was the sum invested (in ₹) at compound interest?

- Ans**
- ☐ 1. 34,700
 - ☐ 2. 34,850
 - ☐ 3. 35,950
 - ☒ 4. 35,600

Q.9 By selling an article for ₹120, a man incurs a loss of 10%. At what price (in ₹) should he sell the article to gain 35%?

- Ans**
- ☒ 1. 180
 - ☐ 2. 170
 - ☐ 3. 190
 - ☐ 4. 200

Q.10 A pie chart displays the percentage of votes received by five candidates.



What is the total number of votes received by candidates B and C if the total number of votes cast was 10,500?

- Ans
- ☒ 1. 4725
 - ☐ 2. 5275
 - ☐ 3. 4856
 - ☐ 4. 5689

Q.11 What is the LCM of 7 and 11?

- Ans
- ☐ 1. 70
 - ☐ 2. 88
 - ☒ 3. 77
 - ☐ 4. 80

Q.12 A trader marks his goods 50% above the cost price and allows a discount of 16% on it. He gains x%, then the value of x is:

- Ans
- ☒ 1. 26
 - ☐ 2. 27
 - ☐ 3. 28
 - ☐ 4. 25

Q.13 David observes a 10% increase in sales in the first year and a 25% increase in the second year. If the current sales are ₹237600, what were the sales (in ₹) two years ago?

- Ans
- ☐ 1. 152800
 - ☐ 2. 216000
 - ☐ 3. 190080
 - ☒ 4. 172800

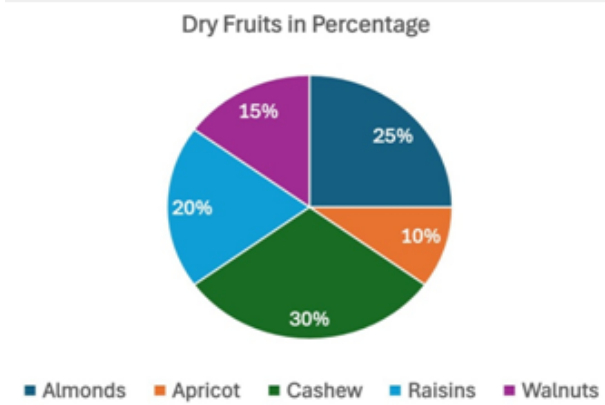
Q.14 Simplify: $50 \left[3\frac{1}{4} - \left\{ \frac{2}{25} - (0.084 + \frac{4}{25}) \right\} \right]$

- Ans
- ☒ 1. 170.7
 - ☐ 2. 160.7
 - ☐ 3. 183.7
 - ☐ 4. 154.7

Q.15 A shopkeeper has 40 kg of rice costing ₹40 per kg. How much rice costing ₹60 per kg should he mix with it so that the resulting mixture costs ₹50 per kg?

- Ans
- ☒ 1. 40 kg
 - ☐ 2. 45 kg
 - ☐ 3. 30 kg
 - ☐ 4. 48 kg

Q.16 A family consumes different dry fruits in one month, as shown in the pie chart below, given as percentages of the total weight of dry fruits consumed. If the total weight of the dry fruits is 1 kg, what is the difference in weights between almonds and raisins?



- Ans
- ☐ 1. 90 gm
 - ☐ 2. 100 gm
 - ☐ 3. 110 gm
 - ☒ 4. 50 gm

Q.17 The number 7781 is divisible by which of the following numbers?

- Ans
- ☐ 1. 21
 - ☐ 2. 22
 - ☒ 3. 31
 - ☐ 4. 26

Q.18 A scooter costs ₹55,000 when it is brand new. At the end of each year, its value is only 70% of what it was at the beginning of the year. What is the value of the scooter at the end of 3 years?

- Ans
- ☐ 1. ₹17,678
 - ☐ 2. ₹19,789
 - ☐ 3. ₹20,250
 - ☒ 4. ₹18,865

Q.19 The marks obtained by a student in different subjects are 40, 50, 60, and 70. What is the average mark per subject?

- Ans
- ☐ 1. 60
 - ☐ 2. 50
 - ☒ 3. 55
 - ☐ 4. 65

Q.20 A chemical factory sells a mixture of alcohol and water at ₹10 per litre containing 10% alcohol. Another mixture contains 40% alcohol and costs ₹16 per litre. How much does the buyer pay if he buys 10 litres of a mixture containing 22% alcohol?

- Ans**
- ☐ 1. ₹132
 - ☐ 2. ₹130
 - ☒ 3. ₹124
 - ☐ 4. ₹122

Section : Arithmetical and Numerical Ability1

Q.1 In a 1200 m race, Train A gives Train B a 120 m head start, and Train B is allowed to start 10 seconds before Train A. Train A runs at 6 m/s, Train B runs at 5 m/s. Who wins the race and by how many meters?

- Ans**
- ☐ 1. Train A wins by 60 m
 - ☐ 2. Train B wins by 45 m
 - ☐ 3. Train B wins by 75 m
 - ☒ 4. Train A wins by 30 m

Q.2 A solid metallic sphere of radius 7 cm is dropped into a cylindrical vessel of radius 13.5 cm containing water. Find the rise in water level. (Take $\pi=22/7$) (rounded off to 2 decimal places.)

- Ans**
- ☐ 1. 5.51 cm
 - ☐ 2. 1.51 cm
 - ☒ 3. 2.51 cm
 - ☐ 4. 3.51 cm

Q.3 What is the total surface area of a cube with side length 8 cm?

- Ans**
- ☐ 1. 344 cm²
 - ☒ 2. 384 cm²
 - ☐ 3. 484 cm²
 - ☐ 4. 364 cm²

Q.4 The marked price of a table is ₹4032, which is 12% above the cost price. It is sold at a discount of 5% on the marked price. Find the profit percentage.

- Ans**
- ☒ 1. 6.4%
 - ☐ 2. 5.5%
 - ☐ 3. 7.2%
 - ☐ 4. 6.2%

Q.5 A car covers a distance of 4536 km at a certain uniform speed in 36 hours. What is its speed in metre per second?

- Ans**
- ☐ 1. 33
 - ☒ 2. 35
 - ☐ 3. 30
 - ☐ 4. 36

Q.6 A man travels at the speed of 10 km/hr, 20 km/hr and 30 km/hr on

Ans

- ☐ 1. $16\frac{2}{11}$ km/hr
- ☐ 2. $16\frac{1}{11}$ km/hr
- ☐ 3. $16\frac{3}{11}$ km/hr
- ☒ 4. $16\frac{4}{11}$ km/hr

Q.7 Meena and Sheema together can complete a work in 15 days. Sheema Richa and Meena together can complete the same work in 12 days. H

Ans

- ☐ 1. 11 days
- ☐ 2. 12 days
- ☒ 3. 10 days
- ☐ 4. 13 days

Q.8 There are 8,540 candidates who appeared in a CAT exam and the ratio of boys to girls in the school is 33:37. Find the number of boys who appeared in CAT exam.

Ans

- ☐ 1. 4,456
- ☒ 2. 4,026
- ☐ 3. 4,780
- ☐ 4. 3,650

Q.9 After selling an article at a discount of 10%, profit percentage obtained is 35%. What is the mark-up percentage?

Ans

- ☐ 1. 45%
- ☐ 2. 60%
- ☐ 3. 55%
- ☒ 4. 50%

Q.10 A shopkeeper allows a rebate of 20% to the buyer. He sells only smuggled goods and as a bribe, he pays 10% of the cost of the article. If his cost price is ₹5,000, then find what should be the marked price if he desires to make a profit of $9\frac{1}{11}\%$.

Ans

- ☐ 1. ₹7,100
- ☐ 2. ₹7,720
- ☐ 3. ₹7,900
- ☒ 4. ₹7,500

Q.11 A student reaches the bus station at a speed of 16 km/h on a bicycle, and then boards a bus whose speed is 30 km/h to the point P. From P to the rickshaw stand, he gets a lift from a car which travels at a speed of 40 km/h. From the rickshaw stand to the exam center, he travels at a speed of 24 km/h. If the distance between home to the bus station, bus station to P, P to rickshaw stand, and the rickshaw stand to the exam center is equal, then find the student's average speed (rounded off to two decimal places).

Ans

- ☐ 1. 32.32 km/h
- ☐ 2. 22.22 km/h
- ☒ 3. 24.62 km/h
- ☐ 4. 28.32 km/h

Q.12 The ratio of two numbers is 7:9. If 27 is added to each number, the ratio becomes 5:6. Find the sum of both the numbers.

- Ans
- ☐ 1. 138
 - ☐ 2. 148
 - ☒ 3. 144
 - ☐ 4. 132

Q.13 If the mean proportional between two numbers is 60 and the sum of the two numbers is 130, what is the larger number?

- Ans
- ☐ 1. 108
 - ☒ 2. 90
 - ☐ 3. 72
 - ☐ 4. 84

Q.14 ₹6,225 is divided among A, B and C such that A receives half as much as B and C together, and B receives one-fourth of what A and C together receive. By how much is A's share more than B's share?

- Ans
- ☐ 1. ₹950
 - ☒ 2. ₹830
 - ☐ 3. ₹760
 - ☐ 4. ₹890

Q.15 A solid cylindrical tank of height 21 cm and base radius 7 cm is filled completely with water. The water is then poured into another cylindrical container whose radius is 14 cm. What will be the height (in cm) of the water level in the second container? (Use $\pi = 22/7$)

- Ans
- ☒ 1. 5.25
 - ☐ 2. 5
 - ☐ 3. 6
 - ☐ 4. 6.25

Q.16 If a pipe can fill a tank in 4 hours and another pipe can fill the same tank in 6 hours, then what part of a tank will be filled by both the pipes in 1 hour, if they are opened simultaneously?

- Ans
- ☐ 1. $\frac{11}{12}$
 - ☐ 2. $\frac{1}{12}$
 - ☐ 3. $\frac{7}{12}$
 - ☒ 4. $\frac{5}{12}$

Q.17 There are two pipes in a tank. Pipe A is for filling the tank and Pipe B is for emptying the tank. If A can fill the tank in 12 hours and B can empty the tank in 15 hours, then find how many hours will it take to completely fill a half empty tank?

- Ans
- ☐ 1. 45
 - ☐ 2. 75
 - ☒ 3. 30
 - ☐ 4. 60

Q.14 Which coastal plain in India is known for the lagoons and backwaters such as Vembanad Lake?

- Ans**
- ☒ 1. Malabar Coast
 - ☐ 2. Konkan Coast
 - ☐ 3. Coromandel Coast
 - ☐ 4. Northern Circars

Q.15 According to which Article of the Indian Constitution shall the President not hold any other office of profit?

- Ans**
- ☒ 1. 59
 - ☐ 2. 53
 - ☐ 3. 63
 - ☐ 4. 56

Q.16 Which of the following is an INCORRECT combination of fundamental rights and their corresponding articles?

- Ans**
- ☐ 1. Right to Freedom of Religion: 25-28
 - ☒ 2. Right to Constitutional Remedies: 29-32
 - ☐ 3. Right against Exploitation: 23-24
 - ☐ 4. Right to Freedom: 19-22

Q.17 The Great Indian Plains lie to the south of which mountain range?

- Ans**
- ☐ 1. Vindhya Range
 - ☐ 2. Aravalli Range
 - ☐ 3. Western Ghats
 - ☒ 4. Himalayas

Q.18 Which Buddhist architectural feature, erected by Emperor Ashoka, contains inscriptions promoting his policy of Dhamma?

- Ans**
- ☒ 1. Pillar, the edict column
 - ☐ 2. Chaitya, the prayer hall
 - ☐ 3. Stupa, the relic structure
 - ☐ 4. Vihara, the monk quarters

Q.19 Which festival marks the celebration of the Tibetan New Year in the month of February?

- Ans**
- ☐ 1. Bhanu Jayanti
 - ☒ 2. Losar
 - ☐ 3. Saga Dawa
 - ☐ 4. Maghe Sankranti

Q.20 Which structure in humans is a vestigial remnant of the ancestral tail?

- Ans**
- ☐ 1. Humerus
 - ☐ 2. Femur
 - ☒ 3. Coccyx
 - ☐ 4. Tibia

Q.1 Simplify : $18 - [6 + 2 \times (3^2 - 5)]$

- Ans
- ☐ 1. 8
 - ☒ 2. 4
 - ☐ 3. 2
 - ☐ 4. 6

Q.2 A fruit seller had some apples. He sold 40% of them and still has 840 apples left. The original number of apples he had was:3

- Ans
- ☐ 1. 2100
 - ☐ 2. 2110
 - ☒ 3. 1400
 - ☐ 4. 1260

Q.3 By selling an article for ₹119, a man incurs a loss of 30%. At what price (in ₹) should he sell the article to gain 20%?

- Ans
- ☐ 1. 214
 - ☐ 2. 194
 - ☐ 3. 224
 - ☒ 4. 204

Q.4 The difference between two numbers is 1757. On dividing the larger number by the smaller number we get 8 as quotient and 21 as remainder. What is the smaller number?

- Ans
- ☐ 1. 246
 - ☐ 2. 245
 - ☒ 3. 248
 - ☐ 4. 247

Q.5 The difference (in ₹) between the compound interest (when interest is compounded annually) and the simple interest, if ₹87,000 is deposited at 5% rate of interest per annum for 2 years, is:8598

- Ans
- ☒ 1. ₹217.50
 - ☐ 2. ₹221.50
 - ☐ 3. ₹220.10
 - ☐ 4. ₹210.70

Q.6 In a cricket match, a batsman scored 80 runs, which included 8 fours and 4 sixes. What percentage of his total score did he make by running between the wickets?
4570

- Ans
- ☒ 1. 30%
 - ☐ 2. 71%
 - ☐ 3. 70%
 - ☐ 4. 31%

Q.7 The following bar graph shows numbers of laptops sold in one month by 5 shops in a locality.



What is the difference between the numbers of laptops sold by Shop A and Shop C?

- Ans
- ☒ 1. 12
 - ☒ 2. 20
 - ☒ 3. 24
 - ☒ 4. 15

Q.8 The average of 4 numbers is 16. If the sum of 3 numbers is 45, what is the 4th number?

- Ans
- ☒ 1. 15
 - ☒ 2. 16
 - ☒ 3. 17
 - ☒ 4. 19

Q.9 The average weight of 12 students in a class group of 20 students is 9 kg. If the average weight of the remaining students is 11.5 kg, then the average weight of all 20 students is:

- Ans
- ☒ 1. 14 Kg
 - ☒ 2. 10 Kg
 - ☒ 3. 12 Kg
 - ☒ 4. 8 Kg

Q.10 The average of 25 numbers is 28. If the average of the first 16 numbers is 23 and the average of the last 8 numbers is 33, then the value of the 17th number is:

- Ans
- ☒ 1. 68
 - ☒ 2. 71
 - ☒ 3. 73
 - ☒ 4. 70

Q.11 Roni deposited ₹850 in an Axis bank that promised 6% simple interest per annum. If Roni kept the money with the bank for 5 years, she will earn an interest of:

- Ans
- ☒ 1. ₹275
 - ☒ 2. ₹245
 - ☒ 3. ₹265
 - ☒ 4. ₹255

Q.12 Find the compound interest on ₹88,750 at 8% per annum for 2 years, compounded annually.

- Ans
- ☐ 1. ₹14,568
 - ☐ 2. ₹14,668
 - ☒ 3. ₹14,768
 - ☐ 4. ₹14,448

Q.13 By how much is 30% of 70 greater than 20% of 45? 6290

- Ans
- ☒ 1. 12
 - ☐ 2. 9
 - ☐ 3. 14
 - ☐ 4. 7

Q.14 Two students appeared in an examination. One of them secured 8 marks more than the other and his marks were 60% of the sum of their marks. The sum of the marks obtained by them was: 4520

- Ans
- ☐ 1. 41
 - ☐ 2. 48
 - ☐ 3. 32
 - ☒ 4. 40

Q.15 Simplify the expression: $\frac{\sqrt{81}}{\sqrt{9}}$.

- Ans
- ☐ 1. 1
 - ☐ 2. 9
 - ☐ 3. 27
 - ☒ 4. 3

Q.16 Evaluate: $\left(\frac{a^2b^5}{a^{-1}b^2}\right)^{-\frac{1}{3}}$

- Ans
- ☐ 1. $\frac{ab}{a+b}$
 - ☒ 2. $\frac{1}{ab}$
 - ☐ 3. $\frac{a+b}{ab}$
 - ☐ 4. $\frac{1}{a^2b^2}$

Q.17 In what ratio must sugar at ₹40 per kg be mixed with sugar at ₹50 per kg to get a mixture worth ₹45 per kg?

- Ans
- ☒ 1. 3:2
 - ☐ 2. 2:1
 - ☐ 3. 1:2
 - ☐ 4. 2:3

Q.18 Shreya lends ₹8,500 to Shanaya at a rate of 20% of compound interest, compounded annually per annum for 3 years. How much interest did Shreya get for the 3rd year?

- Ans
- ☐ 1. ₹2,554
 - ☐ 2. ₹2,502
 - ☐ 3. ₹2,668
 - ☒ 4. ₹2,448

Q.19 By selling an article for ₹120, a man incurs a loss of 10%. At what price (in ₹) should he sell the article to gain 38%?

- Ans**
- ☐ 1. 194
 - ☐ 2. 204
 - ☐ 3. 174
 - ☒ 4. 184

Q.20 The given table shows the number of eggs (in dozens) produced by 6 farms over 6 years. Study the table carefully and answer the question that follows.

Year	A	B	C	D	E	F
2000	420	360	396	528	468	444
2001	564	492	576	610	576	540
2002	588	612	624	650	576	564
2003	600	660	648	630	612	600
2004	648	708	684	670	660	672
2005	732	744	720	750	708	720

What is the respective ratio of the dozens of eggs produced by farms A and B together in the year 2000 to the dozens of eggs produced by farms D and E together in the same year?

- Ans**
- ☐ 1. 65 : 73
 - ☐ 2. 55 : 83
 - ☐ 3. 55 : 73
 - ☒ 4. 65 : 83

Section : **Arithmetical and Numerical Ability1**

Q.1 Krishna sold a painting to Mohan at a profit of 18%. Mohan sold it to Madhav at a loss of 8%. If Madhav paid ₹3,256.80 for the painting, how much did Krishna pay for the painting?

- Ans**
- ☐ 1. ₹2,960
 - ☐ 2. ₹3,105
 - ☐ 3. ₹2,820
 - ☒ 4. ₹3,000

Q.2 A rectangular storage box has its length, breadth, and height in the ratio 2 : 3 : 4. If the volume of the box is 648 cm³, determine its total surface area.

- Ans**
- ☐ 1. 472 cm²
 - ☐ 2. 648 cm²
 - ☐ 3. 442 cm²
 - ☒ 4. 468 cm²

Q.3 A, B and C can do a piece of work in 8 days, 10 days and 12 days, respectively. They started the work together, but B left the work after three days. In how many days will the remaining work be completed by A and C together?

- Ans**
- ☐ 1. $\frac{8}{27}$ days
 - ☐ 2. $\frac{6}{23}$ days
 - ☐ 3. $\frac{7}{19}$ days
 - ☒ 4. $\frac{9}{25}$ days

Q.4 A man sells a mobile phone for ₹600 and loses something. If he had sold it for ₹1,260, his gain would have been double the former loss. The cost price (in ₹) of the mobile phone is:

- Ans**
- ☐ 1. 810
 - ☐ 2. 830
 - ☒ 3. 820
 - ☐ 4. 840

Q.5 If $A:B = 4:5$ and $B:C = 3:2$, find the value of $A^2:C^2$.

- Ans**
- ☐ 1. 16:9
 - ☐ 2. 49:36
 - ☒ 3. 36:25
 - ☐ 4. 4:1

Q.6 How many cubes of edge 6 cm can be obtained by cutting a cuboid of dimensions 24 cm × 16 cm × 12 cm?

- Ans**
- ☒ 1. 16 cubes
 - ☐ 2. 22 cubes
 - ☐ 3. 20 cubes
 - ☐ 4. 18 cubes

Q.7 A dealer offers a 20% discount to his customers and still makes a profit of 28%. If the cost price of an article for the dealer is ₹2,500, what is its marked price (in ₹)?

- Ans**
- ☒ 1. 4,000
 - ☐ 2. 3,200
 - ☐ 3. 3,000
 - ☐ 4. 3,600

Q.8 Arrange the ratios in ascending order:
3:5, 7:11 and 8:15

- Ans**
- ☐ 1. 7:11, 8:15, 3:5
 - ☐ 2. 3:5, 7:11, 8:15
 - ☐ 3. 7:11, 3:5, 8:15
 - ☒ 4. 8:15, 3:5, 7:11

Q.9 A train 180 m long crosses a 120 m long platform in 20 seconds. Find the speed (in km/h) of the train.

- Ans**
- ☐ 1. 68
 - ☒ 2. 54
 - ☐ 3. 60
 - ☐ 4. 72

Q.10 A hollow sphere with an inner radius of 6 cm and an outer radius of 9 cm is melted and recast into a solid cylinder of radius 3 cm. Find the height of the cylinder.

- Ans**
- ☐ 1. 45 cm
 - ☐ 2. 86 cm
 - ☒ 3. 76 cm
 - ☐ 4. 50 cm

Q.11 Ram goes to a shop to purchase a computer priced at ₹40,000. The shopkeeper offers him the four discount options listed below. Which option is best for the shopkeeper?

- Ans
- ☐ 1. Single discount of 29%
 - ☐ 2. Successive discounts of 15% and 15%
 - ☒ 3. Successive discounts of 18% and 8%
 - ☐ 4. Successive discounts of 16% and 14%

Q.12 Find the total surface area of a cube whose edge measures 23 cm.

- Ans
- ☐ 1. 3,154 cm²
 - ☐ 2. 3,194 cm²
 - ☒ 3. 3,174 cm²
 - ☐ 4. 3,124 cm²

Q.13 Zakir goes from point X to Y and comes back. His average speed for the whole journey is 24 km/hr. If his speed while going from X to Y is 20 km/h, then what will be the speed of Zakir (in km/h) while coming back from Y to X?

- Ans
- ☐ 1. 35
 - ☐ 2. 25
 - ☐ 3. 28
 - ☒ 4. 30

Q.14 An aeroplane flies at a speed of 540 km/h for the first 1 hour and then increases its speed to 700 km/h for the next hour. After 2 hours, what is its average speed (in km/h)?

- Ans
- ☐ 1. 600
 - ☐ 2. 610
 - ☒ 3. 620
 - ☐ 4. 640

Q.15 A car travels from City A to City B, a distance of 360 km. First 120 km it covered at 40 km/h, next 100 km it covered at 50 km/h and the remaining distance it covered at a speed of 70 km/h. After reaching City B, the car returns to City A at a constant speed of 45 km/h. Find the average speed of the car for the entire journey (both onwards and return).

- Ans
- ☒ 1. 48 km/h
 - ☐ 2. 52 km/h
 - ☐ 3. 58 km/h
 - ☐ 4. 44 km/h

Q.16 A can do a work in 12 days and B in 18 days. If they work on it together for 3 days, then the fraction of the work that is left is

- Ans
- ☐ 1. $\frac{5}{12}$
 - ☒ 2. $\frac{7}{12}$
 - ☐ 3. $\frac{1}{2}$
 - ☐ 4. $\frac{3}{4}$

Q.16 Which of the following Indian states has the smallest land area?

- Ans**
- ☐ 1. Sikkim
 - ☐ 2. Nagaland
 - ☐ 3. Tripura
 - ☒ 4. Goa

Q.17 The fruit wall is scientifically known as _____.

- Ans**
- ☐ 1. Mesocarp
 - ☐ 2. Endocarp
 - ☒ 3. Pericarp
 - ☐ 4. Epicarp

Q.18 Which of the following in the Brahmaputra River is the largest inhabited riverine island in the world?

- Ans**
- ☐ 1. Peacock Island
 - ☐ 2. Mandhata
 - ☐ 3. Srirangam
 - ☒ 4. Majuli

Q.19 Which Article in the Constitution of India directs the State to organize village Panchayats and empower them as units of self-government?

- Ans**
- ☒ 1. Article 40
 - ☐ 2. Article 243
 - ☐ 3. Article 32
 - ☐ 4. Article 243F

Q.20 What is the main source of similarities and differences in traits among family members?

- Ans**
- ☐ 1. Proteins
 - ☐ 2. Hormones
 - ☒ 3. Genes
 - ☐ 4. Chromosomes

Section : **Arithmetical and Numerical Ability**

Q.1 What percentage of the numbers from 1 to 70 have 1 or 6 in the unit's digit?

- Ans**
- ☐ 1. 12%
 - ☐ 2. 21%
 - ☒ 3. 20%
 - ☐ 4. 0.13

Q.2 The number 4728 is divisible by which of the following numbers?

- Ans**
- ☒ 1. 24
 - ☐ 2. 26
 - ☐ 3. 16
 - ☐ 4. 30

Q.3 Ms. Radhika borrowed ₹925 at 10% per annum simple interest. What amount (in ₹) will she pay to clear her debt after 4 years?

- Ans**
- ☐ 1. 1,375
 - ☐ 2. 1,325
 - ☒ 3. 1,295
 - ☐ 4. 1,265

Q.4 Two students appeared for an examination. One of them secured 7 marks more than the other, and his marks were 62% of the sum of their marks. What was the sum of the marks obtained by them (rounded off to two decimal places)?

- Ans**
- ☐ 1. 30.17
 - ☐ 2. 36.17
 - ☒ 3. 29.17
 - ☐ 4. 22.17

Q.5 A number, when decreased by 4%, gives 3360. The number is: 6104

- Ans**
- ☐ 1. 10500
 - ☒ 2. 3500
 - ☐ 3. 7000
 - ☐ 4. 1750

Q.6 By selling an article for ₹120, a man incurs a loss of 20%. At what price (in ₹) should he sell the article to gain 20%?

- Ans**
- ☐ 1. 170
 - ☒ 2. 180
 - ☐ 3. 190
 - ☐ 4. 200

Q.7 Keshav observes a 10% increase in sales in the first year and a 25% increase in the second year. If the current sales are ₹1,76,000, what were the sales (in ₹) two years ago?

- Ans**
- ☐ 1. 1,60,000
 - ☐ 2. 1,40,800
 - ☒ 3. 1,28,000
 - ☐ 4. 1,08,000

Q.8 The average of 13 numbers is 20. If each number is multiplied by 6, then what will the new average be?

- Ans**
- ☒ 1. 120
 - ☐ 2. 13
 - ☐ 3. 20
 - ☐ 4. 6

Q.9 The heights (in cm) of 7 students in a class are 152, 148, 161, 155, 143, 159, and 150. What is the average height of all the students (rounded off to two decimal places)?

- Ans**
- ☐ 1. 153.67 cm
 - ☒ 2. 152.57 cm
 - ☐ 3. 154.87 cm
 - ☐ 4. 151.37 cm

Q.10 The difference between the compound interest and simple interest on a certain sum for 2 years at 8% per annum is ₹128. What is the sum?

- Ans**
- ☐ 1. ₹22,000
 - ☒ 2. ₹20,000
 - ☐ 3. ₹25,000
 - ☐ 4. ₹30,000

Q.11 A trader marks his goods 50% above the cost price and allows a discount of 8% on it. If his gain is $x\%$, find the value of x .

- Ans**
- ☐ 1. 39
 - ☒ 2. 38
 - ☐ 3. 40
 - ☐ 4. 37

Q.12 There are 84 members in group A, 69 members in group B and 33 members in group C. All the members of these groups went to a restaurant. The average amount spent on each member of group A, B and C is ₹396, ₹302 and ₹322, respectively. The total average amount (in ₹) spent per member is:

- Ans**
- ☐ 1. 350
 - ☒ 2. 348
 - ☐ 3. 352
 - ☐ 4. 346

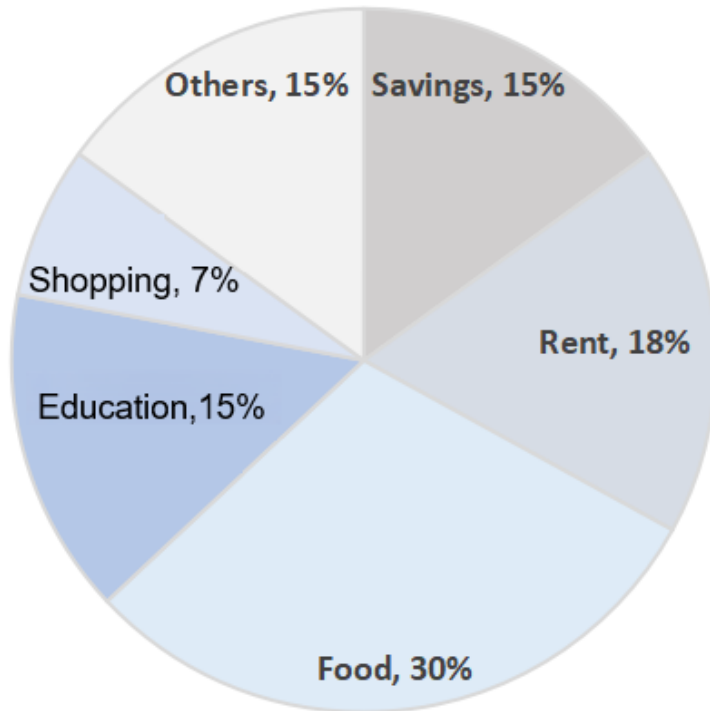
Q.13 The rate of annual growth of population is 5%. If the present population of a city is 16,000, then after three years the population of that city will be:

- Ans**
- ☐ 1. 19,990
 - ☒ 2. 18,522
 - ☐ 3. 17,678
 - ☐ 4. 21,234

Q.14 A factory has 4 machines producing widgets. Machine A produces 100 widgets at an average efficiency rating of 80, Machine B produces 150 at 75, Machine C produces 200 at 85, and Machine D produces 50 at 90. What is the weighted average efficiency rating of the widgets produced?

- Ans**
- ☐ 1. 83.0
 - ☒ 2. 81.5
 - ☐ 3. 78.5
 - ☐ 4. 80.0

- Q.15 The following pie chart shows the monthly expenditure on different items and savings of Sanjiv whose monthly income is ₹47,000. Study the pie chart carefully and answer the question that follows.



Find the sum of the savings and the money spend on rent and shopping (monthly).

- Ans
- ☐ 1. ₹18,600
 - ☐ 2. ₹18,100
 - ☒ 3. ₹18,800
 - ☐ 4. ₹18,300

Q.16 Simplify: $\sqrt{(\sqrt{(1.69)})^2 - (\sqrt{(0.81)})^2}$

- Ans
- ☐ 1. $\sqrt{0.98}$
 - ☒ 2. $\sqrt{0.88}$
 - ☐ 3. $\sqrt{0.08}$
 - ☐ 4. $\sqrt{0.78}$

- Q.17 A water tank has a capacity of 4,800 litres. If it currently holds 1,200 litres of water, what percentage of the tank is filled?

- Ans
- ☐ 1. 40%
 - ☐ 2. 30%
 - ☐ 3. 20%
 - ☒ 4. 25%

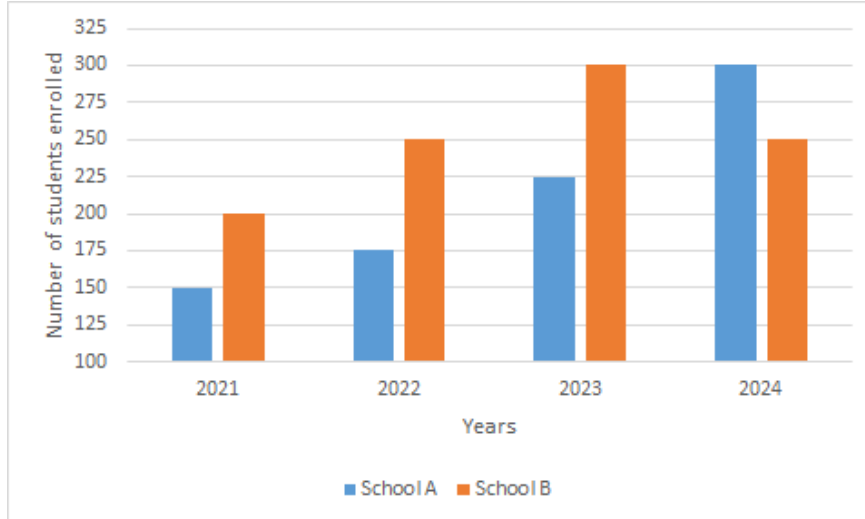
- Q.18 Sudhanshu invested ₹25,000 at 10% per annum for one year. If the interest is compounded every six months, what amount will Sudhanshu get at the end of the year?

- Ans
- ☐ 1. ₹32,456.8
 - ☐ 2. ₹45,676.5
 - ☐ 3. ₹37,899.8
 - ☒ 4. ₹27,562.5

Q.19 Which of the given pairs is not a co-prime pair?⁶⁹⁰⁶

- Ans
- ☐ 1. 19, and 105
 - ☐ 2. 11, and 15
 - ☒ 3. 51, and 17
 - ☐ 4. 23, and 72

Q.20 The graph below shows the number of students enrolled in two schools from 2021 to 2024. What is the percentage of total enrollments in School A compared to those in School B over these years?



- Ans
- ☐ 1. 75%
 - ☒ 2. 85%
 - ☐ 3. 80%
 - ☐ 4. 70%

Section : Arithmetical and Numerical Ability¹

Q.1 Ravi is 36% more efficient than Rohan. If Rohan can complete a work in 34 days, then in how many days can Ravi alone complete the same work?

- Ans
- ☐ 1. 16
 - ☐ 2. 21
 - ☐ 3. 12
 - ☒ 4. 25

Q.2 Two stations A and B are 2520 km apart. A train covers the journey from A to B at 84 km/h and returns to A at a uniform speed of 112 km/h. What is the average speed (in km/h) of the train for the whole journey?

- Ans
- ☐ 1. 92
 - ☐ 2. 84
 - ☐ 3. 88
 - ☒ 4. 96

Q.3 A, B and C started a business by investing ₹1,89,000, ₹2,52,000 and ₹3,36,000, respectively. A is a working partner and gets 25% of the profit as working allowance and the remaining is distributed in the proportion of their investments. If the money received by C is ₹28,200, then what is the total profit (in ₹)?⁴²³²

- Ans
- ☒ 1. 86,950
 - ☐ 2. 73,370
 - ☐ 3. 68,290
 - ☐ 4. 80,800

Q.4 The height of a cylinder is 4 times the radius of the base of the cylinder. If the circumference of the base of the cylinder is 44 cm, then find the total surface area (in cm^2) of the cylinder.

(Use $\pi = \frac{22}{7}$)

- Ans
- ☐ 1. 1670
 - ☐ 2. 1620
 - ☐ 3. 1590
 - ☒ 4. 1540

Q.5 A shopkeeper allows two successive discounts of an article, whose marked price is ₹300 and selling price is ₹180. What is the first discount percentage, if second discount is 10%? (Round off your answer to two decimal places)

- Ans
- ☒ 1. 33.33%
 - ☐ 2. 66.67%
 - ☐ 3. 26.78%
 - ☐ 4. 22.56%

Q.6 Car M takes 7 hours to travel from point A to point B. It would have taken 8 hours if it had travelled the same distance at a speed 31.75 km/h less than its original speed. What is the distance between the points A and B?

- Ans
- ☐ 1. 1768 km
 - ☐ 2. 1788 km
 - ☐ 3. 1758 km
 - ☒ 4. 1778 km

Q.7 Mr. Narayan inherits 3236 gold coins and divides them among his three sons: Bharat, Parat and Marat in a certain ratio. Out of the total coins received by each of them, Bharat sells 35 coins, Parat donates his 30 coins and Marat loses 25 coins. Now, the ratio of gold coins with them is 46:41:34, respectively. How many coins did Parat receive from his father?

- Ans
- ☐ 1. 1094
 - ☒ 2. 1096
 - ☐ 3. 1092
 - ☐ 4. 1090

Q.8 A cylindrical metal pipe is 4.5 cm thick. Its internal radius is 10 cm and length of the pipe is 5 m. Find the volume of the metal used (in cubic cm).

- Ans
- ☐ 1. 25595π
 - ☒ 2. 55125π
 - ☐ 3. 20595π
 - ☐ 4. 51525π

Q.9 A, B and C can do a piece of work in 63, 84, 126 days respectively. They started the work but B left 24 days before the completion of the work while C left 27 days before the completion. In how many days the work was completed?

- Ans
- ☐ 1. 37
 - ☐ 2. 45
 - ☐ 3. 32
 - ☒ 4. 42

Q.10 The capacity of a cuboidal tank of water is 88000 litres. Find the breadth of the tank, if its length and depth are 8 m and 11 m respectively.

- Ans**
- ☐ 1. 1.2 m
 - ☐ 2. 1.5 m
 - ☒ 3. 1 m
 - ☐ 4. 1.7 m

Q.11 X can do a piece of work in 10 days and Y can do it in 6 days. They work together for 3 days and then Y left. The days taken by X to complete the remaining work is:

- Ans**
- ☐ 1. 4 days
 - ☒ 2. 2 days
 - ☐ 3. 6 days
 - ☐ 4. 3 days

Q.12 Which of the following ratios is the greatest?

- Ans**
- ☐ 1. 37:61
 - ☐ 2. 33:49
 - ☒ 3. 56:79
 - ☐ 4. 34:59

Q.13 A conical pile of sand has a base radius of 3 m and height of 4 m. What is the volume of the pile (in m^3) approximately?

- Ans**
- ☐ 1. 56.5
 - ☐ 2. 28.3
 - ☒ 3. 37.7
 - ☐ 4. 45.2

Q.14 Apoorva bought 13 kg of grapes for ₹1,170. He sold them at a profit equal to the selling price of 3 kg of grapes. What was the selling price of grapes per kg?

- Ans**
- ☐ 1. ₹113
 - ☐ 2. ₹115
 - ☒ 3. ₹117
 - ☐ 4. ₹111

Q.15 A boat goes 24 km downstream in 2 hours and returns upstream in 3 hours. Find the speed of the boat in still water.

- Ans**
- ☐ 1. 20 km/h
 - ☒ 2. 10 km/h
 - ☐ 3. 2 km/h
 - ☐ 4. 12 km/h

Q.16 A 10 m long bus travelling at a speed of 60 km/h crosses a flyover in 45 s. What is the length (in m) of the flyover?

- Ans**
- ☐ 1. 760
 - ☒ 2. 740
 - ☐ 3. 725
 - ☐ 4. 690

Q.18 Bihu, a set of seasonal festivals associated with the agricultural cycle and marked by traditional dance, music and community feasts, is primarily celebrated in which Indian state?

- Ans**
- ☐ 1. Manipur
 - ☐ 2. Sikkim
 - ☒ 3. Assam
 - ☐ 4. Odisha

Q.19 The fundamental duties laid down in which part of the Constitution relate to the individuals and the nation?

- Ans**
- ☐ 1. Part V-A
 - ☒ 2. Part IV-A
 - ☐ 3. Part VIII-A
 - ☐ 4. Part II-A

Q.20 The temple at Deogarh in Lalitpur district of Uttar Pradesh is an example of the panchayatana style of architecture. What is the key feature of this style?

- Ans**
- ☐ 1. A circular temple with shrines along the inner wall
 - ☐ 2. A temple with two shrines facing each other
 - ☒ 3. A main shrine with four subsidiary shrines at the four corners
 - ☐ 4. A temple with only one central sanctum and no additional shrines

Section : **Arithmetical and Numerical Ability**

Q.1 A number when increased by 100%, gives 3890. The number is:6131

- Ans**
- ☐ 1. 5835
 - ☒ 2. 1945
 - ☐ 3. 972.5
 - ☐ 4. 3890

Q.2 The average of 11 consecutive natural numbers arranged in ascending order is 31. What is the average of the next 9 consecutive natural numbers?

- Ans**
- ☐ 1. 40
 - ☒ 2. 41
 - ☐ 3. 38
 - ☐ 4. 42

Q.3 Which of the following pairs of numbers are co-prime?

- Ans**
- ☐ 1. 506, 667
 - ☐ 2. 209, 342
 - ☒ 3. 572, 675
 - ☐ 4. 238, 459

Q.4 The average of the five consecutive multiple of 13 starting from 39 is equal to:

- Ans**
- ☐ 1. 52
 - ☐ 2. 39
 - ☒ 3. 65
 - ☐ 4. 78

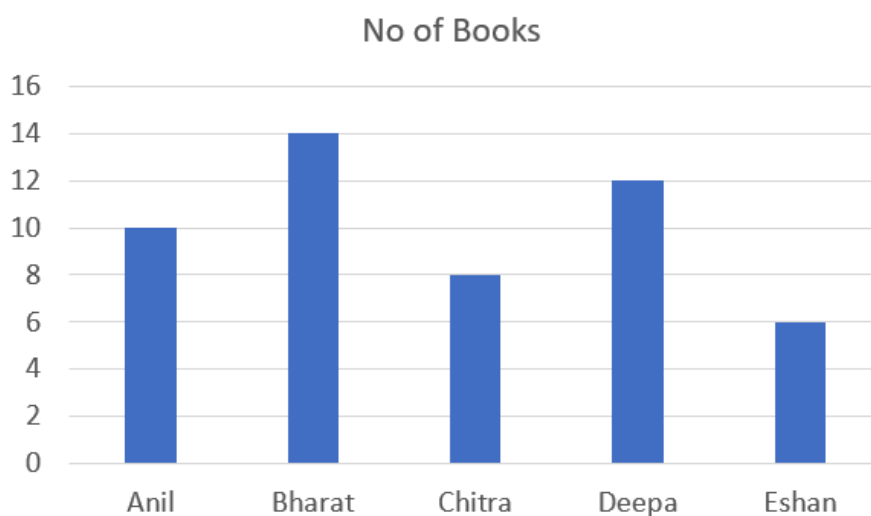
Q.5 Mahesh spends 55% of his income. If he saves ₹54,000, then his income (in ₹) is:105

- Ans
- ☐ 1. 29,700
 - ☐ 2. 1,21,000
 - ☐ 3. 1,19,000
 - ☒ 4. 1,20,000

Q.6 A manufacturer sells a product to a wholesaler at a profit of 25%. The wholesaler, in turn, sells it to a retailer at a profit of 25%, and the retailer sells it to a customer at a profit of 28%. If the customer pays ₹340, find the cost price (in ₹) for the manufacturer.

- Ans
- ☐ 1. 168
 - ☐ 2. 167
 - ☐ 3. 172
 - ☒ 4. 170

Q.7 The bar graph below shows the number of books read by five students in a month.



What is the average number of books read by all five students?

- Ans
- ☐ 1. 8
 - ☒ 2. 10
 - ☐ 3. 12.4
 - ☐ 4. 14

Q.8 Two plumbers, X and Y, are paid a total of ₹660 per day by their employer. If X is paid 200% of the sum paid to Y, then how much is Y paid (in ₹) per day?4511

- Ans
- ☐ 1. 270
 - ☐ 2. 120
 - ☐ 3. 170
 - ☒ 4. 220

Q.9 A sum of ₹10,000 is invested at 8% per annum compounded annually. What will be the compound interest after 2 years?

- Ans
- ☐ 1. ₹1,684
 - ☒ 2. ₹1,664
 - ☐ 3. ₹1,464
 - ☐ 4. ₹1,646

Q.10 The population of a city increased by 28% in the first year and decreased by 18% in the next year. If the present population is 1,25,952, then what was its population 2 years ago?

- Ans
- ☐ 1. 1,18,900
 - ☐ 2. 1,10,900
 - ☒ 3. 1,20,000
 - ☐ 4. 1,15,765

Q.11 The average of 13 numbers is 21. If each number is multiplied by 2, then what will the new average be?

- Ans
- ☐ 1. 2
 - ☐ 2. 13
 - ☐ 3. 21
 - ☒ 4. 42

Q.12 The six-digit number 12A25B is divisible by 9. Find the maximum possible value of (A+B).

- Ans
- ☐ 1. 18
 - ☐ 2. 15
 - ☒ 3. 17
 - ☐ 4. 14

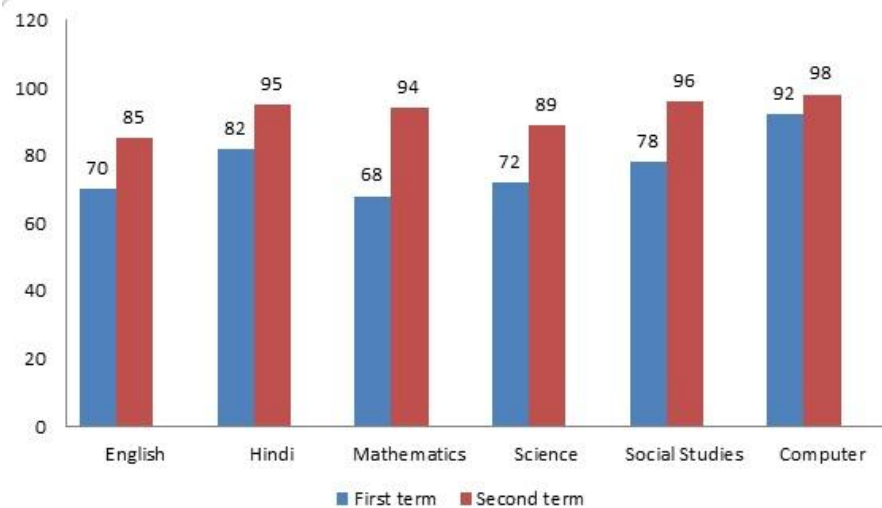
Q.13 The fraction form of 0.21875 is:

- Ans
- ☐ 1. $\frac{5}{32}$
 - ☒ 2. $\frac{7}{32}$
 - ☐ 3. $\frac{9}{32}$
 - ☐ 4. $\frac{11}{32}$

Q.14 $\frac{1}{20}$ is what percentage of $\frac{1}{70}$?⁶⁰⁶⁴

- Ans
- ☐ 1. 365%
 - ☒ 2. 350%
 - ☐ 3. 360%
 - ☐ 4. 700%

- Q.15 The bar graph given below shows the marks (out of 100) obtained by a student in various subjects in first term and the second term examination.



Find the difference between the total marks obtained in Hindi and Mathematics in the first term and the second term.

- Ans
- ☒ 1. 28
 - ☒ 2. 31
 - ☒ 3. 43
 - ☒ 4. 39

- Q.16 A trader marks his goods 50% above the cost price and allows a discount of 18% on it. If he gains $x\%$, find the value of x .

- Ans
- ☒ 1. 22
 - ☒ 2. 24
 - ☒ 3. 23
 - ☒ 4. 25

- Q.17 The population of Kalyan increases by 15% in the first year, it increases by 10% in the second year, and due to mass exodus, it decreases by 15% in the third year. What will its population be after 3 years, if today it is 20,000?

- Ans
- ☒ 1. 21,101
 - ☒ 2. 22,505
 - ☒ 3. 21,505
 - ☒ 4. 21,808

- Q.18 Find the simple interest (in ₹) on ₹1500 at an interest rate of 4% per month for 10 months.

- Ans
- ☒ 1. 600
 - ☒ 2. 100
 - ☒ 3. 60
 - ☒ 4. 50

- Q.19 The number 30728 is divisible by which of the following numbers?

- Ans
- ☒ 1. 92
 - ☒ 2. 99
 - ☒ 3. 102
 - ☒ 4. 87

Q.20 The average salary of 10 employees in a company is ₹17,500. The average salary of 20 other employees is ₹21,500. What is the average salary of all 30 employees together?
(Round off your answer to 2 decimal places.)

- Ans**
- ☐ 1. ₹21,800.67
 - ☐ 2. ₹19,656.67
 - ☐ 3. ₹19,800.67
 - ☒ 4. ₹20,166.67

Section : Arithmetical and Numerical Ability1

Q.1 Pandu can complete a construction work in 12 days, working 8 hours (including one hour per lunch) per day. Ranjan can complete the same work in 7 days, working 8 hours without any specific lunch break. If both work together working 8 hours per day, in how many days can they complete 75% of the work?

- Ans**
- ☐ 1. $3\frac{2}{5}$
 - ☐ 2. $4\frac{7}{20}$
 - ☐ 3. $31\frac{1}{2}$
 - ☒ 4. $3\frac{3}{20}$

Q.2 A tank has two pipes: one for filling and one for emptying. The filling pipe can fill the tank in 5 hours, and the emptying pipe can empty the tank in 7 hours. If both pipes are opened together, how long will it take to fill the tank?

- Ans**
- ☐ 1. 17 hours 15 minutes
 - ☐ 2. 17 hours 20 minutes
 - ☐ 3. 16 hours 45 minutes
 - ☒ 4. 17 hours 30 minutes

Q.3 Three numbers are in the ratio of 3:5:7. If 8 is added to each number, the new numbers are in the ratio of 5:7:9. Find the smallest of the original three numbers.

- Ans**
- ☒ 1. 12
 - ☐ 2. 18
 - ☐ 3. 15
 - ☐ 4. 9

Q.4 The marked price of a bed is ₹17,200. The shopkeeper allows successive discounts of 10%, 5% and 15% on it. What is the selling price of the bed? (Round off the answer to the nearest rupee.)

- Ans**
- ☐ 1. ₹12,400
 - ☒ 2. ₹12,500
 - ☐ 3. ₹12,600
 - ☐ 4. ₹12,700

Q.5 An inlet pipe takes 6 hours to fill a tank. An outlet pipe takes 8 hours to empty it. If both pipes are opened simultaneously, in how many hours will the tank be filled?

- Ans**
- ☐ 1. 20
 - ☐ 2. 26
 - ☒ 3. 24
 - ☐ 4. 22

Q.6 An article was bought for ₹200 and a repairing charge of ₹20 was paid on it. It is sold at a profit of 10%, after a discount of 10% on its marked price. What is the marked price of the article? (rounded off to two decimal places)

- Ans
- ☐ 1. ₹215.67
 - ☐ 2. ₹196.67
 - ☒ 3. ₹268.89
 - ☐ 4. ₹256.67

Q.7 The perpendicular height of a right circular cone is 7 cm and its base radius is 24 cm. What is the curved surface area (in cm^2) of the cone?

- Ans
- ☐ 1. 565π
 - ☒ 2. 600π
 - ☐ 3. 550π
 - ☐ 4. 580π

Q.8 A train runs at a speed of 78.4 km/h. How many metres will it travel in 15 minutes?

- Ans
- ☐ 1. 19,750
 - ☐ 2. 18,980
 - ☐ 3. 18,650
 - ☒ 4. 19,600

Q.9 A man sells a mobile phone for ₹600 and incurs a loss. If he had sold it for ₹1,090, his gain would have been 2.5-times the former loss. The cost price (in ₹) of the mobile phone is:

- Ans
- ☐ 1. 720
 - ☐ 2. 770
 - ☐ 3. 760
 - ☒ 4. 740

Q.10 Suman covers a certain distance by car, driving at 20 km/h, and returns to the starting point on a scooter at a speed of 16 km/h. Find the average speed for the whole journey.

- Ans
- ☒ 1. $17\frac{7}{9}$ km/h
 - ☐ 2. $19\frac{7}{9}$ km/h
 - ☐ 3. $18\frac{7}{9}$ km/h
 - ☐ 4. $16\frac{7}{9}$ km/h

Q.11 If the radius and height of a right circular cylinder are r cm and h cm, then the total surface area of cylinder is :

- Ans
- ☒ 1. $2\pi r(r+h)$ cm^2
 - ☐ 2. $\pi r(2r+h)$ cm^2
 - ☐ 3. $2\pi(r+h)$ cm^2
 - ☐ 4. $\pi r(r+2h)$ cm^2

Q.12 The ratio of P's salary to Q's salary is 5:4. The ratio of Q's salary to R's salary is 7:9. What is the ratio of R's salary to P's salary?

- Ans
- ☐ 1. 9:5
 - ☐ 2. 35:36
 - ☒ 3. 36:35
 - ☐ 4. 5:9

Q.13 Ajit can do a piece of work in 5 hours, Birbal and Charan together can do it in 4 hours, while Ajit and Charan can do it in 4 hours. How many hours will it take Birbal to do the work alone?

- Ans**
- ☒ 1. 5
 - ☐ 2. 4
 - ☐ 3. 6
 - ☐ 4. 3

Q.14 The volume of a cone is 308 cm^3 and its radius is 7 cm. Find its height. (Use $\pi = \frac{22}{7}$)

- Ans**
- ☒ 1. 6 cm
 - ☐ 2. 4 cm
 - ☐ 3. 10 cm
 - ☐ 4. 8 cm

Q.15 Two trains of lengths 100 m and 240 m run in opposite directions at speeds 72 km/h and 108 km/h, respectively. Find the time taken to cross each other completely.

- Ans**
- ☐ 1. 6.6 sec
 - ☐ 2. 6.2 sec
 - ☐ 3. 7.2 sec
 - ☒ 4. 6.8 sec

Q.16 Which of the ratios 2:13, 4:17, 4:13, and 5:19 has the highest value?

- Ans**
- ☒ 1. 4:13
 - ☐ 2. 5:19
 - ☐ 3. 4:17
 - ☐ 4. 2:13

Q.17 The speed of a boat downstream is 18 km/hr. If the speed of the stream is 3 km/hr, then the speed of the boat upstream is:

- Ans**
- ☒ 1. 12 km/hr
 - ☐ 2. 14 km/hr
 - ☐ 3. 11 km/hr
 - ☐ 4. 13 km/hr

Q.18 The radius of a solid cylinder is increased by 20% and its height is decreased by 20%. What is the percentage change in its volume?

- Ans**
- ☐ 1. 1.2% increase
 - ☐ 2. No change
 - ☒ 3. 15.2% increase
 - ☐ 4. 4.2% increase

Q.19 A shopkeeper gives 2 articles free on every purchase of 8 articles and also allows an additional discount of 20% for cash payment only. What is the total discount percentage, that a customer gets on cash payment?

- Ans**
- ☐ 1. 31%
 - ☒ 2. 36%
 - ☐ 3. 40%
 - ☐ 4. 45%

Q.19 What is the main function of bile in the digestive process?

- Ans**
- ☐ 1. Digestion of proteins
 - ☐ 2. Breakdown of carbohydrates
 - ☒ 3. Emulsification of fats
 - ☐ 4. Absorption of water

Q.20 A major harvest festival in India marks the Sikh New Year and commemorates the formation of the Khalsa in 1699 by Guru Gobind Singh. It is celebrated with community gatherings, fairs and traditional dances like Bhangra and Gidda. This festival is primarily associated with which Indian state?

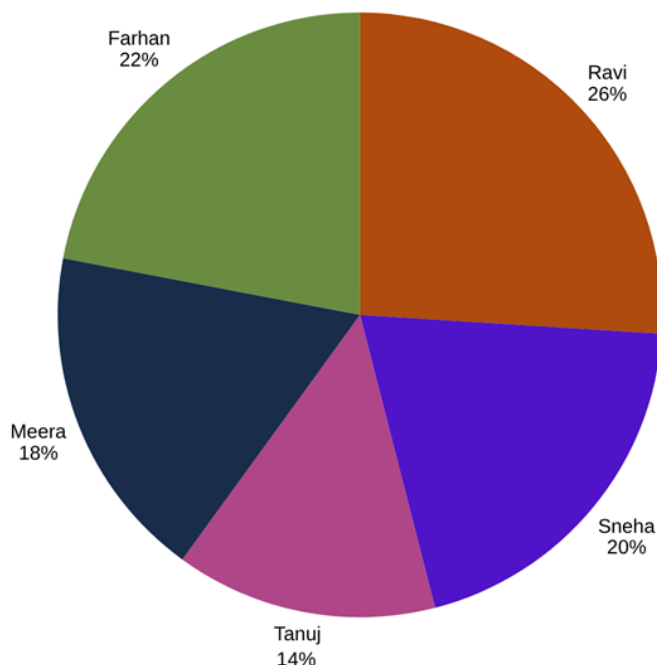
- Ans**
- ☐ 1. Kerala
 - ☐ 2. Odisha
 - ☒ 3. Punjab
 - ☐ 4. Assam

Section : **Arithmetical and Numerical Ability**

Q.1 What is the difference (in ₹) between compound interest on ₹12,000 for one and a half years at 10% per annum, when the interest is compounded annually and semi-annually?

- Ans**
- ☐ 1. 28.35
 - ☐ 2. 25.5
 - ☐ 3. 35.65
 - ☒ 4. 31.50

Q.2 Five school alumni — Ravi, Sneha, Tanuj, Meera, and Farhan — have jointly invested in a food truck business. The percentage of capital invested by each is shown below:



Ravi invested 26% of the total capital. What is the central angle of his sector in a pie chart?

- Ans**
- ☐ 1. 86.4°
 - ☒ 2. 93.6°
 - ☐ 3. 78°
 - ☐ 4. 104.4°

Q.3 There are 24 members in group A, 62 members in group B, and 13 members in group C. All the members of these groups went to a restaurant. The average amount spent per member in groups A, B, and C is ₹146, ₹138, and ₹405, respectively. Find the overall average amount spent per member (in ₹).

- Ans
- ☐ 1. 174
 - ☒ 2. 175
 - ☐ 3. 173
 - ☐ 4. 179

Q.4 Tannu deposited ₹2,200 in a private bank that promised 8% simple interest per annum. If Tannu kept the money with the bank for 8 years, she will earn an interest of:

- Ans
- ☐ 1. ₹1,508
 - ☒ 2. ₹1,408
 - ☐ 3. ₹1,488
 - ☐ 4. ₹1,388

Q.5 Kiran finds a 10% increase in the sales in the first year and 25% in the second year, if the current sales is ₹2,50,800, what was the sales (in ₹) two years ago?

- Ans
- ☒ 1. 1,82,400
 - ☐ 2. 2,00,640
 - ☐ 3. 1,62,400
 - ☐ 4. 2,28,000

Q.6 Find the value $x : x = \frac{2.863}{1000} + 4.37 + \frac{32}{100}$

- Ans
- ☐ 1. 6.692863
 - ☒ 2. 4.692863
 - ☐ 3. 7.692863
 - ☐ 4. -4.692863

Q.7 If the number 199 can be written as $m^2 - n^2$, where m and n are natural numbers, ($m > n$), then the values of m and n , respectively, are:

- Ans
- ☐ 1. 98 and 101
 - ☐ 2. 102 and 97
 - ☐ 3. 101 and 98
 - ☒ 4. 100 and 99

Q.8 Simplify: $\sqrt{711 + \sqrt{306 + \sqrt{360 - 36}}}$

- Ans
- ☐ 1. 28
 - ☒ 2. 27
 - ☐ 3. 24
 - ☐ 4. 23

Q.9 A team of 5 members scored the following points in a quiz: 12, 15, 17, 19, and 21. If a sixth member joins and the average score becomes 18, what is the score of the sixth member?

- Ans
- ☐ 1. 18
 - ☐ 2. 12
 - ☐ 3. 21
 - ☒ 4. 24

Q.10 The price of an item was increased by 12%. This reduced the monthly total sales by 16%. The overall effect on the value of monthly sales is _____.

- Ans
- ☐ 1. 6.82 % decrease
 - ☐ 2. 6.82 % increase
 - ☐ 3. 5.92 % increase
 - ☒ 4. 5.92 % decrease

Q.11 In what ratio must a shopkeeper mix two varieties of coffee worth ₹480 per kg and ₹520 per kg so that by selling the mixture at ₹550 per kg, he gains 10%?

- Ans
- ☐ 1. 2 : 1
 - ☐ 2. 1 : 2
 - ☐ 3. 3 : 4
 - ☒ 4. 1 : 1

Q.12 Towns A and B currently have populations of 10,000 and 12,000, respectively. If the population of town A increases by 10% per year and the population of town B remains constant, by how much will the population of town A exceed that of town B after 2 years?

- Ans
- ☐ 1. 200
 - ☐ 2. 50
 - ☒ 3. 100
 - ☐ 4. 150

Q.13 By selling an article for ₹120, a man incurs a loss of 20%. At what price (in ₹) should he sell the article to gain 14%?

- Ans
- ☐ 1. 161
 - ☒ 2. 171
 - ☐ 3. 191
 - ☐ 4. 181

Q.14 By selling an article for ₹120, a man incurs a loss of 20%. At what price (in ₹) should he sell the article to gain 22%?

- Ans
- ☒ 1. 183
 - ☐ 2. 193
 - ☐ 3. 203
 - ☐ 4. 173

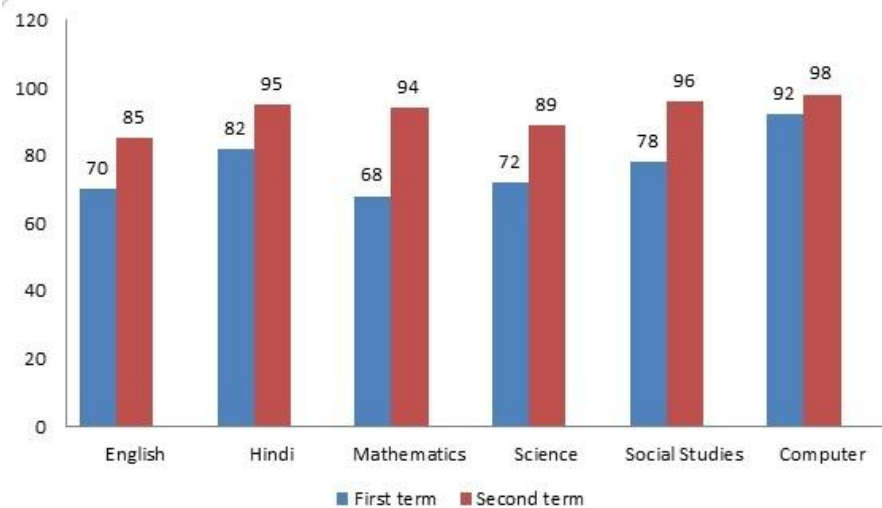
Q.15 Ajay observes a 10% increase in sales in the first year and a 25% increase in the second year. If the current sales are ₹228800, what were the sales (in ₹) two years ago?¹¹⁸

- Ans
- ☐ 1. 146400
 - ☐ 2. 183040
 - ☒ 3. 166400
 - ☐ 4. 208000

Q.16 The average weight of 6 boxes is 18 kg. If the weights of five of the boxes are 14 kg, 16 kg, 18 kg, 20 kg, and 22 kg, respectively, then what is the weight of the sixth box?

- Ans
- ☒ 1. 18 kg
 - ☐ 2. 24 kg
 - ☐ 3. 15 kg
 - ☐ 4. 20 kg

- Q.17 The bar graph given below shows the marks (out of 100) obtained by a student in various subjects in first term and the second term examination.



Find the difference between the average marks obtained by student in English and Science in term first and in term second examination.

- Ans
- ☐ 1. 19
 - ☐ 2. 15
 - ☐ 3. 13
 - ☒ 4. 16

- Q.18 The current population of a town is 72,600. If it has been growing at the rate of 10% compounded every year for the past few years, what was the population of the town two years ago?

- Ans
- ☐ 1. 70,000
 - ☐ 2. 65,000
 - ☐ 3. 55,000
 - ☒ 4. 60,000

- Q.19 Two bells ring at intervals of 4 minutes and 6 minutes. If they ring together at 8:00 a.m., at what time will they ring together again?

- Ans
- ☐ 1. 8:16 a.m.
 - ☐ 2. 8:14 a.m.
 - ☒ 3. 8:12 a.m.
 - ☐ 4. 8:10 a.m.

- Q.20 $\frac{1}{20}$ is what percentage of $\frac{1}{50}$?

- Ans
- ☐ 1. 265%
 - ☐ 2. 500%
 - ☐ 3. 260%
 - ☒ 4. 250%

Q.1 Find the 4th proportional to 4, 27.5 and 36.

Ans ☒ 1. 247.5

☐ 2. 245.5

☐ 3. 241.5

☐ 4. 243.5

Q.2 If a pipe can fill a tank in 6 hours and another pipe can empty the tank in 10 hours, then what part of the tank will be filled by both pipes in 1 hour, if both pipes are open simultaneously?

Ans ☐ 1. $\frac{4}{15}$

☐ 2. $\frac{6}{15}$

☒ 3. $\frac{1}{15}$

☐ 4. $\frac{2}{15}$

Q.3 A supermarket is offering "Buy 1, get 3 free" on household items. What is the net percentage discount being offered by the supermarket?

Ans ☐ 1. 65%

☒ 2. 75%

☐ 3. 85%

☐ 4. 80%

Q.4 A train 240 meters long passes a man standing on a platform in 12 seconds. What is the speed of the train in km/h?

Ans ☐ 1. 80

☐ 2. 60

☒ 3. 72

☐ 4. 66

Q.5 A man sells a mobile phone for ₹600 and incurs a loss. If he had sold it for ₹1,080, his gain would have been 5-times the former loss. The cost price (in ₹) of the mobile phone is:

Ans ☒ 1. 680

☐ 2. 660

☐ 3. 700

☐ 4. 710

Q.6 A cylindrical vessel has a radius of 28 cm and contains water to a height of 60 cm. A solid metal cylinder with a radius of 14 cm and height of 20 cm is completely immersed in the water. Assuming no water overflows, find how much the water level rises in the vessel.

Ans ☒ 1. 5 cm

☐ 2. 3.5 cm

☐ 3. 8 cm

☐ 4. 7.5 cm

Q.7 Three inlet pipes, A, B, and C, can fill a cistern in 12 hours, 15 hours, and 60 hours, respectively. All three pipes are opened at the same time when the cistern is empty, and pipe C is shut off after 1.5 hours. Determine the time required for pipes A and B to fill the remaining part of the cistern.

- Ans**
- ☐ 1. 7 hours
 - ☐ 2. 4 hours
 - ☒ 3. 5 hours
 - ☐ 4. 6 hours

Q.8 The ratio of the initial incomes of Mohan and Sohan is 3 : 5. Mohan's income increases by ₹3000, while Sohan's income decreases by ₹2000. As a result, the new ratio of their incomes becomes 3 : 4. Find the initial income of Mohan.

- Ans**
- ☐ 1. ₹17000
 - ☐ 2. ₹21000
 - ☒ 3. ₹18000
 - ☐ 4. ₹19000

Q.9 A train travels at a speed of 40 km/h for 12 minutes and at a speed of 60 km/h for the next 8 minutes. Find the average speed (in km/h) of the train.

- Ans**
- ☐ 1. 36
 - ☐ 2. 42
 - ☐ 3. 56
 - ☒ 4. 48

Q.10 A car covers 2,700 km at a certain uniform speed in 30 hours. What is its speed in metre per second?

- Ans**
- ☐ 1. 27
 - ☐ 2. 23
 - ☒ 3. 25
 - ☐ 4. 18

Q.11 If 564 is divided into two parts such that the one-fifth part of the first and one-eighth part of the second are in the ratio 3:4, then compare the two parts in the form of a ratio.

- Ans**
- ☐ 1. 17:33
 - ☐ 2. 4:15
 - ☐ 3. 11:15
 - ☒ 4. 15:32

Q.12 Mohan and Sohan shared the profit of a business in the ratio 4:7. If Mohan and Sohan invested their capitals for 9 months and 15 months respectively, find the ratio between the capitals of Mohan and Sohan respectively.

- Ans**
- ☐ 1. 23:18
 - ☐ 2. 21:20
 - ☒ 3. 20:21
 - ☐ 4. 18:23

Q.13 A shopkeeper gives two successive discounts on an article marked ₹2,080. The first discount given is 25%. If the customer pays ₹1,500 for the article, find the second discount percentage (rounded off to two decimal places).

- Ans**
- ☐ 1. 4.05%
 - ☒ 2. 3.85%
 - ☐ 3. 4.95%
 - ☐ 4. 2.35%

Q.14 A cone has radius 5 cm and height 14 cm. If this cone is melted and recast into smaller cones with radius 2.5 cm and height 7 cm, how many smaller cones can be formed?

- Ans
- ☐ 1. 12
 - ☐ 2. 11
 - ☐ 3. 10
 - ☒ 4. 8

Q.15 Pipe X can fill a tank in 15 hours and pipe Y can fill the same tank in 45 hours. In how many hours can both pipe X and pipe Y together fill one-third part of the tank?

- Ans
- ☒ 1. $3\frac{3}{4}$
 - ☐ 2. $4\frac{1}{4}$
 - ☐ 3. $3\frac{1}{4}$
 - ☐ 4. $3\frac{1}{2}$

Q.16 Two trains of lengths 105 m and 96 m, respectively, run at the speeds of 72.9 km/h and 108 km/h, respectively, in opposite directions on parallel tracks. Find the time which they take to cross each other.

- Ans
- ☒ 1. 4 seconds
 - ☐ 2. 2 seconds
 - ☐ 3. 3 seconds
 - ☐ 4. 5 seconds

Q.17 Four-ninth of 999 chairs was sold at a profit of ₹95 each and the rest for ₹9,56,043. If the seller makes a profit of 62% on the whole transaction, what is the cost price (in ₹) of each of the chair?

- Ans
- ☐ 1. 940
 - ☐ 2. 820
 - ☒ 3. 850
 - ☐ 4. 760

Q.18 The diameter of a road roller of length 130 cm is 84 cm. It rolls over a road 700 times. Find the area of the road covered in square meters. (Use $\pi = \frac{22}{7}$)

- Ans
- ☒ 1. 2402.4
 - ☐ 2. 240.24
 - ☐ 3. 2,4024
 - ☐ 4. 420.24

Q.19 If the length of longest diagonal of a cube is $7\sqrt{21}$ cm. Find its volume (V) and surface area (S).

- Ans
- ☐ 1. $V=2411\sqrt{7}$ cm³, $S=2068$ cm²
 - ☐ 2. $V=2421\sqrt{7}$ cm³, $S=2078$ cm²
 - ☒ 3. $V=2401\sqrt{7}$ cm³, $S=2058$ cm²
 - ☐ 4. $V=2431\sqrt{7}$ cm³, $S=2088$ cm²

Q.18 The Union Budget 2025-26 outlines a significant push towards nuclear energy as part of India's long-term energy transition strategy. The Government of India has set an ambitious target of 100 GW of nuclear power capacity by _____.

- Ans**
- ☐ 1. 2030
 - ☐ 2. 2040
 - ☒ 3. 2047
 - ☐ 4. 2035

Q.19 Which Article of the Indian Constitution states that the Council of Ministers shall be collectively responsible to the House of the People?

- Ans**
- ☐ 1. 69
 - ☐ 2. 45
 - ☒ 3. 75
 - ☐ 4. 57

Q.20 Which hills constitute the outer extent of the Peninsular Plateau in the south?

- Ans**
- ☐ 1. Deccan hills
 - ☐ 2. Gir hills
 - ☐ 3. Rajmahal hills
 - ☒ 4. Cardamom hills

Section : **Arithmetical and Numerical Ability**

Q.1 The LCM of two prime numbers x and y , ($x > y$), is 35. Find the value of $(2y - x)$.

- Ans**
- ☐ 1. 7
 - ☒ 2. 3
 - ☐ 3. 5
 - ☐ 4. 9

Q.2 An amount of ₹12,000 is deposited in a bank at an interest rate of 8% per annum, compounded annually, in 2021. An additional ₹6,000 is deposited exactly one year later, in 2022. What will be the total account balance on the same date in 2023?

- Ans**
- ☐ 1. ₹20,980.5
 - ☐ 2. ₹21,756.6
 - ☒ 3. ₹20,476.8
 - ☐ 4. ₹21,225.8

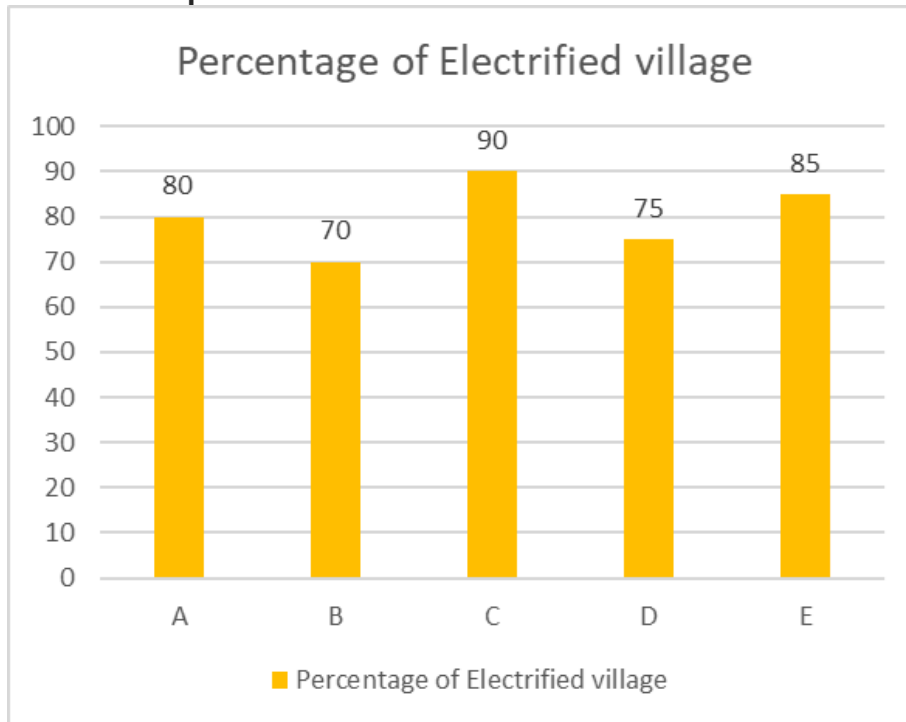
Q.3 A student calculates the average of her test scores recorded as 75, 80, 72, 85, and 78, but she later finds that the score recorded as 72 should have been 82. What is her corrected average score?

- Ans**
- ☐ 1. 78
 - ☐ 2. 79
 - ☒ 3. 80
 - ☐ 4. 82

Q.4 Two numbers are such that their HCF is 3 and their LCM is 36. If one

- Ans**
- ☐ 1. 10
 - ☒ 2. 12
 - ☐ 3. 18
 - ☐ 4. 16

- Q.5 The given bar graph represents the Percentage of electrified villages in 5 states A, B, C, D, and E. Study the graph and answer the questions based on it.



If the total number of villages in State A is 150, then find the number of villages that are electrified in State A.

- Ans
- ☐ 1. 130
 - ☒ 2. 120
 - ☐ 3. 100
 - ☐ 4. 110

- Q.6 The average of 11 numbers is 18. If one number 30 is removed, what is the new average?

- Ans
- ☐ 1. 12.5
 - ☒ 2. 16.8
 - ☐ 3. 13.8
 - ☐ 4. 15.5

- Q.7 $\frac{1}{20}$ is what percentage of $\frac{1}{80}$?⁶⁰⁶³

- Ans
- ☐ 1. 800%
 - ☐ 2. 410%
 - ☒ 3. 400%
 - ☐ 4. 415%

- Q.8 Two plumbers, X and Y, are paid a total of ₹770 per day by their employer. If X is paid 120% of the sum paid to Y, then how much is Y paid (in ₹) per day?

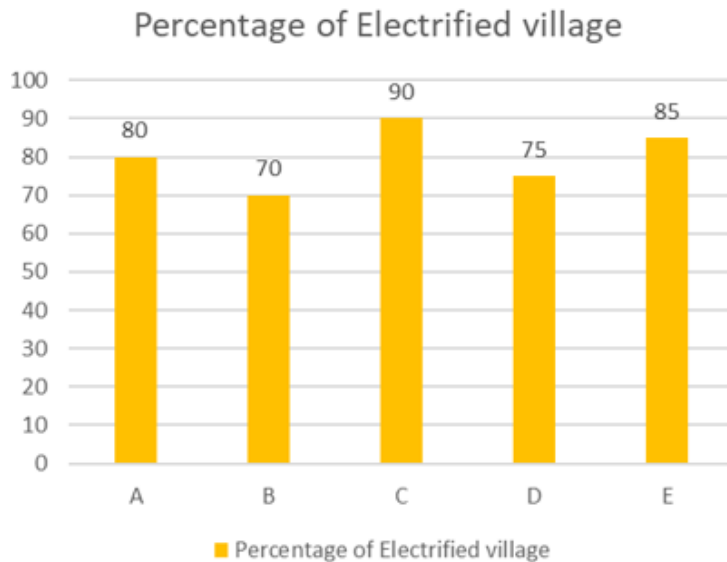
- Ans
- ☐ 1. 300
 - ☒ 2. 350
 - ☐ 3. 400
 - ☐ 4. 250

Q.9 A school deposits ₹1,500 at an interest rate of 8% per annum, compounded half-yearly. What will be the total amount at the end of one year?

- Ans
- ☐ 1. ₹1,632.40
 - ☐ 2. ₹1,628.40
 - ☐ 3. ₹1,612.40
 - ☒ 4. ₹1,622.40

Q.10 Study the following bar graph and answer the question based on it.

The given bar graph represents the Percentage of electrified villages in 5 states A, B, C, D, and E.



If the total number of villages in State E is 200, then find the number of villages electrified in State E.

- Ans
- ☐ 1. 155
 - ☒ 2. 170
 - ☐ 3. 165
 - ☐ 4. 160

Q.11 At present, the population of a town is 70,000. At what annual growth rate would the population be 81,648 in two years?

- Ans
- ☐ 1. 5%
 - ☐ 2. 10%
 - ☒ 3. 8%
 - ☐ 4. 3%

Q.12 The simple interest received on a certain amount is equal to the principal. If the time period is equal to the rate of interest. Find the rate of interest per annum.

- Ans
- ☒ 1. 10%
 - ☐ 2. 14%
 - ☐ 3. 13%
 - ☐ 4. 12%

Q.13 A factory produces defective items at a rate of 6 for every 47 good items. If the total production in a day is 10,706 items, what is the total production of defective items from a factory in 2 days?

- Ans
- ☐ 1. 2,432
 - ☒ 2. 2,424
 - ☐ 3. 2,448
 - ☐ 4. 2,476

Q.14 There are 15 members in group A, 18 members in group B, and 30 members in group C. All the members of these groups went to a restaurant. The average amount spent per member in groups A, B, and C is ₹122, ₹121, and ₹194 respectively. Find the overall average amount spent per member (in ₹).

- Ans
- ☐ 1. 155
 - ☐ 2. 159
 - ☐ 3. 160
 - ☒ 4. 156

Q.15 By how much is 30% of 70 greater than 20% of 40?6291

- Ans
- ☒ 1. 13
 - ☐ 2. 15
 - ☐ 3. 10
 - ☐ 4. 8

Q.16 By selling an article for ₹119, a man incurs a loss of 45%. At what price (in ₹) should he sell the article to gain 10%?

- Ans
- ☐ 1. 248
 - ☐ 2. 228
 - ☒ 3. 238
 - ☐ 4. 258

Q.17 The number 16341 is divisible by which of the following numbers?

- Ans
- ☐ 1. 33
 - ☐ 2. 32
 - ☒ 3. 39
 - ☐ 4. 29

Q.18 By selling an article for ₹119, a man incurs a loss of 30%. At what price (in ₹) should he sell the article to gain 40%?

- Ans
- ☐ 1. 228
 - ☐ 2. 248
 - ☐ 3. 258
 - ☒ 4. 238

Q.19 There are 85 members in group A, 15 members in group B, and 55 members in group C. All the members of these groups went to a restaurant. The average amount spent per member in groups A, B, and C is ₹347, ₹237, and ₹160 respectively. Find the overall average amount spent per member (in ₹).

- Ans
- ☐ 1. 268
 - ☒ 2. 270
 - ☐ 3. 272
 - ☐ 4. 267

Q.20 Vipul observes a 10% increase in sales in the first year and a 25% increase in the second year. If the current sales are ₹1,89,200, what were the sales (in ₹) two years ago?

- Ans**
- ☐ 1. 1,51,360
 - ☐ 2. 1,17,600
 - ☐ 3. 1,72,000
 - ☒ 4. 1,37,600

Section : **Arithmetical and Numerical Ability1**

Q.1 If the fourth proportional to 8, 12, and a number 'x' is equal to the mean proportional between 20 and 45, find the value of x.

- Ans**
- ☐ 1. 32
 - ☐ 2. 24
 - ☒ 3. 20
 - ☐ 4. 28

Q.2 Three-eighth of 768 chairs was sold at a profit of ₹80 each and the rest for ₹6,12,000. If the seller makes a profit of 50% on the whole transaction, what is the cost price (in ₹) of each chair?

- Ans**
- ☒ 1. 735
 - ☐ 2. 775
 - ☐ 3. 820
 - ☐ 4. 684

Q.3 A can do a piece of work in 19 hours and B in 6 hours. If both work together, in how many hours will the work be completed?

- Ans**
- ☐ 1. 6.25 hours
 - ☐ 2. 5.75 hours
 - ☒ 3. 4.56 hours
 - ☐ 4. 4.25 hours

Q.4 The mean proportion of 12 and 27 is:

- Ans**
- ☐ 1. 12
 - ☒ 2. 18
 - ☐ 3. 15
 - ☐ 4. 21

Q.5 A can do a piece of work in 84 days and B in 144 days but with the help of C they finished the work in 36 days. Out of the total payment of ₹99,260, how much (in ₹) should C get?

- Ans**
- ☐ 1. 31,590
 - ☐ 2. 31,950
 - ☐ 3. 30,195
 - ☒ 4. 31,905

Q.6 The speed of the stream is $\frac{20}{\sqrt{7}}$ km/hr. A boat goes 40 km downstream in 4 hours 40 minutes. The speed of the boat in still water is:

- Ans
- ☒ 1. 20 km/hr
 - ☐ 2. 26 km/hr
 - ☐ 3. 25 km/hr
 - ☐ 4. 24 km/hr

Q.7 The radius of a wire is 2 cm. If the length of wire is 588 cm, then the
(Use $\pi = \frac{22}{7}$)

- Ans
- ☐ 1. 7594 cm³
 - ☐ 2. 7492 cm³
 - ☐ 3. 7394 cm³
 - ☒ 4. 7392 cm³

Q.8 Three dealers X, Y and Z selling the same model of refrigerator mark them at the same selling price. X gives successive discounts of 25% and 5%, Y gives successive discounts of 16% and 13%, and Z gives a single discount of 30%. From whom is it cheapest to purchase the refrigerator?

- Ans
- ☒ 1. From Z
 - ☐ 2. From X
 - ☐ 3. From Y
 - ☐ 4. Both From X and Y

Q.9 A man walks along the sides of a field which is in the shape of a square at the speeds of 2 km/h, 4 km/h, 6 km/h and 8 km/h, respectively. Find his average speed (in km/h).

- Ans
- ☐ 1. 4.84
 - ☐ 2. 4.28
 - ☒ 3. 3.84
 - ☐ 4. 4.56

Q.10 A pipe can fill a tank in 12 hours. Due to a leak in the bottom, it fills the tank in 22 hours. If the tank is full, then how much time will the leak take to empty it?

- Ans
- ☐ 1. 25.4 hours
 - ☒ 2. 26.4 hours
 - ☐ 3. 27.4 hours
 - ☐ 4. 28.4 hours

Q.11 There are two hollow cylinders, each of radius 15 cm and height 40 cm. The first cylinder is closed at both ends and the second cylinder is open at the top. Find the ratio of metal sheet required to make the first and the second cylinder.

- Ans
- ☐ 1. 9:19
 - ☐ 2. 22:23
 - ☒ 3. 22:19
 - ☐ 4. 19:22

Q.12 If x varies inversely as $y^3 - 1$ and is equal to 3 when $y = 2$, find x when $y = 5$.

- Ans
- ☒ 1. $\frac{21}{124}$
 - ☐ 2. $\frac{23}{124}$
 - ☐ 3. $\frac{19}{121}$
 - ☐ 4. $\frac{27}{124}$

Q.13 Two trains of lengths 77 m and 93 m are moving in the same direction at 10 m/s and 5 m/s, respectively. Find the time taken by the faster train to cross the slower train.

- Ans
- ☐ 1. 33 seconds
 - ☐ 2. 31 seconds
 - ☒ 3. 34 seconds
 - ☐ 4. 32 seconds

Q.14 Three pipes A, B, and C are connected to a tank. Pipe A can fill the tank in 12 hours, pipe B can fill it in 15 hours, and pipe C can empty it in 20 hours. The pipes are opened one by one in order — A for 1 hour, then B for 1 hour, then C for 1 hour — and this cycle repeats. How many hours will it take to fill the tank completely?

- Ans
- ☒ 1. 28 hours 15 minutes
 - ☐ 2. 29 hours 15 minutes
 - ☐ 3. 30 hours
 - ☐ 4. 28 hours

Q.15 Which of the following ratios is the largest?

- Ans
- ☐ 1. 5:8
 - ☒ 2. 13:20
 - ☐ 3. 3:5
 - ☐ 4. 7:12

Q.16 A trader bought 69 eggs for ₹69. During transit, 32 eggs got damaged. He sold the remaining eggs at ₹5.10 each. Calculate the trader's profit.

- Ans
- ☐ 1. ₹129.50
 - ☐ 2. ₹112.50
 - ☐ 3. ₹113.70
 - ☒ 4. ₹119.70

Q.17 A bike travels a distance of 150 km at the speed of 25 km/h. It covers the next 50 km of its journey at the speed of 5 km/h and the last 50 km of its journey at the speed of 10 km/h. What is the average speed (rounded off to two decimal places) of the bike?

- Ans
- ☐ 1. 14.25 km/h
 - ☐ 2. 8.34 km/h
 - ☐ 3. 15.15 km/h
 - ☒ 4. 11.90 km/h

Q.18 The radius of a cylinder is increased to four times its original value while the height remains the same. By what factor does its volume increase?

- Ans
- ☐ 1. 4
 - ☒ 2. 16
 - ☐ 3. 32
 - ☐ 4. 8

Q.17 Which of the following Indian languages is officially recognized as a Classical language by the Government of India and belongs to the Dravidian language family?

- Ans**
- ☐ 1. Hindi
 - ☐ 2. Urdu
 - ☒ 3. Tamil
 - ☐ 4. Kashmiri

Q.18 Which of the following regions of India is also known as the 'Molasses Basin'?

- Ans**
- ☒ 1. Mizoram
 - ☐ 2. Tamil Nadu
 - ☐ 3. Nagaland
 - ☐ 4. Gujarat

Q.19 राजस्थान का कौन-सा मंदिर अपने श्वेत संगमरमर और जटिल नक्काशी के लिए प्रसिद्ध है तथा वास्तुकला की नागर शैली का अनुसरण करता है?

- Ans**
- ☐ 1. रथ युक्त कोणार्क मंदिर
 - ☐ 2. गोपुरों वाला मीनाक्षी मंदिर
 - ☐ 3. समुद्र तटीय दृश्य वाला शोर मंदिर
 - ☒ 4. जैन डिजाइन वाला दिलवाड़ा मंदिर

Q.20 Which of the following rivers originates from the Amarkantak Plateau?

- Ans**
- ☐ 1. Ganga
 - ☒ 2. Narmada
 - ☐ 3. Kaveri
 - ☐ 4. Godavari

Section : Arithmetical and Numerical Ability

Q.1 Simplify : $12 + 8 \div 4 - 3 \times 2$

- Ans**
- ☐ 1. 13
 - ☒ 2. 8
 - ☐ 3. 17
 - ☐ 4. 11

Q.2 मोहित ने ₹95,000 में एक घर खरीदा और उसने 1.5 वर्ष बाद 12% वार्षिक चक्रवृद्धि ब्याज दर से भुगतान करने का वादा किया, जहां ब्याज अर्ध-वार्षिक रूप से संयोजित किया जाता है। 1.5 वर्ष बाद भुगतान किया गया ब्याज ज्ञात कीजिए।

- Ans**
- ☐ 1. ₹18,987.23
 - ☐ 2. ₹17,516.32
 - ☒ 3. ₹18,146.52
 - ☐ 4. ₹17,123.23

Q.3 By selling an article for ₹120, a man incurs a loss of 20%. At what price (in ₹) should he sell the article to gain 12%?

- Ans**
- ☐ 1. 158
 - ☐ 2. 188
 - ☐ 3. 178
 - ☒ 4. 168

Q.4 What percentage of the numbers from 1 to 90 have 1 or 4 in the unit's digit?

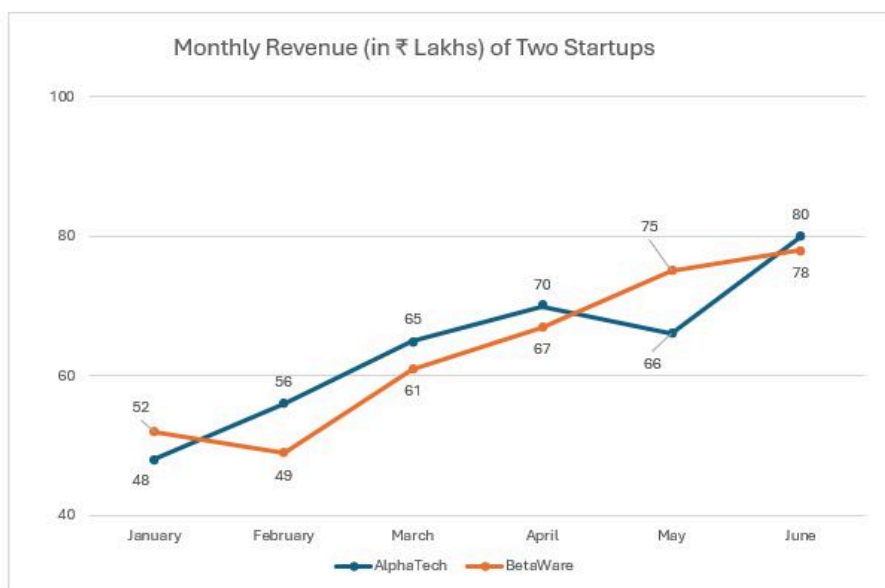
- Ans
- ☐ 1. 8%
 - ☐ 2. 21%
 - ☒ 3. 20%
 - ☐ 4. 0.09

Q.5 A number when decreased by $87\frac{1}{2}\%$, gives 795. The number is:

69

- Ans
- ☐ 1. 6400
 - ☐ 2. 6200
 - ☒ 3. 6360
 - ☐ 4. 6300

Q.6 The chart below shows the monthly revenue of two startups over six months of a year. Study the graph and answer the question below.



What is the percentage increase in revenue of BetaWare from February to June?
(Correct to two decimal places.)

- Ans
- ☐ 1. 62.18
 - ☐ 2. 55.18
 - ☒ 3. 59.18
 - ☐ 4. 65.18

Q.7 Two plumbers, X and Y, are paid a total of ₹550 per day by their employer. If X is paid 120% of the sum paid to Y, then how much is Y paid (in ₹) per day?

- Ans
- ☐ 1. 150
 - ☒ 2. 250
 - ☐ 3. 300
 - ☐ 4. 200

Q.8 Ajay observes a 10% increase in sales in the first year and a 25% increase in the second year. If the current sales are ₹149600, what were the sales (in ₹) two years ago?

- Ans
- ☒ 1. 108800
 - ☐ 2. 119680
 - ☐ 3. 88800
 - ☐ 4. 136000

Q.9 The L.C.M of $(2^3 \times 3, 2^5 \times 5^2)$ is

- Ans
- ☐ 1. 2500
 - ☐ 2. 3000
 - ☒ 3. 2400
 - ☐ 4. 2600

Q.10 Calculate the difference between compound interest, compounded annually, and simple interest on a principal of ₹1000 at a rate of 10% per annum for a period of 2 years.

- Ans
- ☐ 1. ₹15
 - ☐ 2. ₹11
 - ☐ 3. ₹12
 - ☒ 4. ₹10

Q.11 The LCM of the numbers 2.7 and 0.064 is:

- Ans
- ☐ 1. 432
 - ☐ 2. 0.432
 - ☐ 3. 4.32
 - ☒ 4. 43.2

Q.12 The average of 13 numbers is 20. If each number is multiplied by 4, then what will the new average be?

- Ans
- ☐ 1. 13
 - ☐ 2. 4
 - ☐ 3. 20
 - ☒ 4. 80

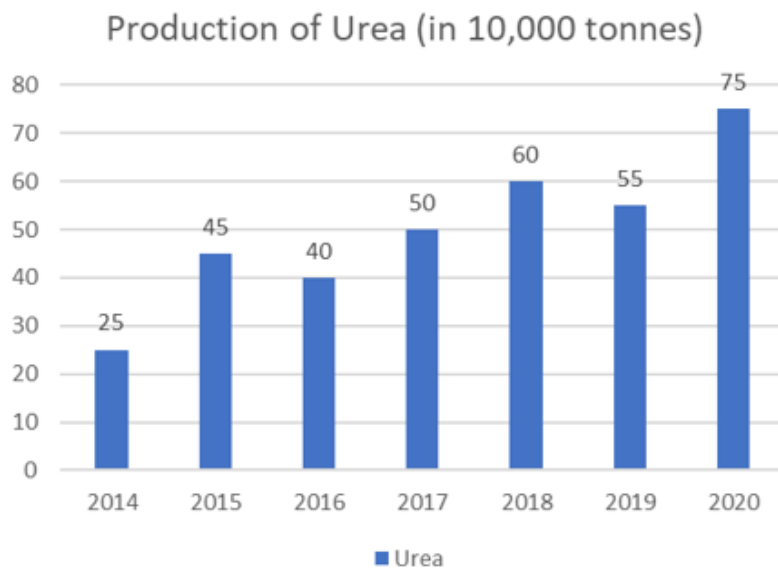
Q.13 The average of six consecutive prime numbers starting from 13 is equal to:

- Ans
- ☒ 1. 22
 - ☐ 2. 20
 - ☐ 3. 18
 - ☐ 4. 24

Q.14 The population of Bajhera village increases by 10% in the first year, it increases by 10% in the second year and due to mass exodus, it decreases by 20% in the third year. What will be its population after 3 years, if present population is 10,000?

- Ans
- ☒ 1. 9,680
 - ☐ 2. 9,880
 - ☐ 3. 9,460
 - ☐ 4. 8,890

- Q.15 Study the following bar graph and answer the question based on it.
The Production of Urea by a Company (in 10,000 tonnes) over the Years



What was the percentage increase in the production of Urea from 2014 to 2020?

- Ans ☒ 1. 190%
☒ 2. 220%
☒ 3. 175%
☒ 4. 200%
- Q.16 In how many years will the sum of ₹450 become ₹585, if the rate of simple interest is 6% per annum.
- Ans ☒ 1. 3
☒ 2. 4
☒ 3. 5
☒ 4. 6
- Q.17 If 8 liters of a 30% alcohol solution is mixed with 12 liters of a 40% alcohol solution, what is the percentage of alcohol in the resulting mixture?
- Ans ☒ 1. 36%
☒ 2. 35%
☒ 3. 34%
☒ 4. 38%
- Q.18 A trader marks his goods 50% above the cost price and allows a discount of 10% on it. If his gain is $x\%$, find the value of x .
- Ans ☒ 1. 37
☒ 2. 34
☒ 3. 36
☒ 4. 35
- Q.19 The product of two co-prime numbers is 115. Their LCM is:
- Ans ☒ 1. 1
☒ 2. 115
☒ 3. 5
☒ 4. 23

Q.20 There are 24 members in group A, 78 members in group B, and 60 members in group C. All the members of these groups went to a restaurant. The average amount spent per member in groups A, B, and C is ₹334, ₹423, and ₹113 respectively. Find the overall average amount (in ₹) spent per member.

Ans ☒ 1. 292

☒ 2. 295

☒ 3. 293

☒ 4. 291

Section : Arithmetical and Numerical Ability1

Q.1 A piece of work can be finished in 8 days, 10 days and 15 days by P, Q and R, respectively. They start the work; P works on all days, Q works on even days, and R works only for the first three days. The work is then finished in ____ days.

Ans ☒ 1. 4.2

☒ 2. 5.5

☒ 3. 4.5

☒ 4. 4.8

Q.2 What is the total surface area of a cone of base radius 7 cm and height 22 cm? (Use $\pi = \frac{22}{7}$ and round off your answer to one decimal place)

Ans ☒ 1. 622.2 cm²

☒ 2. 652.2 cm²

☒ 3. 632.7 cm²

☒ 4. 661.9 cm²

Q.3 Find the mean proportional between 1200 and 2700.

Ans ☒ 1. 900

☒ 2. 1280

☒ 3. 1200

☒ 4. 1800

Q.4 When moving against the current, the effective speed of a boat is half of its speed while moving with the current. If the stream flows at 4 km/h, find the speed of this boat in still water.

Ans ☒ 1. 9 km/h

☒ 2. 7 km/h

☒ 3. 12 km/h

☒ 4. 6 km/h

Q.5 A sum of money is divided among P, Q, R and S in the ratio of 3 : 7 : 9 : 13. If the share of Q is ₹2436, then what will be the share of P?

Ans ☒ 1. ₹1,044

☒ 2. ₹1,054

☒ 3. ₹1,064

☒ 4. ₹1,034

Q.6 Determine the equivalent single discount that is equal to successive discounts of 15%, 20%, and 30%.

- Ans**
- ☐ 1. 48.6%
 - ☐ 2. 50.6%
 - ☒ 3. 52.4%
 - ☐ 4. 46.6%

Q.7 The area of the base of a right circular cone is 154 sq.cm. If the height of the cone is twice the radius of the base, find its volume (in cu.cm, rounded off to two decimal places). (Use $\pi = 22/7$)

- Ans**
- ☐ 1. 730.33
 - ☒ 2. 718.67
 - ☐ 3. 720.32
 - ☐ 4. 750.25

Q.8 A car travels from City A to City B at 60 km/h and returns to City A at 80 km/h. Immediately after returning, it again travels from City A to City B at 120 km/h. If the distance between A and B is 240 km, what is the average speed for the entire journey?

- Ans**
- ☐ 1. 85 km/h
 - ☒ 2. 80 km/h
 - ☐ 3. 70 km/h
 - ☐ 4. 90 km/h

Q.9 A right circular cylinder has a base radius of 4 cm and a vertical height of 10 cm. Calculate the curved surface area of this cylinder. (Use $\pi = 3.14$)

- Ans**
- ☐ 1. 502.4 cm²
 - ☐ 2. 125.6 cm²
 - ☐ 3. 314 cm²
 - ☒ 4. 251.2 cm²

Q.10 A can do a piece of work in 40 days. B is 25% more efficient than A. Find the number of days taken by B to do the same piece of work.

- Ans**
- ☐ 1. 36 days
 - ☒ 2. 32 days
 - ☐ 3. 24 days
 - ☐ 4. 16 days

Q.11 A and B can do a piece of work in 16 and 24 days, respectively. They start the work together, and after some days, A leaves and B completes the rest of the work in 9 days. After how many days did A leave?

- Ans**
- ☒ 1. 6 days
 - ☐ 2. 8 days
 - ☐ 3. 7 days
 - ☐ 4. 4 days

Q.12 A man sells a mobile phone for ₹600 and loses an amount. If he had sold it for ₹1,080, his gain would have been 4-times the former loss. The cost price (in ₹) of the mobile phone is:

- Ans**
- ☐ 1. 716
 - ☐ 2. 726
 - ☐ 3. 676
 - ☒ 4. 696

Q.13 The mean proportional between two numbers is 30. If one number is 11 less than the other, what is the larger number?

- Ans
- ☒ 1. 36
 - ☐ 2. 25
 - ☐ 3. 30
 - ☐ 4. 42

Q.14 Pipe A alone can fill a tank in 15 hours; what part of the tank will fill in 3 hours?

- Ans
- ☐ 1. $\frac{1}{3}$
 - ☒ 2. $\frac{1}{5}$
 - ☐ 3. $\frac{1}{2}$
 - ☐ 4. $\frac{2}{5}$

Q.15 A train 300 meters long is moving at a speed of 80 km/h. A man is running in the opposite direction at 10 km/h. How long will it take for the train to pass the man completely?

- Ans
- ☐ 1. 18 sec
 - ☐ 2. 15 sec
 - ☐ 3. 9 sec
 - ☒ 4. 12 sec

Q.16 A person travels for 2 hours at 50 km/h and for another 3 hours at 70 km/h. What is the average speed (in km/hour) for the entire journey?

- Ans
- ☐ 1. 64
 - ☐ 2. 60
 - ☒ 3. 62
 - ☐ 4. 65

Q.17 Divide 735 into three parts, such that the first part is double that of the second part and the second part is one-fourth of the third part. What is the third part?

- Ans
- ☒ 1. 420
 - ☐ 2. 475
 - ☐ 3. 538
 - ☐ 4. 435

Q.18 Calculate the percentage discount if an article is marked at ₹4,580 but sold for ₹2,977.

- Ans
- ☒ 1. 35%
 - ☐ 2. 44%
 - ☐ 3. 40%
 - ☐ 4. 31%

Q.19 A shopkeeper bought locks at the rate of 8 locks for ₹68 and sold them at the rate of 12 locks for ₹114. Find his gain percent (rounded off to two decimal places).

- Ans
- ☒ 1. 11.76%
 - ☐ 2. 17.78%
 - ☐ 3. 13.13%
 - ☐ 4. 15.56%

Section : **Arithmetical and Numerical Ability**

Q.1 Evaluate: $(-40) + (-11) \div (-2) \times 6$

- Ans**
- ☐ 1. -8
 - ☐ 2. -10
 - ☒ 3. -7
 - ☐ 4. -9

Q.2 A student scored 40, 50, and 65 in subjects A, B, and C. If their weights are 2, 3, and 1 respectively, find the weighted average score (rounded to two decimal places).

- Ans**
- ☒ 1. 49.17
 - ☐ 2. 49.45
 - ☐ 3. 50.31
 - ☐ 4. 48.21

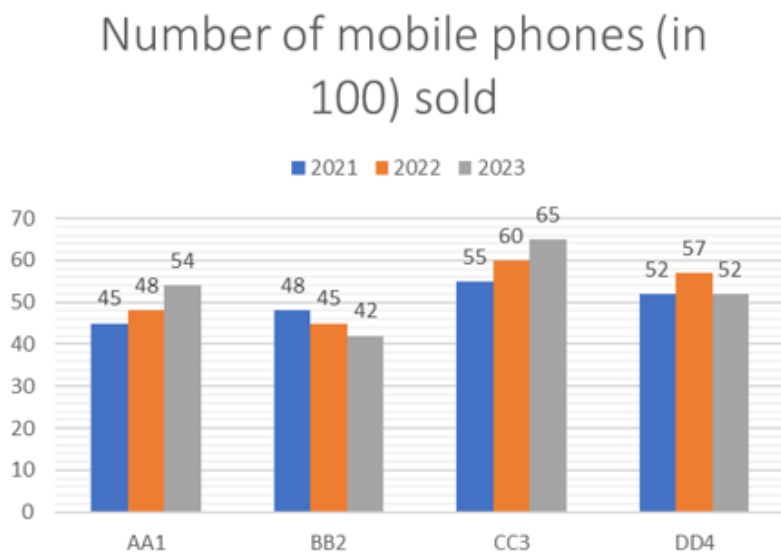
Q.3 A man sells a watch for ₹600 and incurs a loss. If he had sold it for ₹750, his gain would have been two times the original loss. What is the cost price (in ₹) of the watch?

- Ans**
- ☐ 1. 640
 - ☐ 2. 660
 - ☐ 3. 625
 - ☒ 4. 650

Q.4 There are 25 members in group A, 64 members in group B, and 22 members in group C. All the members of these groups went to a restaurant. The average amount spent per member in groups A, B, and C is ₹146, ₹278, and ₹317, respectively. Find the overall average amount spent per member (in ₹).

- Ans**
- ☐ 1. 253
 - ☐ 2. 255
 - ☐ 3. 252
 - ☒ 4. 256

- Q.5 The given bar graph shows the number of mobiles (in 100) sold by companies AA1, BB2, CC3 and DD4 in 2021, 2022 and 2023. Study the graph and answer the question based on it.



Which company sold the least number of mobiles across all the years?

- Ans
- ☐ 1. DD4
 - ☐ 2. CC3
 - ☐ 3. AA1
 - ☒ 4. BB2

- Q.6 20% of a number is more than 20% of 570 by 190. The number is:4507

- Ans
- ☒ 1. 1520
 - ☐ 2. 1570
 - ☐ 3. 1370
 - ☐ 4. 1620

- Q.7 A town has a population of 20,000. If the population grows at a rate of 5% per year, what will be the population after one year?

- Ans
- ☒ 1. 21,000
 - ☐ 2. 19,000
 - ☐ 3. 20,100
 - ☐ 4. 20,500

- Q.8 A grocer purchased 80 kg of tea powder at the cost of ₹800 per kg. He mixed it with 120 kg tea powder which costs ₹1,200 per kg. At what price should he sell the mixture (in kg) to get a gain of 15%?

- Ans
- ☐ 1. ₹1,150
 - ☐ 2. ₹1,190
 - ☒ 3. ₹1,196
 - ☐ 4. ₹1,120

- Q.9 The mean monthly salary of 12 workers in a company is ₹13,560. One more worker with monthly salary ₹13,573 has also been taken into consideration. What is the mean monthly salary of 13 workers?

- Ans
- ☐ 1. ₹13,550
 - ☐ 2. ₹13,560
 - ☒ 3. ₹13,561
 - ☐ 4. ₹13,555

Q.10 Keshav finds that sales increased by 12% in the first year and by 20% in the second year. If the current sales are ₹1,34,400, what were the sales (in ₹) two years ago?

- Ans
- ☐ 1. 1,20,000
 - ☐ 2. 80,000
 - ☒ 3. 1,00,000
 - ☐ 4. 1,12,000

Q.11 The given table shows the number of employees working in various departments of company ABC Ltd. over several years. Study the following table and answer the question based on it.

Departments/ Years	Research	Marketing	Production	Account	Finance
2017	45	50	50	45	50
2018	40	45	75	60	45
2019	55	55	85	55	40
2020	60	60	115	70	55
2021	65	65	130	40	60
2022	45	70	150	75	65

In which department did the number of employees remain the same during the years 2017 and 2022?

- Ans
- ☐ 1. Account
 - ☐ 2. Marketing
 - ☐ 3. Finance
 - ☒ 4. Research

Q.12 $\frac{1}{20}$ is what percentage of $\frac{1}{90}$?⁶⁰⁶²

- Ans
- ☒ 1. 450%
 - ☐ 2. 465%
 - ☐ 3. 900%
 - ☐ 4. 460%

Q.13 In an experiment, the focal length of a convex lens was measured five times as 10.1 cm, 10.2 cm, 9.8 cm, 10.0 cm and 10.2 cm. Find the average focal length (in cm) (rounded off to one decimal place).

- Ans
- ☐ 1. 10.2 cm
 - ☐ 2. 10.0 cm
 - ☐ 3. 9.9 cm
 - ☒ 4. 10.1 cm

Q.14 Simplify the following expression.

$$135 \div 9 + 72 \div 12 \times 8 - 16 \text{ of } 6 + 8 \times 8$$

- Ans
- ☐ 1. 34
 - ☒ 2. 31
 - ☐ 3. 32
 - ☐ 4. 33

Q.15 A factory produces defective items at a rate of 6 for every 47 good items. If the total production in a day is 21,412 items, what is the total production of defective items from the factory in 7 days?

- Ans**
- ☐ 1. 16,918 items
 - ☒ 2. 16,968 items
 - ☐ 3. 16,948 items
 - ☐ 4. 16,998 items

Q.16 Find the simple interest (in ₹) on ₹1,500 at 4% per month for 11 months.

- Ans**
- ☐ 1. 75
 - ☒ 2. 660
 - ☐ 3. 110
 - ☐ 4. 55

Q.17 If the H.C.F. of x and y is p and $y = pq$, then find the L.C.M. of x and y .

- Ans**
- ☒ 1. xq
 - ☐ 2. yq
 - ☐ 3. pq
 - ☐ 4. xy

Q.18 In a test, B got 54 marks while A got 75 marks, out of 80 maximum marks. What approximate percentage of B's marks was A's marks?

- Ans**
- ☒ 1. 138.89%
 - ☐ 2. 80%
 - ☐ 3. 72%
 - ☐ 4. 93.75%

Q.19 Find the difference between Simple Interest and Compound Interest on ₹5,000 at 10% per annum for 2 years.

- Ans**
- ☐ 1. ₹25
 - ☐ 2. ₹75
 - ☐ 3. ₹40
 - ☒ 4. ₹50

Q.20 The value of a car worth ₹62,50,000 is depreciating at the rate of 20% per annum. In how many years will its value be reduced to ₹25,60,000?

- Ans**
- ☒ 1. 4
 - ☐ 2. 5
 - ☐ 3. 6
 - ☐ 4. 3

Section : Arithmetical and Numerical Ability1

Q.1 Pipes P and Q can fill a tank in 10 hours and 15 hours, respectively. Pipe R can empty the full tank in 30 hours. All the three pipes are opened together, but R is closed 4 hours before the tank is filled. In how many hours in total is the tank filled?

- Ans**
- ☐ 1. 5
 - ☒ 2. $6\frac{1}{2}$
 - ☐ 3. $5\frac{1}{2}$
 - ☐ 4. 6

Q.2 Hitesh can do $\frac{1}{7}$ th of a piece of work in 13 days and Jitesh can do $\frac{1}{9}$ th of a piece of work in 13 days. Find the number of days taken to complete the work if both work together. (Round off your answer to one decimal place.)

- Ans
- ☐ 1. 42.4
 - ☐ 2. 44.6
 - ☐ 3. 48.2
 - ☒ 4. 47.4

Q.3 Two liquids, A and B, are mixed in the ratio 3: 2 to form a solution. 20 liters of this solution is taken out and replaced with 20 liters of B. The new ratio becomes 3:7. Find the total quantity of the solution.

- Ans
- ☒ 1. 40 liters
 - ☐ 2. 30 liters
 - ☐ 3. 50 liters
 - ☐ 4. 60 liters

Q.4 Find the volume of a sphere of radius 21 cm. (Use $\pi = \frac{22}{7}$)

- Ans
- ☐ 1. 37708 cm³
 - ☒ 2. 38808 cm³
 - ☐ 3. 38980 cm³
 - ☐ 4. 38602 cm³

Q.5 Suresh completed a certain journey by a four-wheeler. If he covered 20% of the distance at the speed of 60 km/h, 50% of the distance at 120 km/h, and the remaining distance at 40 km/h, then find his average speed (rounded off to 2 decimal places).

- Ans
- ☐ 1. 75.56 km/h
 - ☐ 2. 84.34 km/h
 - ☐ 3. 78.33 km/h
 - ☒ 4. 66.67 km/h

Q.6 A train runs at a speed of 72 km/h in the first 10 minutes and 60 km/h in the next 15 minutes. What is the average speed of the train?

- Ans
- ☐ 1. 65.4 km/hr
 - ☐ 2. 68.4 km/hr
 - ☐ 3. 60.8 km/hr
 - ☒ 4. 64.8 km/hr

Q.7 When the selling price of a music system is ₹18,000, the shopkeeper incurs a loss of 10%. At what selling price (in ₹) should the music system be sold to make a profit of 17%?

- Ans
- ☒ 1. 23,400
 - ☐ 2. 23,200
 - ☐ 3. 23,600
 - ☐ 4. 23,800

Q.8 The marked price of a I-pad is ₹90,000. What is the selling price of the I-pad after giving two successive discounts of 10% and 20% on it?

- Ans
- ☐ 1. ₹65,600
 - ☒ 2. ₹64,800
 - ☐ 3. ₹66,400
 - ☐ 4. ₹63,900

Q.9 What is the total surface area of a cuboid if its length is 9 cm, breadth is 8 cm and height is 10 cm?

- Ans
- ☐ 1. 480 cm²
 - ☒ 2. 484 cm²
 - ☐ 3. 454 cm²
 - ☐ 4. 458 cm²

Q.10 Two trains, respectively 200 m and 160 m in length, are running in the same direction. The first train runs at the rate of 51 m/s and the second one runs at the rate of 42 m/s. How long will the faster train, coming from behind, take to completely cross the slower one?

- Ans
- ☐ 1. 52 seconds
 - ☐ 2. 45 seconds
 - ☐ 3. 48 seconds
 - ☒ 4. 40 seconds

Q.11 If $\frac{P}{63} = \frac{252}{P}$, and $P > 0$, find the value of P.

- Ans
- ☒ 1. 126
 - ☐ 2. 114
 - ☐ 3. 145
 - ☐ 4. 122

Q.12 If the total surface area of cube is 1014 cm², then find the volume of cube (in cm³).

- Ans
- ☐ 1. 3256
 - ☒ 2. 2197
 - ☐ 3. 1728
 - ☐ 4. 2267

Q.13 The printed price of a mattress is ₹5000. The shopkeeper allows a discount of 10%, but there is a successive discount of 20% on paying via cash. What is the selling price (in ₹) of the mattress if the customer is paying through cash?

- Ans
- ☐ 1. 3550
 - ☒ 2. 3600
 - ☐ 3. 3500
 - ☐ 4. 3650

Q.14 Jaydeep went to another town such that he covered 120 km by a car going at 30 km/hr and he covered 40 km by a train, going at 50 km/hr. What was his average speed (rounded off to two decimal places) during the whole journey?

- Ans
- ☒ 1. 33.33 km/hr
 - ☐ 2. 41.03 km/hr
 - ☐ 3. 36.67 km/hr
 - ☐ 4. 43.33 km/hr

Q.20 The Dhauladhar and the Mahabharat ranges are part of which mountain?

- Ans**
- ☒ 1. The Himalayas
 - ☐ 2. Aravali
 - ☐ 3. Western Ghats
 - ☐ 4. Vindhyachal

Section : **Arithmetical and Numerical Ability**

Q.1 3% of a number is what percentage of 3% of the same number?5906

- Ans**
- ☒ 1. 100%
 - ☐ 2. 110%
 - ☐ 3. 25%
 - ☐ 4. 50%

Q.2 A man sells a watch for ₹600 and incurs a loss. If he had sold it for ₹1,070, his gain would have been four times the original loss. What is the cost price (in ₹) of the watch?

- Ans**
- ☐ 1. 712
 - ☐ 2. 672
 - ☐ 3. 728
 - ☒ 4. 694

Q.3 A biological sample doubles its population every 3 years. If it starts at 50, what will its population be after 6 years?

- Ans**
- ☐ 1. 100
 - ☐ 2. 150
 - ☐ 3. 300
 - ☒ 4. 200

Q.4 Find the positive value of x. $\sqrt{144} + \sqrt{36 + x^2} = 22$

- Ans**
- ☒ 1. x = 8
 - ☐ 2. x = 9
 - ☐ 3. x = 5
 - ☐ 4. x = 4

Q.5 The present cost of a hospital is ₹130195. After a year, its cost increased to ₹177474. The percentage increase (rounded off to the nearest integer) in the cost of the hospital is:

- Ans**
- ☐ 1. 44
 - ☐ 2. 46
 - ☐ 3. 42
 - ☒ 4. 36

Q.6 Find the compound interest, compounded annually on ₹4000 for 3 years at 5% per annum for the first year, 6% for the second year, and 7% for the third year.

- Ans**
- ☐ 1. ₹715.88
 - ☐ 2. ₹883.44
 - ☐ 3. ₹815.46
 - ☒ 4. ₹763.64

Q.7

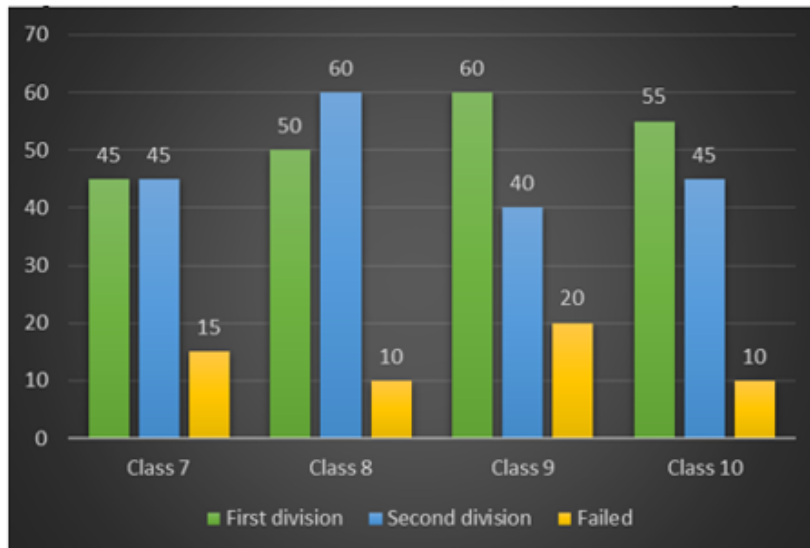
Simplify: $\frac{(5^3 \times 6^3 \times 5^3)}{(5^1 \times 6^3 \times 5^2)}$

Ans

- ☐ 1. 132
- ☐ 2. 124
- ☒ 3. 125
- ☐ 4. 135

Q.8

The given chart shows the number of students in Class 7, Class 8, Class 9, and Class 10 who got first division, second division, and failed in the final examinations. Study the bar graph and answer the question based on it.



Which class has the maximum number of students who passed?

Ans

- ☐ 1. Class 10
- ☐ 2. Class 7
- ☐ 3. Class 9
- ☒ 4. Class 8

Q.9

Ram buys oranges at the rate of ₹24 and sells them at the rate of ₹25 for ₹225. What is his percentage profit?

Ans

- ☐ 1. 4%
- ☐ 2. 6%
- ☐ 3. 10%
- ☒ 4. 8%

Q.10

There are 62 members in group A, 23 members in group B, and 52 members in group C. All the members of these groups went to a restaurant. The average amount spent per member in groups A, B, and C is ₹173, ₹352, and ₹107, respectively. Find the overall average amount spent per member (in ₹).

Ans

- ☐ 1. 177
- ☒ 2. 178
- ☐ 3. 181
- ☐ 4. 182

Q.11 In what ratio should milk costing ₹26 per liter be mixed with milk costing ₹67 per liter so that the mixture costs ₹35.50 per liter?

- Ans
- ☐ 1. 65:19
 - ☐ 2. 67:19
 - ☒ 3. 63:19
 - ☐ 4. 61:19

Q.12 Find the simple interest (in ₹) on ₹1,500 at 5% per month for 2 months.

- Ans
- ☐ 1. 25
 - ☐ 2. 12.50
 - ☐ 3. 37.50
 - ☒ 4. 150

Q.13 Amit finds a 12% increase in the sales in the first year and a 20% increase in the second year. If the current sales are ₹1,42,800, what were his sales (in ₹) two years ago?

- Ans
- ☐ 1. 1,19,000
 - ☐ 2. 1,27,500
 - ☒ 3. 1,06,250
 - ☐ 4. 86,250

Q.14 In what ratio should wheat costing ₹31.5 per kg be mixed with wheat costing ₹44.5 per kg to get a mixture worth ₹36 per kg?

- Ans
- ☒ 1. 17:9
 - ☐ 2. 17:13
 - ☐ 3. 17:7
 - ☐ 4. 17:11

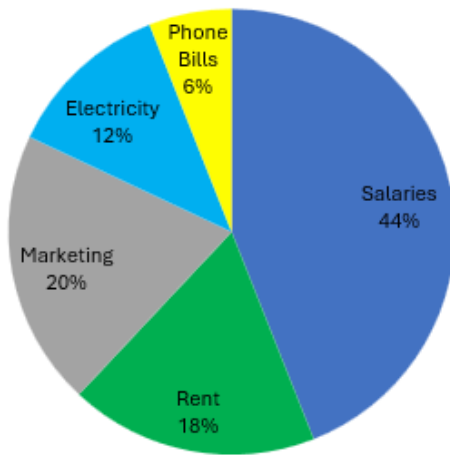
Q.15 Three bells ring at intervals of 12, 15, and 20 minutes. If they ring together at 7:20 AM, when will they next ring together?

- Ans
- ☐ 1. 8:00 AM
 - ☒ 2. 8:20 AM
 - ☐ 3. 8:30 AM
 - ☐ 4. 8:10 AM

Q.16 If $\sqrt{2} = 1.4142$, find the value of $\frac{\sqrt{2}}{2 + \sqrt{2}}$. (Rounded off to four decimal

- Ans
- ☐ 1. 0.4232
 - ☐ 2. 0.4112
 - ☐ 3. 0.3212
 - ☒ 4. 0.4143

Q.17 The given pie chart shows the annual budget of a company. Total annual budget is ₹5,68,500. Study the chart and answer the question that follows.



What is the amount allocated for salaries?

- Ans
- ☒ 1. ₹2,50,140
 - ☐ 2. ₹2,50,970
 - ☐ 3. ₹2,50,780
 - ☐ 4. ₹2,50,560

Q.18 Find the compound interest, compounded annually on ₹5,80,000 for 3 years at 5% per annum for the first year, 6% per annum for the second year, and 5% per annum for the third year.

- Ans
- ☐ 1. ₹96,189
 - ☒ 2. ₹97,817
 - ☐ 3. ₹99,456
 - ☐ 4. ₹98,232

Q.19 Atul observes a 12% increase in sales in the first year and an 18% increase in the second year. If the current sales are ₹1,65,200, what were the sales (in ₹) two years ago?

- Ans
- ☐ 1. 1,05,000
 - ☐ 2. 1,47,500
 - ☒ 3. 1,25,000
 - ☐ 4. 1,40,000

Q.20 There are 23 members in group A, 49 members in group B, and 72 members in group C. All the members of these groups went to a restaurant. The average amount spent per member in groups A, B, and C is ₹324, ₹468, and ₹352, respectively. Find the overall average amount spent per member (in ₹).

- Ans
- ☐ 1. 386
 - ☒ 2. 387
 - ☐ 3. 384
 - ☐ 4. 385

Q.1 Priyanka went to the grocery shop to purchase wheat flour. She is offered a "Buy 2, get 1 free" deal. What is the percentage of discount (rounded off to one decimal place) being offered?

- Ans**
- ☐ 1. 25.4%
 - ☒ 2. 33.3%
 - ☐ 3. 37.5%
 - ☐ 4. 20.3%

Q.2 A trader has 6450 kg of cement. He sells a part of it at 21% profit and the remaining quantity at 64% profit. If his overall gain is 46%, then what is the difference (in kg) of five-eighth of the quantity sold at 21% profit and 2.25 times the quantity sold at 64% profit?

- Ans**
- ☐ 1. 6570
 - ☐ 2. 5670
 - ☐ 3. 5760
 - ☒ 4. 6750

Q.3 A person covers a distance of 12 km, while walking at a speed of 4.5 km/h. How much distance he would cover in same time if he walks at a speed of 6 km/h?

- Ans**
- ☐ 1. 12 km
 - ☐ 2. 18 km
 - ☒ 3. 16 km
 - ☐ 4. 14 km

Q.4 Pipes I and II can fill a tank in 4 hours and 6 hours, respectively. Pipe III can empty the tank in 12 hours. If all three pipes are opened when the tank is empty, find the number of hours required to fill the tank.

- Ans**
- ☐ 1. 5
 - ☐ 2. 7
 - ☒ 3. 3
 - ☐ 4. 8

Q.5 Find the fourth proportional to 1.25, 4.5, and 7.5.

- Ans**
- ☐ 1. 28
 - ☐ 2. 24
 - ☒ 3. 27
 - ☐ 4. 25

Q.6 A triangular garden has sides in the ratio 5:6:7 and its perimeter is 108 meters. What is the difference between the lengths of the longest and shortest sides?

- Ans**
- ☒ 1. 12 meters
 - ☐ 2. 30 meters
 - ☐ 3. 36 meters
 - ☐ 4. 42 meters

Q.7 The discount offer "Buy 6, get 12" is equivalent to what percentage discount?

- Ans**
- ☐ 1. 45%
 - ☒ 2. 50%
 - ☐ 3. 66%
 - ☐ 4. 60%

Q.8 If x is the fourth proportional to 7, 21, and 49, and y is the fourth proportional to 8, 24, and 72, find the value of $x + y$.

- Ans
- ☐ 1. 324
 - ☐ 2. 288
 - ☒ 3. 363
 - ☐ 4. 189

Q.9 If 30% of a number is equal to two-third of another number, what is the ratio of the first number to the second number?

- Ans
- ☒ 1. 20:9
 - ☐ 2. 22:13
 - ☐ 3. 23:11
 - ☐ 4. 10:3

Q.10 A solid sphere of radius 6.60 cm is melted and recast into smaller spheres of radius 3.20 cm. How many complete small spheres are formed?

- Ans
- ☐ 1. 9
 - ☐ 2. 7
 - ☒ 3. 8
 - ☐ 4. 6

Q.11 Three solid spheres of radii 18 cm, 19 cm and 21 cm are melted to form a larger solid sphere. Find the radius of the new sphere.

- Ans
- ☐ 1. 32 cm
 - ☒ 2. 28 cm
 - ☐ 3. 25 cm
 - ☐ 4. 30 cm

Q.12 The mean proportional between $(5 + 2\sqrt{3})$ and $(10 - 4\sqrt{3})$ is:

- Ans
- ☐ 1. $\sqrt{22}$
 - ☐ 2. $\sqrt{19}$
 - ☐ 3. $\sqrt{29}$
 - ☒ 4. $\sqrt{26}$

Q.13 The percentage profit earned by selling an article for ₹2820 is equal to the percentage loss incurred by selling the same article for ₹2380. At what price (in ₹) should the article be sold to make 40% profit?

- Ans
- ☐ 1. 3560
 - ☒ 2. 3640
 - ☐ 3. 3540
 - ☐ 4. 3460

Q.14 Two trains of lengths 76 m and 92 m are moving in the same direction at 10 m/s and 6 m/s respectively. Find the time taken by the faster train to cross the slower train.

- Ans
- ☐ 1. 43 seconds
 - ☐ 2. 41 seconds
 - ☒ 3. 42 seconds
 - ☐ 4. 40 seconds

Q.14 Which of the following Articles of the Constitution of India mentions that the law declared by the Supreme Court of India shall be binding on all courts?

- Ans**
- ☐ 1. Article 143
 - ☐ 2. Article 136
 - ☐ 3. Article 139
 - ☒ 4. Article 141

Q.15 Which among the following is one of the primary causes for the milk curdling when lemon juice is added?

- Ans**
- ☐ 1. High temperature causes curdling
 - ☐ 2. Sugar changes milk structure
 - ☒ 3. The acid in lemon juice coagulates milk proteins
 - ☐ 4. Salt breaks down proteins

Q.16 Which language was the last to receive Classical Language status in India before the five new additions made by the Union Cabinet in October 2024?

- Ans**
- ☐ 1. Telugu
 - ☒ 2. Odia
 - ☐ 3. Sanskrit
 - ☐ 4. Malayalam

Q.17 The Directive Principles of State Policy are included in which part of the Indian Constitution?

- Ans**
- ☐ 1. Part VI
 - ☐ 2. Part VIII
 - ☒ 3. Part IV
 - ☐ 4. Part II

Q.18 Which of the following food sources is the richest in iron?

- Ans**
- ☐ 1. Rice
 - ☒ 2. Spinach
 - ☐ 3. Milk
 - ☐ 4. Apple

Q.19 'Urban heat Island' is a phenomenon where:

- Ans**
- ☐ 1. urban areas have less traffic congestion than surrounding rural areas.
 - ☐ 2. urban areas have lower air pollution levels than surrounding rural areas
 - ☒ 3. urban areas experience significantly higher temperatures than surrounding rural areas.
 - ☐ 4. urban areas receive more rainfall than surrounding rural areas.

Q.20 According to 2011 census of India, which state recorded a negative decadal growth rate of population?

- Ans**
- ☐ 1. Himachal Pradesh
 - ☐ 2. Kerala
 - ☐ 3. Sikkim
 - ☒ 4. Nagaland

Q.1 $\frac{1}{20}$ is what percentage of $\frac{2}{20}$?⁶⁰⁶⁰

- Ans
- ☐ 1. 65%
 - ☐ 2. 100%
 - ☒ 3. 50%
 - ☐ 4. 60%

Q.2 How long will it take for ₹6,000 to become ₹10,368 at 40% per annum compound interest, compounded half-yearly?

- Ans
- ☐ 1. 1 year
 - ☒ 2. 1 year 6 months
 - ☐ 3. 2 years 6 months
 - ☐ 4. 2 years

Q.3 The HCF and LCM of two numbers are 5 and 255, respectively. If one of the numbers is 85, find the other one.

- Ans
- ☐ 1. 60
 - ☒ 2. 15
 - ☐ 3. 25
 - ☐ 4. 35

Q.4 The six-digit number 3767A2 is divisible by 11. Find the value of A.

- Ans
- ☒ 1. 7
 - ☐ 2. 4
 - ☐ 3. 5
 - ☐ 4. 9

Q.5 The population of Jhumri village increases by 15% in the first year, it increases by 20% in the second year and due to mass exodus, it decreases by 5% in the third year. What will be its population after 3 years, if today it is 1,00,000?

- Ans
- ☐ 1. 1,21,500
 - ☒ 2. 1,31,100
 - ☐ 3. 1,25,600
 - ☐ 4. 1,27,800

Q.6 A number when increased by 100%, gives 3880. The number is:⁶¹³²

- Ans
- ☐ 1. 970
 - ☐ 2. 5820
 - ☐ 3. 3880
 - ☒ 4. 1940

Q.7 There are 84 members in group A, 56 members in group B, and 66 members in group C. All the members of these groups went to a restaurant. The average amount spent per member in groups A, B, and C is ₹231, ₹447, and ₹338, respectively. Find the overall average amount spent per member (in ₹).

- Ans
- ☐ 1. 322
 - ☒ 2. 324
 - ☐ 3. 327
 - ☐ 4. 325

Q.8 What is the difference between the compound interests on a sum of ₹50,000 for 1 year at 10% per annum, when compounded yearly and half-yearly?

- Ans
- ☐ 1. ₹111
 - ☐ 2. ₹120
 - ☐ 3. ₹129
 - ☒ 4. ₹125

Q.9 Evaluate:

$$\sqrt{153 - \sqrt{74 + \sqrt{44 + \sqrt{25}}}}$$

- Ans
- ☐ 1. 11
 - ☒ 2. 12
 - ☐ 3. 10
 - ☐ 4. 9

Q.10 20% of a number is more than 20% of 570 by 250. The number is

- Ans
- ☐ 1. 1920
 - ☐ 2. 1670
 - ☐ 3. 1870
 - ☒ 4. 1820

Q.11 Number of Books Sold by a Store Over 5 Months



In which month was the number of books sold the highest, and what was the difference between the highest and the lowest sale months?

- Ans
- ☐ 1. January, 70
 - ☒ 2. April, 80
 - ☐ 3. February, 50
 - ☐ 4. May, 60

Q.12 Find the simple interest (in ₹) on ₹1,500 at 5% per month for 8 months.

- Ans
- ☐ 1. 50
 - ☐ 2. 75
 - ☐ 3. 100
 - ☒ 4. 600

Q.13 Two bikes were sold for ₹3,990 each, gaining 4% on one and losing 4% on the other. What is the gain or loss percentage on the whole transaction?

- Ans**
- ☒ 1. 0.16% loss
 - ☐ 2. 1.6% loss
 - ☐ 3. 0.016% gain
 - ☐ 4. 16% gain

Q.14 There are 36 members in group A, 63 members in group B, and 18 members in group C. All the members of these groups went to a restaurant. The average amount spent per member in groups A, B, and C is ₹246, ₹487, and ₹293 respectively. Find the overall average amount spent per member (in ₹).

- Ans**
- ☐ 1. 387
 - ☐ 2. 385
 - ☐ 3. 381
 - ☒ 4. 383

Q.15 Anand purchased an item and incurred ₹133 in repair expenses. Subsequently, he sold it to Bharath with a 36% profit. Eventually, Bharath sold the item for ₹6,732, making a 55% loss. What was the cost (in ₹) of the item for Anand just before selling it to Bharath?

- Ans**
- ☒ 1. 11,000
 - ☐ 2. 10,997
 - ☐ 3. 11,001
 - ☐ 4. 10,999

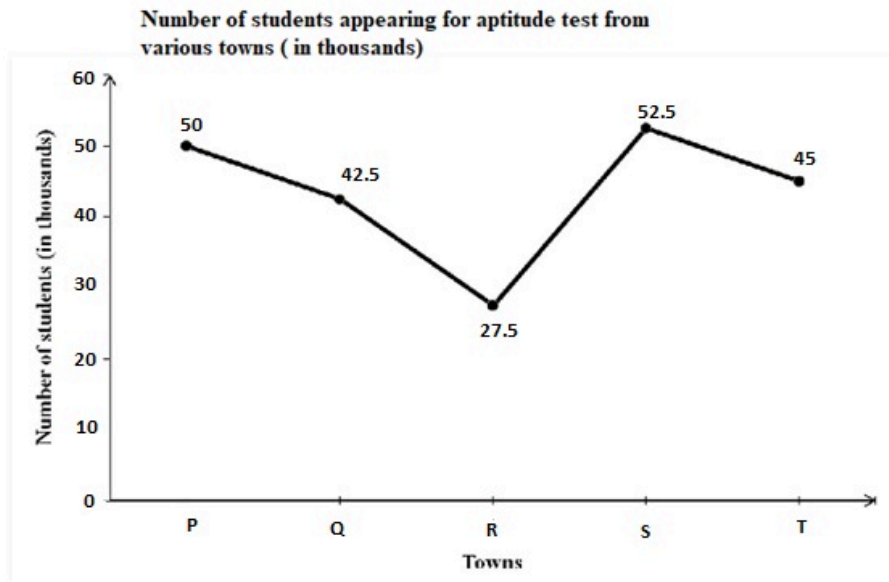
Q.16 A container holds 30 liters of a mixture of milk and water in the ratio 7:3. If 10 liters of this mixture is removed and replaced with pure milk, what will be the new ratio of milk to water in the container?

- Ans**
- ☐ 1. 2:1
 - ☐ 2. 5:3
 - ☐ 3. 9:1
 - ☒ 4. 4:1

Q.17 A milkman mixes 5 litres of milk costing ₹50 per litre with 5 litres of milk costing ₹60 per litre. What is the price per litre of the resulting mixture?

- Ans**
- ☒ 1. ₹55
 - ☐ 2. ₹56
 - ☐ 3. ₹52
 - ☐ 4. ₹54

Q.18 Study the following line graph carefully and answer the question given below.



What is average number of students appearing for the aptitude test from P, R, S and T the towns together?

- Ans
- ☒ 1. 43750
 - ☐ 2. 43725
 - ☐ 3. 43700
 - ☐ 4. 43775

Q.19 The number 695476 is divisible by:

- Ans
- ☒ 1. 76
 - ☐ 2. 73
 - ☐ 3. 82
 - ☐ 4. 93

Q.20 किसी संख्या का 20%, 570 के 20% से 240 अधिक है, तो वह संख्या ज्ञात कीजिए।

- Ans
- ☐ 1. 1820
 - ☐ 2. 1620
 - ☒ 3. 1770
 - ☐ 4. 1870

Section : Arithmetical and Numerical Ability1

Q.1 Two taps can separately fill a cistern in 10 minutes and 15 minutes respectively and when the waste pipe is open, they can together fill it in 18 minutes. The waste pipe can empty the full cistern in ?

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- Ans
- ☐ 1. 8 min
 - ☒ 2. 9 min
 - ☐ 3. 6 min
 - ☐ 4. 7min

Q.2 Suman covers a certain distance by car, driving at 25 km/h, and he returns back to the starting point riding on a scooter at a speed of 20 km/h. Find the average speed for the whole journey.

- Ans
- ☒ 1. $22\frac{2}{9}$ km/h
 - ☐ 2. $21\frac{2}{9}$ km/h
 - ☐ 3. $20\frac{2}{9}$ km/h
 - ☐ 4. $19\frac{2}{9}$ km/h

Q.3 If $\frac{a}{b} = \frac{3}{4}$ and $\frac{b}{c} = \frac{5}{6}$, what is the value of $\frac{a}{c}$?

- Ans
- ☐ 1. $\frac{6}{7}$
 - ☐ 2. $\frac{7}{8}$
 - ☐ 3. $\frac{5}{6}$
 - ☒ 4. $\frac{5}{8}$

Q.4 Smart Bazaar offers "Buy 3, get 2 free" on household items. What is the net percentage discount being offered by the store?

- Ans
- ☐ 1. 33.33%
 - ☐ 2. 35%
 - ☒ 3. 40%
 - ☐ 4. 44.45%

Q.5 A vendor acquires goods at ₹40 per piece. He sells them following a pattern: the first piece is sold for ₹3, the second for ₹6, the third for ₹9, and so on, with an increment of ₹3 for each subsequent piece. What is the minimum number of pieces he must sell to make a profit of at least 20%?

- Ans
- ☐ 1. 29
 - ☐ 2. 32
 - ☐ 3. 30
 - ☒ 4. 31

Q.6 A car covers the first 51 km of its journey in 40 minutes and covers the remaining 33 km in the next 30 minutes. What is the average speed (in m/sec) of the car?

- Ans
- ☐ 1. 16
 - ☐ 2. 24
 - ☒ 3. 20
 - ☐ 4. 28

Q.7 A solid marble cuboid whose length, breadth and height are 6 m, 4 m and 4 m, respectively, is cut into identical cubes of edge length 2 m. During cutting, 25% of the total marble is wasted. The density of marble is 1000 kg per m³ and marble costs ₹8 per kg. After cutting, each cube is polished on all faces at ₹5 per m², packed and transported at ₹1000 per cube and each finished cube is sold at 20% profit on total cost. Find the total profit earned from all cubes.

- Ans**
- ☐ 1. ₹1,56,348
 - ☐ 2. ₹1,58,050
 - ☒ 3. ₹1,55,616
 - ☐ 4. ₹1,59,040

Q.8 Aman can do $\frac{1}{4}$ th of a piece of work in 10 days and Chaman can do $\frac{1}{5}$ th of a piece of work in 10 days. Find the number of days taken to complete the work if both work together. (Round the answer to one decimal place.)

- Ans**
- ☐ 1. 30.7
 - ☐ 2. 21.1
 - ☒ 3. 27.1
 - ☐ 4. 24.1

Q.9 A boat takes one hour more to go 48 km upstream than to travel the same distance downstream. If the speed of the stream is 2 km/h, find the time taken (in minutes) by the boat to go 18 km upstream when the speed of the boat in still water is reduced by 2 km/h.

- Ans**
- ☐ 1. 121
 - ☒ 2. 108
 - ☐ 3. 90
 - ☐ 4. 135

Q.10 If a shopkeeper gives you eight items for the price of five items, then what is the percentage of discount being offered here?

- Ans**
- ☐ 1. 32.5%
 - ☒ 2. 37.5%
 - ☐ 3. 28.5%
 - ☐ 4. 42.5%

Q.11 A cistern can be filled by one tap in 9 hours, and by another in 6 hours. How long will it take to fill the cistern if both taps are opened together?

- Ans**
- ☒ 1. 3 hour 36 minutes
 - ☐ 2. 3 hour 16 minutes
 - ☐ 3. 3 hour 20 minutes
 - ☐ 4. 3 hour 24 minutes

Q.12 What is the mean proportional between 2 and 8?

- Ans**
- ☒ 1. 4
 - ☐ 2. 7
 - ☐ 3. 6
 - ☐ 4. 2

Q.13 A square and a rectangle have the same perimeter. The length of the side of the square is 24 m and the breadth of the rectangle is 16 m. Find the area of the rectangle.

- Ans
- ☐ 1. 320 m²
 - ☐ 2. 488 m²
 - ☒ 3. 512 m²
 - ☐ 4. 580 m²

Q.14 The mean proportional between $(6x + 1)$ and $(19x + 5)$ is 45. Find the positive value of x .

- Ans
- ☐ 1. 3
 - ☐ 2. 7
 - ☐ 3. 8
 - ☒ 4. 4

Q.15 Two trains, respectively 100 m and 80 m in length, are running in opposite directions. The first train runs at the rate of 36 km/hr and the second one runs at the rate of 54 km/hr. How long will they take to cross each other?

- Ans
- ☐ 1. 5.8 seconds
 - ☐ 2. 7.9 seconds
 - ☐ 3. 6.6 seconds
 - ☒ 4. 7.2 seconds

Q.16 If an article is sold for ₹4,450 at a loss of 11%, what should be its selling price to earn a profit of 20%?

- Ans
- ☒ 1. ₹6,000
 - ☐ 2. ₹4,500
 - ☐ 3. ₹5,000
 - ☐ 4. ₹5,500

Q.17 The radius of the base of a cylinder is increased from 5 cm to 25 cm, but its curved surface area remains unchanged. If the initial height of the cylinder was 5 cm, what will be its new height?

- Ans
- ☒ 1. 1 cm
 - ☐ 2. 3 cm
 - ☐ 3. 4 cm
 - ☐ 4. 2.5 cm

Q.18 Two pipes can fill a cistern in 5 hours and 6 hours, respectively, and a waste pipe can empty it in 3 hours. If all the three pipes are kept open, then the cistern will be filled in:

- Ans
- ☐ 1. 15 hours
 - ☒ 2. 30 hours
 - ☐ 3. 18 hours
 - ☐ 4. 33 hours

Q.19 If the fourth proportional to $(3x - 2)$, $(2x + 1)$, and $(7x + 2)$ is 27, find x , given that $x > 1$.

- Ans
- ☐ 1. 3
 - ☐ 2. 2
 - ☐ 3. 7
 - ☒ 4. 4

Q.18 Which UNESCO site in Tamil Nadu is known for its shore temples and ancient sculptures?

- Ans**
- ☐ 1. Brihadeeswarar Temple
 - ☐ 2. Kanchipuram
 - ☒ 3. Mahabalipuram
 - ☐ 4. Meenakshi Temple

Q.19 The Himalayan mountain range passes through which among the following states?

- Ans**
- ☐ 1. Tamil Nadu
 - ☒ 2. Himachal Pradesh
 - ☐ 3. Odisha
 - ☐ 4. Gujarat

Q.20 Which of these is part of the Peninsular Plateau?

- Ans**
- ☐ 1. Brahmaputra Valley
 - ☒ 2. Satpura Range
 - ☐ 3. Kashmir Valley
 - ☐ 4. Ganga Plains

Section : **Arithmetical and Numerical Ability**

Q.1 In a test, B got 50 marks while A got 80 marks, out of 120 maximum marks. What percentage of B's marks was A's marks?

- Ans**
- ☐ 1. 120%
 - ☐ 2. 62.5%
 - ☒ 3. 160%
 - ☐ 4. 66.67%

Q.2 A manufacturer sells a product to a wholesaler at a profit of 47%. The wholesaler, in turn, sells it to a retailer at a profit of 60%, and the retailer sells it to a customer at a profit of 25%. If the customer pays ₹441, find the cost price (in ₹) for the manufacturer.

- Ans**
- ☐ 1. ₹147
 - ☐ 2. ₹152
 - ☐ 3. ₹149
 - ☒ 4. ₹150

- Q.3 The given table shows the marks obtained by four students in five subjects. Maximum marks for each subject are 100. Study the following table and answer the question based on it.

Subject	English	Hindi	Maths	Science	Arts
Priya	80	90	75	90	90
Parul	85	100	80	85	95
Priyanka	90	95	70	80	80
Preeti	95	100	65	90	85

What is the average percentage marks obtained by all students in Arts?

- Ans
- ☐ 1. 92%
 - ☐ 2. 78%
 - ☒ 3. 87.5%
 - ☐ 4. 82.5%

- Q.4 The population of a city was 1,50,000 in the year 2005. During the next year, it increased by 12%, but due to an epidemic, it decreased by 8% in the following year. What was its population in the year 2007?

- Ans
- ☐ 1. 1,62,300
 - ☐ 2. 1,52,680
 - ☒ 3. 1,54,560
 - ☐ 4. 1,65,560

- Q.5 A book costs ₹7,200. The price of this book first decreased by 18%, and after a month, the price increased by 12% of the new price. What is the final price of the book?

- Ans
- ☐ 1. ₹6,002.48
 - ☐ 2. ₹6,062.48
 - ☒ 3. ₹6,612.48
 - ☐ 4. ₹6,600.48

- Q.6 20% of a number is more than 20% of 580 by 150. The number is

- Ans
- ☐ 1. 1180
 - ☐ 2. 1380
 - ☒ 3. 1330
 - ☐ 4. 1430

- Q.7 Simplify: $\sqrt{561 + \sqrt{209 + \sqrt{302 - 46}}}$

- Ans
- ☒ 1. 24
 - ☐ 2. 22
 - ☐ 3. 26
 - ☐ 4. 28

Q.8 The average of 13 numbers is 21. If each number is multiplied by 6, then what will the new average be?

- Ans
- ☐ 1. 6
 - ☐ 2. 13
 - ☒ 3. 126
 - ☐ 4. 21

Q.9 Study the following table and answer the question based on it.
The given table shows the number of units of a product manufactured and sold by a company over six years.

Years	Number of units manufactured (in 1000)	Number of units Sold (in 1000)
2013	3550	2250
2014	3450	3210
2015	5560	2560
2016	5640	2800
2017	5850	3650
2018	4250	3250

The ratio of the total number of units sold in 2013 and 2018 to the number of units manufactured in 2017 is:

- Ans
- ☐ 1. 121:129
 - ☒ 2. 110:117
 - ☐ 3. 112:117
 - ☐ 4. 110:119

Q.10 The population of a town is 50,000. It decreases at the rate of 5% per annum. What will be the population after 2 years?

- Ans
- ☐ 1. 43,920
 - ☐ 2. 46,920
 - ☒ 3. 45,125
 - ☐ 4. 44,920

Q.11 If $x = \sqrt{1^2 + 2^2 + 3^2 + 4^2 + 5^2}$ and $y = \sqrt{1 + 2 + 3 + 4}$, then $\sqrt{x^2 + y^2}$

- Ans
- ☒ 1. 8
 - ☐ 2. 7
 - ☐ 3. 6
 - ☐ 4. 5

Q.12 In what ratio must tea costing ₹121/kg be mixed with tea costing ₹151/kg to obtain a mixture worth ₹136/kg?

- Ans
- ☐ 1. 4:3
 - ☐ 2. 3:5
 - ☐ 3. 1:2
 - ☒ 4. 1:1

Q.13 The HCF and LCM of two numbers are 76 and 456, respectively. If one of the numbers is 152, find the other one.

- Ans
- ☐ 1. 152
 - ☐ 2. 112
 - ☐ 3. 76
 - ☒ 4. 228

Q.14 A student scored 75, 80, and 85 in three subjects, each carrying different weightages of 2, 3, and 5, respectively. What is the weighted average score?

- Ans
- ☐ 1. 83.5
 - ☐ 2. 80
 - ☒ 3. 81.5
 - ☐ 4. 85

Q.15 Find the simple interest (in ₹) on ₹1,500 at 5% per month for 5 months.

- Ans
- ☐ 1. 31.25
 - ☐ 2. 62.50
 - ☐ 3. 125
 - ☒ 4. 375

Q.16 The average of 13 numbers is 21. If each number is multiplied by 8, then what will the new average be?

- Ans
- ☒ 1. 168
 - ☐ 2. 8
 - ☐ 3. 21
 - ☐ 4. 13

Q.17 20% of a number is more than 20% of 570 by 220. The number is:4504

- Ans
- ☐ 1. 1720
 - ☒ 2. 1670
 - ☐ 3. 1520
 - ☐ 4. 1770

Q.18 Evaluate: $(-40) + (-11) \div (-3) \times 6$

- Ans
- ☐ 1. -20
 - ☐ 2. -19
 - ☒ 3. -18
 - ☐ 4. -21

Q.19 The population of a town is 48,000 and increases by 3% due to births and 2% due to migration every year. How much will the population increase during the third year?

- Ans
- ☒ 1. 2,646
 - ☐ 2. 2,656
 - ☐ 3. 2,516
 - ☐ 4. 2,556

Q.20 A manufacturer sells a product to a wholesaler at a profit of 40%. The wholesaler, in turn, sells it to a retailer at a profit of 25%, and the retailer sells it to a customer at a profit of 25%. If the customer pays ₹140, find the cost price (in ₹) for the manufacturer.

- Ans**
- ☒ 1. ₹63
 - ☒ 2. ₹64
 - ☒ 3. ₹62
 - ☒ 4. ₹67

Section : Arithmetical and Numerical Ability1

Q.1 Determine the equivalent single discount that is equal to successive discounts of 12%, 13%, and 14%. (Round off your answer to two decimal places.)

- Ans**
- ☒ 1. 39.39%
 - ☒ 2. 33.33%
 - ☒ 3. 36.36%
 - ☒ 4. 34.16%

Q.2 A hollow spherical shell has an outer radius of 14 cm and an inner radius of 7 cm. What is the volume (in cm^3 , rounded off to the nearest integer) of material required to make the shell? (Use $\pi = 22/7$)

- Ans**
- ☒ 1. 10,261
 - ☒ 2. 11,261
 - ☒ 3. 11,061
 - ☒ 4. 10,061

Q.3 Priya gets a 44% discount on a grinder whose marked price is ₹2500. She receives a further 13% discount on the reduced price for paying by credit card. How much does she pay (in ₹)?

- Ans**
- ☒ 1. 1218
 - ☒ 2. 1219
 - ☒ 3. 1215
 - ☒ 4. 1220

Q.4 In a school, a tank is filled by two pipes L and M in 80 minutes and 40 minutes, respectively. How many minutes will it take to fill the tank from empty to full if M is used half time and then both L and M together?

- Ans**
- ☒ 1. 36 minutes
 - ☒ 2. 50 minutes
 - ☒ 3. 32 minutes
 - ☒ 4. 40 minutes

Q.5 If $A:B = 2:3$ and $B:C = 4:5$, find the value of $(A^2 + B^2):(A^2 + C^2):(B^2 + C^2)$.

- Ans**
- ☒ 1. 208:289:369
 - ☒ 2. 12:18:19
 - ☒ 3. 169:201:274
 - ☒ 4. 123:136:148

Q.6 If $a : b = 6 : 11$ and $b : c = 4 : 9$, find $a : b : c$.

- Ans
- ☐ 1. 24:44:19
 - ☐ 2. 12:22:33
 - ☒ 3. 24:44:99
 - ☐ 4. 12:22:189

Q.7 A motor car starts with a speed of 60 km/h and its speed increases for every two hours by 10 km/h. Find the average speed (in km/h) of the car over the first four hours.

- Ans
- ☐ 1. 60
 - ☒ 2. 65
 - ☐ 3. 64
 - ☐ 4. 68

Q.8 If the length, the breadth and the height of a large closed cuboidal water tank are in the ratio 6:5:4 and if its total surface area is $33,300 \text{ m}^2$, find its volume.

- Ans
- ☐ 1. 5,04,000 m^3
 - ☐ 2. 4,55,000 m^3
 - ☐ 3. 4,55,500 m^3
 - ☒ 4. 4,05,000 m^3

Q.9 The distance between two stations is 200 km. A train covers the distance and while returning it covers the distance at $\frac{3}{2}$ speed of previous speed (in km/hr) of the train?

- Ans
- ☐ 1. 44
 - ☐ 2. 46
 - ☒ 3. 48
 - ☐ 4. 42

Q.10 There are two taps to fill a tank, while a third tap to empty it. When the third tap is closed, they can fill the tank in 16 minutes and 18 minutes, respectively. If all three taps be opened, the tank is filled in 24 minutes. If the first two taps are closed, in what time can the third tap empty the tank, when it is full?

- Ans
- ☐ 1. $12\frac{4}{9}$ minutes
 - ☐ 2. $10\frac{2}{3}$ minutes
 - ☒ 3. $13\frac{1}{11}$ minutes
 - ☐ 4. $11\frac{3}{7}$ minutes

Q.11 The ratio of milk to water in a 60-litre mixture is 7:5. Find the quantity of water that needs to be added to the mixture in order to make the ratio 1:1.

- Ans
- ☐ 1. 11 litre
 - ☐ 2. 8 litre
 - ☒ 3. 10 litre
 - ☐ 4. 5 litre

Q.12 The curved surface area of a cylinder is 880 cm^2 . If the radius is 7 cm, find the height. (Use $\pi = \frac{22}{7}$)

- Ans
- ☐ 1. 22 cm
 - ☐ 2. 10 cm
 - ☐ 3. 15 cm
 - ☒ 4. 20 cm

Q.13 If x is inversely proportional to y , and $y = 4$ when $x = 2$, find the value of x , when $y = 16$.

- Ans
- ☐ 1. 2
 - ☒ 2. 0.5
 - ☐ 3. 1.5
 - ☐ 4. 1

Q.14 Harish and Vineet move towards Coimbatore, starting from IIM, Bangalore, at speeds of 80 km/h and 120 km/h, respectively. If Vineet reaches Coimbatore 100 minutes earlier than Harish, what is the distance between IIM, Bangalore and Coimbatore?

- Ans
- ☐ 1. 415 km
 - ☐ 2. 515 km
 - ☐ 3. 450 km
 - ☒ 4. 400 km

Q.15 Two pipes can fill a tank in 12 and 18 minutes, respectively, and pipe C can empty the tank 4 gallons per minute. All the three running together can fill the tank in 8 minutes. Find the capacity of the tank.

- Ans
- ☐ 1. 258 gallons
 - ☐ 2. 208 gallons
 - ☒ 3. 288 gallons
 - ☐ 4. 268 gallons

Q.16 Find the volume of a cylinder with radius 7 cm and height 10 cm. (Use $\pi = \frac{22}{7}$)

- Ans
- ☐ 1. 1320 cm^3
 - ☐ 2. 1610 cm^3
 - ☐ 3. 1510 cm^3
 - ☒ 4. 1540 cm^3

Q.17 After selling an article at a discount of 25%, the profit percentage obtained is 25%. What is the mark-up percentage (rounded off to 2 decimal places)?

- Ans
- ☐ 1. 61.25%
 - ☐ 2. 72.45%
 - ☒ 3. 66.67%
 - ☐ 4. 58.87%

Q.18 A train overtakes two people walking along a railway track. The first person walks at 9 km/hr, while the second person walks at 10.8 km/hr. The train takes 8.4 seconds and 8.5 seconds, respectively, to overtake them. What is the speed of the train if both people are walking in the same direction as that of the train?

- Ans
- ☐ 1. 148 km/hr
 - ☐ 2. 156 km/hr
 - ☐ 3. 172 km/hr
 - ☒ 4. 162 km/hr

Q.16 Which among the following Articles of the Constitution of India provides that there shall be a Council of Ministers with the Prime Minister as its head to aid and advise the President?

- Ans**
- ☐ 1. Article 78
 - ☒ 2. Article 74
 - ☐ 3. Article 76
 - ☐ 4. Article 80

Q.17 Which of the following is a financial committee?

- Ans**
- ☒ 1. Public accounts committee
 - ☐ 2. Committee on commerce
 - ☐ 3. Ethics committee
 - ☐ 4. Committee on railways

Q.18 Which of the following plant parts primarily absorbs water from the soil?

- Ans**
- ☐ 1. Stem node
 - ☒ 2. Root hair
 - ☐ 3. Leaf vein
 - ☐ 4. Flower stalk

Q.19 What is the latitude that divides India into almost two equal parts?

- Ans**
- ☒ 1. The Tropic of Cancer, 23° 30'N
 - ☐ 2. The Tropic of Cancer, 33° 30'N
 - ☐ 3. The Tropic of Cancer, 34° 80'N
 - ☐ 4. The Tropic of Cancer, 13° 60'N

Q.20 Who was responsible for completing the construction of the Itimad-ud-Daulah's tomb, and what relationship did this person have with the deceased?

- Ans**
- ☐ 1. Akbar, his son-in-law
 - ☐ 2. Jahangir, his nephew
 - ☒ 3. Nur Jahan, his daughter
 - ☐ 4. Shah Jahan, his grandson

Section : **Arithmetical and Numerical Ability**

- Q.1 Study the following table and answer the questions based on it.
Given table shows that the courier charges (in ₹) for sending a 1 kg parcel from one city to another.

Cities	Delhi	Kolkata	Lucknow	Chandigarh	Mumbai
Delhi	.	60	50	40	90
Kolkata	60	.	50	60	60
Lucknow	50	50	.	50	55
Chandigarh	40	60	50	.	100
Mumbai	90	60	55	100	.

Among the following, the charges will be the least for sending a parcel from:

- Ans
- ☒ 1. Delhi to Mumbai
 - ☒ 2. Mumbai to Kolkata
 - ☒ 3. Delhi to Chandigarh
 - ☒ 4. Chandigarh to Lucknow

- Q.2 Find the simple interest if ₹3,600 is invested for 10 years at a rate of 5% per annum.

- Ans
- ☒ 1. ₹1,600
 - ☒ 2. ₹1,800
 - ☒ 3. ₹1,900
 - ☒ 4. ₹1,700

- Q.3 There are 20 members in group A, 39 members in group B, and 14 members in group C. All the members of these groups went to a restaurant. The average amount spent per member in groups A, B, and C is ₹103, ₹327, and ₹209 respectively. Find the overall average amount spent per member (in ₹).

- Ans
- ☒ 1. 243
 - ☒ 2. 248
 - ☒ 3. 240
 - ☒ 4. 245

- Q.4 Simplify the expression: $(2^3 \times 2^2) \div 2^4$

- Ans
- ☒ 1. 4
 - ☒ 2. 8
 - ☒ 3. 2
 - ☒ 4. 16

- Q.5 Simplify: $\sqrt{660} + \sqrt{231} + \sqrt{691} - 66$

- Ans
- ☒ 1. 24
 - ☒ 2. 25
 - ☒ 3. 27
 - ☒ 4. 26

Q.6 The value of a residential flat constructed at a cost of ₹10,00,000 is depreciating at the rate of 20% per annum. What will be its value 3 years after construction?

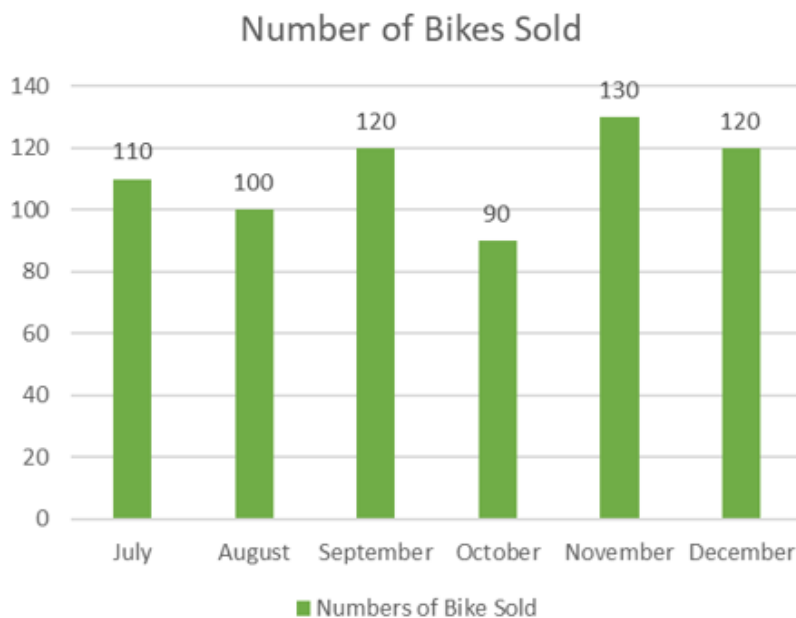
- Ans
- ☐ 1. ₹5,14,000
 - ☒ 2. ₹5,12,000
 - ☐ 3. ₹5,12,500
 - ☐ 4. ₹5,13,500

Q.7 Simplify the expression: $[3.6 + (0.6)^2 \times (2.04 \div 0.04)] \div \frac{18}{5}$

- Ans
- ☐ 1. 6.4
 - ☐ 2. 6.2
 - ☒ 3. 6.1
 - ☐ 4. 6.3

Q.8 Study the following bar graph and answer the question based on it.

The bar graph shows the number of bikes sold by a distributor in each month from July to December.



What is the ratio of the number of bikes sold in July to October?

- Ans
- ☐ 1. 8:11
 - ☒ 2. 11:9
 - ☐ 3. 9:10
 - ☐ 4. 13:11

Q.9 Ajay finds that sales increased by 11% in the first year and by 20% in the second year. If the current sales are ₹1,33,200, what were the sales (in ₹) two years ago?

- Ans
- ☐ 1. 1,20,000
 - ☐ 2. 80,000
 - ☒ 3. 1,00,000
 - ☐ 4. 1,11,000

Q.10 The present population of a town is 8,45,000. It is increasing at the rate of 10% every year. What will be the increase in population in 3 years from now?

- Ans
- ☐ 1. 2,76,985
 - ☐ 2. 2,97,659
 - ☐ 3. 2,79,965
 - ☒ 4. 2,79,695

Q.11 The salary of a worker increased from ₹15,000 to ₹18,000. What is the percentage increase in their salary?

- Ans
- ☐ 1. 35%
 - ☐ 2. 25%
 - ☐ 3. 30%
 - ☒ 4. 20%

Q.12 A certain sum becomes 1.728 times in three years at compound interest, compounded annually. What is the rate of interest per annum?

- Ans
- ☐ 1. 17%
 - ☐ 2. 24%
 - ☒ 3. 20%
 - ☐ 4. 22%

Q.13 Simplify $\sqrt{1849} + \sqrt{529} + 12^2 - \sqrt{1521}$.

- Ans
- ☐ 1. 191
 - ☒ 2. 171
 - ☐ 3. 161
 - ☐ 4. 181

Q.14 Salil finds a 12% increase in the sales in the first year and 20% increase in the second year. If the current sales is ₹159600, what was the sales (in ₹) two years ago?

- Ans
- ☐ 1. 133000
 - ☐ 2. 98750
 - ☐ 3. 142500
 - ☒ 4. 118750

Q.15 There are 26 members in group A, 10 members in group B, and 64 members in group C. All the members of these groups went to a restaurant. The average amount spent per member in groups A, B, and C is ₹147, ₹253, and ₹107, respectively. Find the overall average amount spent per member (in ₹).

- Ans
- ☒ 1. 132
 - ☐ 2. 129
 - ☐ 3. 127
 - ☐ 4. 136

Q.16 A merchant earns a profit of 40% on selling an article. If the cost price is reduced by 25% and the selling price is increased by 20%, then by what percentage will his profit percentage increase?

- Ans
- ☐ 1. 100%
 - ☒ 2. 210%
 - ☐ 3. 86%
 - ☐ 4. 178%

Q.17 A man sold two tables for ₹14,250 each, gaining 20% on one and losing 25% on the other. What is his gain/loss percentage (rounded to the nearest whole number) for the transaction?

- Ans**
- ☐ 1. Gain, 20%
 - ☒ 2. Loss, 8%
 - ☐ 3. Gain, 12%
 - ☐ 4. Loss, 27%

Q.18 A number X when reduced by 30% becomes 280. The original value of X is:

- Ans**
- ☐ 1. 300
 - ☒ 2. 400
 - ☐ 3. 250
 - ☐ 4. 350

Q.19 A merchant has 2,400 kg of rice, one part of which he sells at 36% profit and the rest at 16% profit. He gains 28% on the whole. Find the quantity sold at 16%.

- Ans**
- ☐ 1. 900 kg
 - ☐ 2. 920 kg
 - ☒ 3. 960 kg
 - ☐ 4. 940 kg

Q.20 A group of people consists of engineers, doctors, and technicians. Among them, 25% are engineers, 55% are doctors, and the rest are technicians. Their average weights are 45 kg, 60 kg, and 20 kg, respectively. Find the average weight of the group.

- Ans**
- ☐ 1. 42.40 kg
 - ☐ 2. 49.10 kg
 - ☒ 3. 48.25 kg
 - ☐ 4. 47.34 kg

Section : Arithmetical and Numerical Ability1

Q.1 In a quadrilateral ABCD, the diagonal AC= 20 cm. The perpendiculars dropped from vertices B and D to the diagonal AC are h_1 and h_2 . If $h_1 : h_2 = 2:3$ and the total area of quadrilateral is 150 cm^2 , find the length of the shorter perpendicular.

- Ans**
- ☐ 1. 12 cm
 - ☐ 2. 9 cm
 - ☐ 3. 4 cm
 - ☒ 4. 6 cm

Q.2 Two trains 200 meters and 240 meters long are running in the same direction at speeds of 72 km/h and 54 km/h. In how much time (in seconds) will the first train cross the second?

- Ans**
- ☐ 1. 77
 - ☐ 2. 99
 - ☒ 3. 88
 - ☐ 4. 66

Q.3 If x is directly proportional to y , and $y = 4$ when $x = 12$, find the value of x , when $y = 5$.

- Ans**
- ☒ 1. 15
 - ☐ 2. 12
 - ☐ 3. 19
 - ☐ 4. 21

Q.4 A bike travels 20 km in the first hour, 25 km in the second hour and 30 km in the third hour. Find the average speed (in km/hr) of the bike.

- Ans**
- ☒ 1. 25
 - ☐ 2. 20
 - ☐ 3. 22
 - ☐ 4. 28

Q.5 Two pipes can fill a tank in 20 hours and 30 hours, respectively, while a third pipe empties the full tank in 36 hours. If all the pipes are opened simultaneously when the tank is empty, in how much time will the tank be filled?

- Ans**
- ☐ 1. 12 hours
 - ☐ 2. 21 hours
 - ☒ 3. 18 hours
 - ☐ 4. 24 hours

Q.6 A cube has a surface area of 486 cm^2 . If the cube is melted and recast into a cuboid of dimensions $9 \text{ cm} \times 6 \text{ cm} \times h$, what is the value of h (in cm)?

- Ans**
- ☐ 1. 9.6 cm
 - ☒ 2. 13.5 cm
 - ☐ 3. 10.2 cm
 - ☐ 4. 15 cm

Q.7 A business is started by A and B with the investment in capital in the ratio 5:9. As an active partner, A receives 12.5% of the total profit as a salary and the remaining profit is divided in the ratio of their capitals. If A receives a total of ₹17,500 at the end of the year, what was the total profit?

- Ans**
- ☒ 1. ₹40,000
 - ☐ 2. ₹36,000
 - ☐ 3. ₹32,000
 - ☐ 4. ₹28,000

Q.8 Chitra gets a 25% discount on an oven whose marked price is ₹3000. She receives a further 20% discount on the reduced price for paying by credit card. How much does she pay (in ₹)?

- Ans**
- ☒ 1. 1800
 - ☐ 2. 1799
 - ☐ 3. 1797
 - ☐ 4. 1801

- Q.9 Aman can do $\frac{1}{6}$ th of a piece of work in 2 days and Chaman can do $\frac{1}{7}$
Find the number of days taken to complete the work if both work together.
(Round off your answer to one decimal place.)

Ans ☒ 1. 10.9
☐ 2. 8.9
☐ 3. 14.9
☐ 4. 11.6

- Q.10 Aman covers a certain distance by scooter at 80 km/hr and he returns to the starting place riding a bicycle at 20 km/hr. Find the average speed (in km/hr) for the whole journey.

Ans ☐ 1. 50
☐ 2. 40
☒ 3. 32
☐ 4. 36

- Q.11 A conical pit of diameter 4.8 m is 25 m deep. What is its capacity? (Use $\pi = 3.14$)

Ans ☐ 1. 154.16 m³
☐ 2. 156.28 m³
☒ 3. 150.72 m³
☐ 4. 160.42 m³

- Q.12 Two pipes, A and B, can fill a tank in 15 hours and 30 hours, respectively. Pipe C can empty the full tank in 20 hours. All the three pipes are opened in the beginning. However, pipe C is closed six hours before the tank is filled. In how much time (in hours) will the tank be full?

Ans ☐ 1. 12
☐ 2. 13
☐ 3. 10
☒ 4. 14

- Q.13 Abdul gets two successive discounts of 30% and 25% on his grocery bill of ₹5,240. What is the amount paid by Abdul?

Ans ☐ 1. ₹2,651
☐ 2. ₹2,861
☒ 3. ₹2,751
☐ 4. ₹2,551

- Q.14 Which of the following ratios is the smallest?

Ans ☐ 1. 24:29
☐ 2. 22:27
☒ 3. 45:59
☐ 4. 45:53

- Q.15 In covering a distance of 60 km, Abhay takes 4 hours more than Sameer. If Abhay doubles his speed, then he would take 1 hour less than Sameer. Abhay's speed is:

Ans ☐ 1. 4 km/h
☐ 2. 8 km/h
☐ 3. 10 km/h
☒ 4. 6 km/h

Q.19 How many Fundamental Duties were recommended by the Swaran Singh Committee?

- Ans**
- ☐ 1. Seven
 - ☒ 2. Eight
 - ☐ 3. Six
 - ☐ 4. Five

Q.20 The Vesara style of temple architecture represents a blend of which of the following two styles?

- Ans**
- ☒ 1. Nagara and Dravida
 - ☐ 2. Islamic and Gandhara
 - ☐ 3. Nagara and Islamic
 - ☐ 4. Dravidian and Islamic

Section : **Arithmetical and Numerical Ability**

Q.1 The mean of 20 numbers is 60. Subsequently, it was discovered that during the calculation of the average, the number 45 was erroneously interpreted as 25. The accurate mean is:

- Ans**
- ☐ 1. 61.5
 - ☐ 2. 60
 - ☒ 3. 61
 - ☐ 4. 60.5

Q.2 By selling an article for ₹120, a man incurs a loss of 10%. At what price (in ₹) should he sell the article to gain 14%?

- Ans**
- ☐ 1. 162
 - ☒ 2. 152
 - ☐ 3. 142
 - ☐ 4. 172

Q.3 By selling an article for ₹119, a man incurs a loss of 50%. At what price (in ₹) should he sell the article to gain 50%?

- Ans**
- ☐ 1. 347
 - ☐ 2. 367
 - ☐ 3. 377
 - ☒ 4. 357

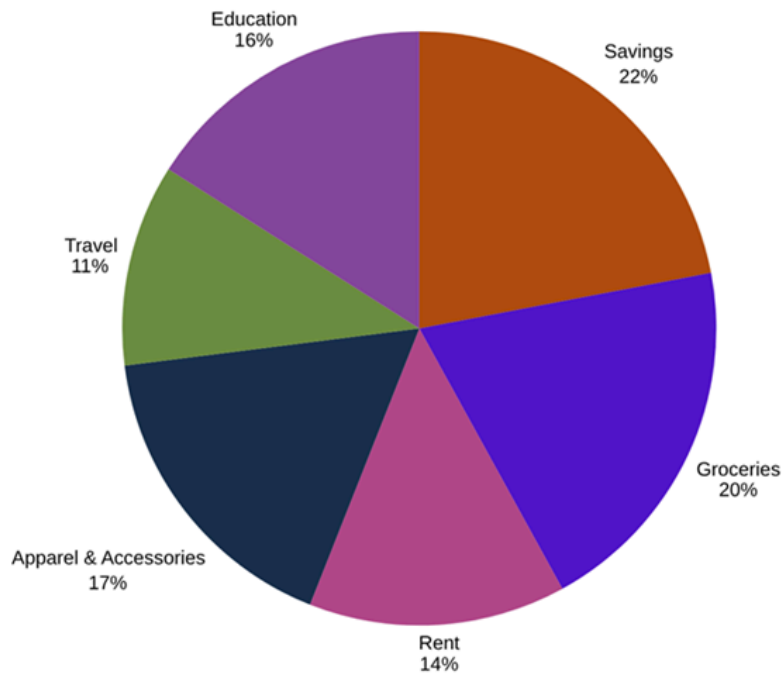
Q.4 Vipul observes a 10% increase in sales in the first year and a 25% increase in the second year. If the current sales are ₹224400, what were the sales (in ₹) two years ago?

- Ans**
- ☐ 1. 179520
 - ☒ 2. 163200
 - ☐ 3. 143200
 - ☐ 4. 204000

Q.5 The fraction form of 0.1875 is:

- Ans**
- ☒ 1. $\frac{3}{16}$
 - ☐ 2. $\frac{7}{16}$
 - ☐ 3. $\frac{11}{16}$
 - ☐ 4. $\frac{5}{16}$

Q.6 Ms. Kavita tracks her annual spending using a pie chart. Her annual income is ₹6,00,000. What is her expenditure on Apparel & Accessories?



- Ans
- ☐ 1. ₹1,00,200
 - ☐ 2. ₹1,07,500
 - ☐ 3. ₹91,800
 - ☒ 4. ₹1,02,000

Q.7 Simplify: $\frac{1}{1000} + 0.45 + \frac{36}{10^5}$

- Ans
- ☐ 1. 0.25136
 - ☐ 2. 0.0036
 - ☐ 3. 0.15136
 - ☒ 4. 0.45136

Q.8 If at same rate of interest, in 2 years, the simple interest is ₹78 and compound interest is ₹81, then what is the principal (in ₹)?

- Ans
- ☐ 1. 511
 - ☒ 2. 507
 - ☐ 3. 500
 - ☐ 4. 502

Q.9 A number when decreased by $67\frac{1}{2}\%$, results in 325. The number is:

- Ans
- ☐ 1. 1600
 - ☐ 2. 1300
 - ☒ 3. 1000
 - ☐ 4. 800

Q.10 A number, when decreased by 4%, gives 2640. The number is:

- Ans
- ☒ 1. 2750
 - ☐ 2. 8250
 - ☐ 3. 1375
 - ☐ 4. 5500

Q.11 The number 35446 is divisible by which of the following numbers?

- Ans
- ☐ 1. 79
 - ☐ 2. 81
 - ☒ 3. 74
 - ☐ 4. 70

Q.12 A sum of ₹30,000 is invested at 20% per year for 1 year. What is the difference in interest earned if it is compounded annually and if it is compounded half-yearly?

- Ans
- ☐ 1. ₹330
 - ☐ 2. ₹400
 - ☒ 3. ₹300
 - ☐ 4. ₹360

Q.13 At what percentage simple interest per annum will a certain sum triple in 20 years?

- Ans
- ☐ 1. 11%
 - ☐ 2. 14%
 - ☐ 3. 13%
 - ☒ 4. 10%

Q.14 Two plumbers, X and Y, are paid a total of ₹440 per day by their employer. If X is paid 120% of the sum paid to Y, then how much is Y paid (in ₹) per day?

- Ans
- ☐ 1. 250
 - ☒ 2. 200
 - ☐ 3. 100
 - ☐ 4. 150

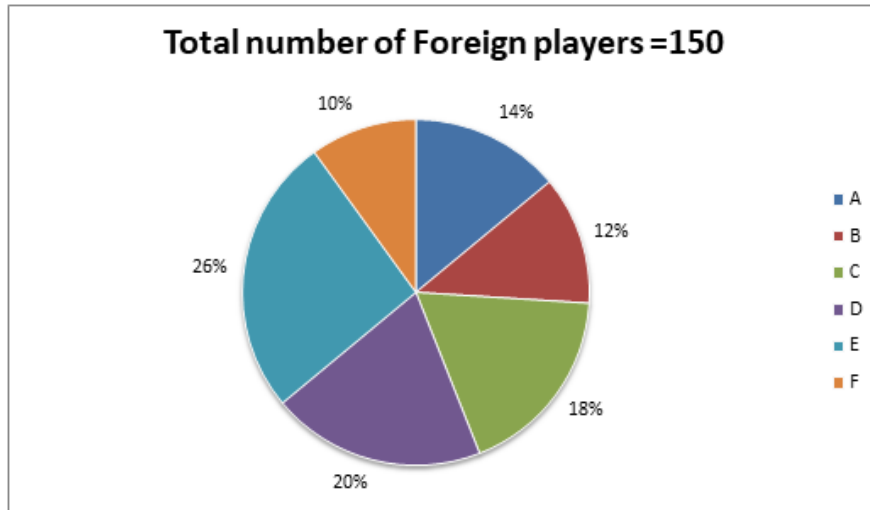
Q.15 A student scored 60 marks in an examination of weight 1 and 90 marks in another examination of weight 2. What is the weighted average marks?

- Ans
- ☒ 1. 80
 - ☐ 2. 65
 - ☐ 3. 70
 - ☐ 4. 75

Q.16 A student's marks were incorrectly entered as 25 instead of 97. Due to this, the average marks of the class got decreased by 1.5. What is the number of students in the class?1533

- Ans
- ☐ 1. 51
 - ☐ 2. 55
 - ☒ 3. 48
 - ☐ 4. 40

Q.17 The following Pie chart shows the percentage of foreign players in various teams in a cricket league. Study the pie chart carefully and answer the question that follows.



Find the number of foreign players in Team B.

- Ans ☒ 1. 18
☒ 2. 15
☒ 3. 19
☒ 4. 16

Q.18 In a decade, a town's population grew from 20,35,000 to 37,00,000. What is the average annual percentage increase in the population (rounded off to 2 decimal places)?

- Ans ☒ 1. 8.18%
☒ 2. 7.77%
☒ 3. 6.12%
☒ 4. 5.23%

Q.19 Which one of the following is NOT a prime number?

2, 173, 161, 7

- Ans ☒ 1. 173
☒ 2. 161
☒ 3. 7
☒ 4. 2

Q.20 There are 16 members in group A, 51 members in group B, and 87 members in group C. All the members of these groups went to a restaurant. The average amount spent per member in groups A, B, and C is ₹237, ₹183, and ₹497 respectively. Find the overall average amount (in ₹) spent per member.

- Ans ☒ 1. 361
☒ 2. 363
☒ 3. 366
☒ 4. 370

Q.1 The height of a right circular cone is 12 cm. If the circumference of th

(Use $\pi = \frac{22}{7}$)

Ans ☒ 1. 616 cm³

☐ 2. 656 cm³

☐ 3. 624 cm³

☐ 4. 516 cm³

Q.2 Workman A is thrice as good as workman B and therefore is able to finish a job in 40 days less than B. Working together, they can do it in:

Ans ☐ 1. 22 days

☐ 2. 24 days

☐ 3. 18 days

☒ 4. 15 days

Q.3 If the total surface area of a cube is 1734 cm², then the volume of the

Ans ☐ 1. 5213 cm³

☐ 2. 5913 cm³

☐ 3. 5013 cm³

☒ 4. 4913 cm³

Q.4 The ratio of the time taken by A and B to cover a certain distance is 6 : 11. The ratio of their respective speeds will be:

Ans ☐ 1. 6 : 11

☒ 2. 11 : 6

☐ 3. 12 : 5

☐ 4. 5 : 12

Q.5 Find the fourth proportional to 7, 14, and 21.

Ans ☐ 1. 35

☐ 2. 49

☐ 3. 56

☒ 4. 42

Q.6 If $a : b = 3 : 5$, $b : c = 4 : 7$, $c : d = 6 : 11$ and $a + b + c + d = 7870$, then what is the value of c?

Ans ☐ 1. 1400

☒ 2. 2100

☐ 3. 3500

☐ 4. 4200

Q.7 Ankit travels from Delhi to Noida, which is 100 kms away from Delhi, at a speed of 50 km/h on his bike. But while returning from Noida to Delhi, he travelled through a 10 km shorter route at a speed of 45 km/h. What is the average speed of Ankit for the entire journey?

Ans ☐ 1. 58.5 km/h

☒ 2. 47.5 km/h

☐ 3. 54.5 km/h

☐ 4. 52.5 km/h

Q.8 By selling 22 articles, a shopkeeper gains the selling price of 12 articles. What is his gain percentage?

- Ans**
- ☐ 1. 130%
 - ☐ 2. 110%
 - ☒ 3. 120%
 - ☐ 4. 100%

Q.9 A ferry travels from Town A to Town B and back. In still water, the ferry's speed is 5 km/h, and the river's current flows at 1 km/h. If the total time for the round trip is exactly 1 hour, find the distance between Town A and Town B.

- Ans**
- ☒ 1. 2.4 km
 - ☐ 2. 3 km
 - ☐ 3. 2 km
 - ☐ 4. 1.9 km

Q.10 A can complete a work in 8 days and B in 12 days. They work together on Day 1, then A alone on Day 2, then B alone on Day 3, and the cycle repeats. After how many days will the work be completed?

- Ans**
- ☐ 1. 5.8 days
 - ☐ 2. 4.8 days
 - ☐ 3. 7.8 days
 - ☒ 4. 6.8 days

Q.11 A and B together can complete a piece of work in 12 days. B and C together can complete it in 15 days. A and C together can do it in 20 days. If A, B, and C work together for x days, the work gets completed. Find x.

- Ans**
- ☐ 1. 12
 - ☒ 2. 10
 - ☐ 3. 9
 - ☐ 4. 8

Q.12 Find the area of a right-angled triangle with a base of 6 m and a hypotenuse of 6.5 m.

- Ans**
- ☐ 1. 6.0 m²
 - ☐ 2. 6.5 m²
 - ☐ 3. 8.25 m²
 - ☒ 4. 7.5 m²

Q.13 Manoj sold two guitars, each for ₹840. If he made 25% profit on the first and 16% loss on the second, then what is the total cost price (in ₹) of both guitars?

- Ans**
- ☐ 1. 1,050
 - ☒ 2. 1,672
 - ☐ 3. 1,840
 - ☐ 4. 1,822

Q.14 A shopkeeper offers a 22% discount on the marked price of a watch. If the cost price of the watch is ₹2,730, what should be the marked price to earn a profit of 35%?

- Ans**
- ☒ 1. ₹4,725
 - ☐ 2. ₹4,495
 - ☐ 3. ₹3,685
 - ☐ 4. ₹3,075

Q.19 Which of the following was NOT a classical language of India as of 2023?

- Ans**
- ☐ 1. Malayalam
 - ☐ 2. Telugu
 - ☒ 3. Bengali
 - ☐ 4. Kannada

Q.20 Which process follows ingestion in the normal sequence of nutrition in animals?

- Ans**
- ☐ 1. Assimilation
 - ☐ 2. Egestion
 - ☐ 3. Absorption
 - ☒ 4. Digestion

Section : **Arithmetical and Numerical Ability**

Q.1 Find the simple interest (in ₹) on ₹1,500 at 5% per month for 3 months.

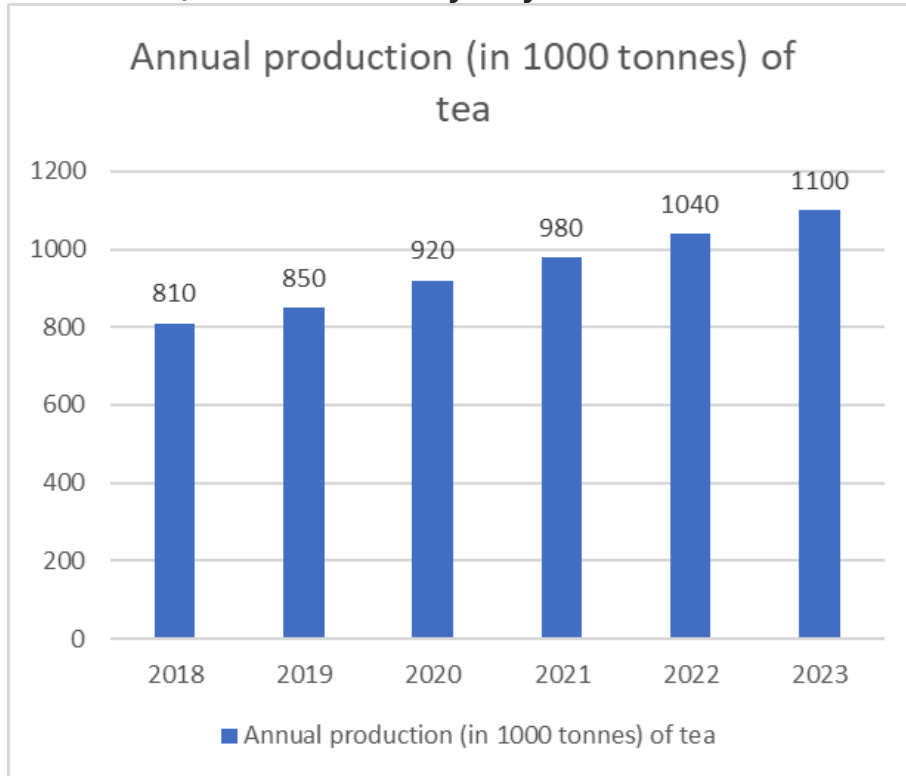
- Ans**
- ☐ 1. 18.75
 - ☒ 2. 225
 - ☐ 3. 56.25
 - ☐ 4. 37.50

Q.2 There are 39 members in group A, 81 members in group B, and 20 members in group C. All the members of these groups went to a restaurant. The average amount spent per member in groups A, B, and C is ₹142, ₹302, and ₹103, respectively. Find the overall average amount spent per member (in ₹).

- Ans**
- ☐ 1. 228
 - ☐ 2. 224
 - ☐ 3. 227
 - ☒ 4. 229

Q.3 Study the following bar graph and answer the question based on it.

The bar chart given below shows the annual production (in 1000 tonnes) of tea of a country for years 2018 to 2023.



The production for the year 2023 is approximately what per cent of the production for the year 2019?

- Ans
- ☐ 1. 138.67%
 - ☐ 2. 124.24%
 - ☒ 3. 129.41%
 - ☐ 4. 133.33%

Q.4 Simplify: $\sqrt{5 + 2\sqrt{6}} - \sqrt{5 - 2\sqrt{6}}$

- Ans
- ☐ 1. 2
 - ☒ 2. $2\sqrt{2}$
 - ☐ 3. $2\sqrt{3}$
 - ☐ 4. 3

Q.5 In a test, B got 50 marks while A got 80 marks, out of 110 maximum marks. What percentage of B's marks was A's marks?

- Ans
- ☐ 1. 72.73%
 - ☐ 2. 110%
 - ☐ 3. 62.5%
 - ☒ 4. 160%

Q.6 In what ratio should tea costing ₹280 per kg be mixed with tea costing ₹345 per kg to obtain a mixture worth ₹300 per kg?

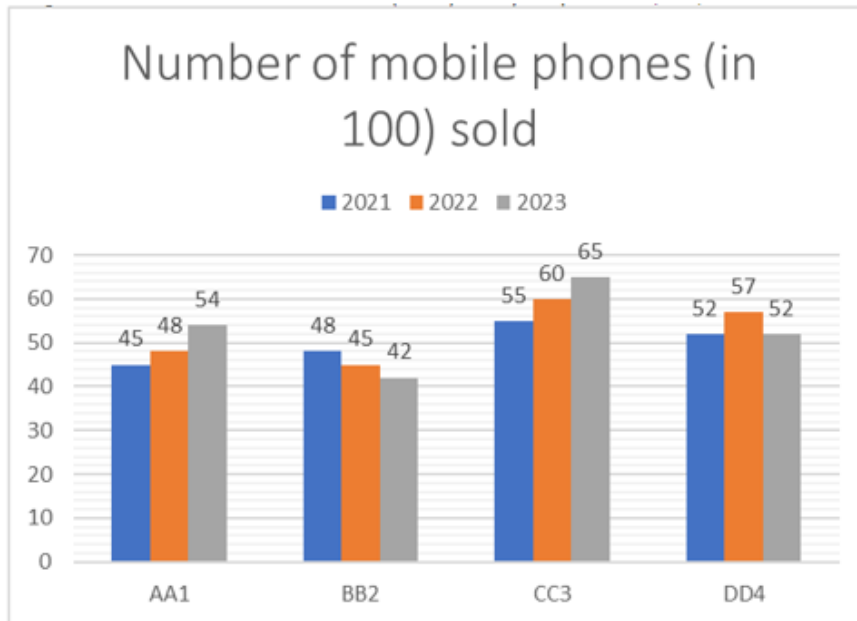
- Ans
- ☐ 1. 9:7
 - ☐ 2. 9:2
 - ☒ 3. 9:4
 - ☐ 4. 9:6

Q.7 Solve the following : $\sqrt{50 \div 0.05 \times 2}$

- Ans
- ☐ 1. $50\sqrt{3}$
 - ☐ 2. $100\sqrt{2}$
 - ☐ 3. $10\sqrt{2}$
 - ☒ 4. $20\sqrt{5}$

Q.8 Study the following bar graph and answer the question based on it.

The given data shows the number of mobile phones (in 100) sold by companies AA1, BB2, CC3 and DD4 in 2021, 2022 and 2023.



Which company sold the maximum number of mobile phones across all the years?

- Ans
- ☐ 1. BB2
 - ☐ 2. DD4
 - ☐ 3. AA1
 - ☒ 4. CC3

Q.9 Evaluate the given expression.

1804

$$12 + 18 \div 3$$

- Ans
- ☐ 1. 22
 - ☐ 2. 12
 - ☒ 3. 18
 - ☐ 4. 10

Q.10 The compound interest on a certain sum of ₹48000 is ₹15888 in one and a half years, when the interest is compounded half-yearly. What is the rate of interest per annum?

- Ans
- ☐ 1. 10%
 - ☐ 2. 15%
 - ☒ 3. 20%
 - ☐ 4. 30%

Q.11 The present population of a town is 1,59,135. If it has been increasing at 3% per annum, find its population 2 years ago.

- Ans
- ☐ 1. 1,48,000
 - ☒ 2. 1,50,000
 - ☐ 3. 1,52,000
 - ☐ 4. 1,54,000

Q.12 Atul's salary was first reduced by 40% and subsequently raised by 47%. By what percentage was his final salary lower compared to his initial salary?⁸¹⁷⁶

- Ans
- ☐ 1. 40%
 - ☐ 2. 47%
 - ☐ 3. 18.8%
 - ☒ 4. 11.8%

Q.13 Two alloys contain gold and silver in the ratios of 3:2 and 5:3, respectively. In what ratio must these two alloys be mixed to produce a new alloy containing exactly 61% gold?

- Ans
- ☐ 1. 3:2
 - ☐ 2. 4:3
 - ☐ 3. 1:1
 - ☒ 4. 2:3

Q.14 In how much time will ₹20,000 amount to ₹22,898 at 14% per annum, interest being compounded half-yearly?

- Ans
- ☐ 1. 2 years
 - ☐ 2. 3 years
 - ☐ 3. 4 years
 - ☒ 4. 1 year

Q.15 A manufacturer sells a product to a wholesaler at a profit of 44%. The wholesaler, in turn, sells it to a retailer at a profit of 25%, and the retailer sells it to a customer at a profit of 24%. If the customer pays ₹279, find the cost price (in ₹) for the manufacturer.

- Ans
- ☐ 1. 123
 - ☐ 2. 126
 - ☒ 3. 125
 - ☐ 4. 124

Q.16 The profit of a company is increased from ₹10,00,000 to ₹11,79,000 in one year. Calculate the percentage increase in the profit of company.

- Ans
- ☐ 1. 17.47%
 - ☐ 2. 17.5%
 - ☐ 3. 17.3%
 - ☒ 4. 17.9%

Q.17 Evaluate: $(12 \div 4) \times 8$

- Ans
- ☐ 1. 28
 - ☐ 2. 25
 - ☐ 3. 26
 - ☒ 4. 24

Q.18 A manufacturer sells a product to a wholesaler at a profit of 17%. The wholesaler, in turn, sells it to a retailer at a profit of 12%, and the retailer sells it to a customer at a profit of 25%. If the customer pays ₹819, find the cost price (in ₹) for the manufacturer.

- Ans**
- ☐ 1. 499
 - ☒ 2. 500
 - ☐ 3. 497
 - ☐ 4. 498

Q.19 Two students appeared in an examination. One of them secured 7 marks more than the other and his marks were 52% of the sum of their marks. The sum of the marks obtained by them was:4528

- Ans**
- ☐ 1. 182
 - ☐ 2. 168
 - ☒ 3. 175
 - ☐ 4. 176

Q.20 In what ratio must a grocer mix two varieties of rice costing ₹276 and ₹267 per kg, respectively, to get a mixture of rice worth ₹272 per kg?1478

- Ans**
- ☐ 1. 11:15
 - ☐ 2. 3:4
 - ☒ 3. 4:5
 - ☐ 4. 5:6

Section : **Arithmetical and Numerical Ability1**

Q.1 A laptop is marked at a price 55% above its cost price. At what discount percentage should it be sold to make a profit of 35%? (Rounded off to 2 decimal places)

- Ans**
- ☐ 1. 14.65%
 - ☐ 2. 10.23%
 - ☒ 3. 12.90%
 - ☐ 4. 16.89%

Q.2 The ratio of boys to girls in a class is 7:5. If 12 more girls join the class, the ratio becomes 7:7. How many boys are there in the class?

- Ans**
- ☐ 1. 54
 - ☐ 2. 49
 - ☐ 3. 35
 - ☒ 4. 42

Q.3 A cistern can be filled by pipes P and Q in 50 minutes and 25 minutes, respectively. Tap S at the bottom can empty the cistern in 30 minutes. If tap S is opened 15 minutes after pipes P and Q are opened, how long will it take to fill the cistern completely?

- Ans**
- ☐ 1. 16 minutes and 40 seconds
 - ☒ 2. 18 minutes and 45 seconds
 - ☐ 3. 16 minutes and 15 seconds
 - ☐ 4. 18 minutes and 25 seconds

Q.4 If a, b, c, d are in continued proportion, then find the value of $\frac{a^3 + b^3}{b^3 + c^3}$

Ans

- ☒ 1. $\frac{a}{d}$
☐ 2. $\frac{b}{c}$
☐ 3. $\frac{a^2}{d^2}$
☐ 4. $\frac{a}{b}$

Q.5 A cyclist travelled the distance between two towns, which is 55 km, in 1 hour and 50 minutes. Find his speed in meter per minute.

Ans

- ☒ 1. 500
☐ 2. 550
☐ 3. 475
☐ 4. 525

Q.6 Pipe P can empty a 400-liter tank in 12 hours. If pipe Q is introduced, which works at half the rate of pipe P, how long would it take for pipe Q alone to empty the tank?

Ans

- ☐ 1. 6 hours
☐ 2. 18 hours
☒ 3. 24 hours
☐ 4. 12 hours

Q.7 The perimeter of an isosceles triangle is 50 cm. Each of the equal sides is 4 cm longer than the base. What is the length of each equal side?

Ans

- ☐ 1. 8 cm
☒ 2. 18 cm
☐ 3. 14 cm
☐ 4. 16 cm

Q.8 P, Q and R can complete a work alone in 20 days, 30 days, and 60 days, respectively. P and Q start the work together. After 6 days, R also joins them and all three work together until the work is finished. What is the total number of days needed to complete the work?

Ans

- ☒ 1. 11 days
☐ 2. 12 days
☐ 3. 15 days
☐ 4. 8 days

Q.9 Pawan runs at a speed of 10 meters per second. How many kilometre

Ans

- ☒ 1. 15
☐ 2. 20
☐ 3. 12
☐ 4. 18

Q.10 Arvind bought an article for ₹x. He sold it to Biru at a loss of 30%. Biru spent ₹178 on its transportation and sold it to Minu at a profit of 42%. If Minu bought it for ₹1,704, then what is the value of x?

- Ans
- ☐ 1. ₹1,486
 - ☐ 2. ₹1,491
 - ☒ 3. ₹1,460
 - ☐ 4. ₹1,438

Q.11 Rajiv completed a certain journey by a two-wheeler. If he covered 20% of the distance at the speed of 20 km/h, 50% of the distance at 50 km/h, and the remaining distance at 30 km/h, then find the average speed (in km/h) of his entire journey.

- Ans
- ☐ 1. $29\frac{1}{3}$
 - ☐ 2. $23\frac{2}{3}$
 - ☐ 3. $35\frac{2}{3}$
 - ☒ 4. $33\frac{1}{3}$

Q.12 In a class, the number of boys and that of the girls are in the ratio of 3 : 5. If one more boy joins the class, the ratio will become 5 : 8. How many girls are there in the class?

- Ans
- ☐ 1. 10
 - ☐ 2. 30
 - ☒ 3. 40
 - ☐ 4. 20

Q.13 Ramesh, Seema, and Shanaya invest ₹1210, ₹1320, and ₹1430 respectively to start a business. If the profit at the end of the year is ₹1620, then what is the share of Shanaya in the profit?

- Ans
- ☐ 1. ₹515
 - ☐ 2. ₹555
 - ☐ 3. ₹615
 - ☒ 4. ₹585

Q.14 P and Q together can do a piece of work in 12 days, which P alone can do in 15 days. Q alone can do it in:

- Ans
- ☐ 1. 42 days
 - ☐ 2. 30 days
 - ☐ 3. 21 days
 - ☒ 4. 60 days

Q.15 The marked price of a product is 40% above its cost price. Two successive discounts of 10% and 15% are given on the marked price. What is the profit percent?

- Ans
- ☐ 1. 8.1%
 - ☒ 2. 7.1%
 - ☐ 3. 6.1%
 - ☐ 4. 5.1%

Q.14 According to the Census of India 2011, the total population of India was approximately:

- Ans**
- ☒ 1. 1210 million
 - ☐ 2. 1410 million
 - ☐ 3. 1110 million
 - ☐ 4. 1310 million

Q.15 The Brihadeeswara Temple is known for its towering vimana and elaborate temple complex. These architectural features are characteristic of which style of Indian temple architecture?

- Ans**
- ☐ 1. Nagara style
 - ☒ 2. Dravidian style
 - ☐ 3. Kalinga style
 - ☐ 4. Vesara style

Q.16 According to the National Horticulture Board 2021-22, which state is the largest Cashew Nut producer?

- Ans**
- ☐ 1. Tamil Nadu
 - ☐ 2. Kerala
 - ☐ 3. Andhra Pradesh
 - ☒ 4. Maharashtra

Q.17 Which of the following is the main function of the stem in a plant?

- Ans**
- ☐ 1. Photosynthesis
 - ☐ 2. Absorption
 - ☒ 3. Transport
 - ☐ 4. Reproduction

Q.18 Which states lie along the Konkan Coast?

- Ans**
- ☐ 1. Andhra Pradesh and Tamil Nadu
 - ☐ 2. Odisha and Andhra Pradesh
 - ☐ 3. Karnataka and Kerala
 - ☒ 4. Maharashtra and Goa

Q.19 Why is the Supreme Court called the court of record?

- Ans**
- ☐ 1. Because it issues warrants for arrest
 - ☐ 2. Because it registers complaints like FIRs
 - ☐ 3. Because it stores musical recordings
 - ☒ 4. Because it keeps judgments and punishes for contempt

Q.20 Which of the following best describes the relationship between DNA and genes?

- Ans**
- ☐ 1. Genes are chromosomes
 - ☐ 2. DNA is made of genes
 - ☐ 3. Genes are separate from DNA
 - ☒ 4. Genes are segments of DNA

Q.1 If the average age of 6 students is 15 years, and two students aged 13 years and 17 years leave the group, what will be the average age of the remaining students?

- Ans**
- ☐ 1. 17 years
 - ☐ 2. 13 years
 - ☐ 3. 20 years
 - ☒ 4. 15 years

Q.2 By selling an article for ₹120, a man incurs a loss of 10%. At what price (in ₹) should he sell the article to gain 20%?

- Ans**
- ☐ 1. 150
 - ☒ 2. 160
 - ☐ 3. 170
 - ☐ 4. 180

Q.3 Find the LCM of 105, 145, and 150.

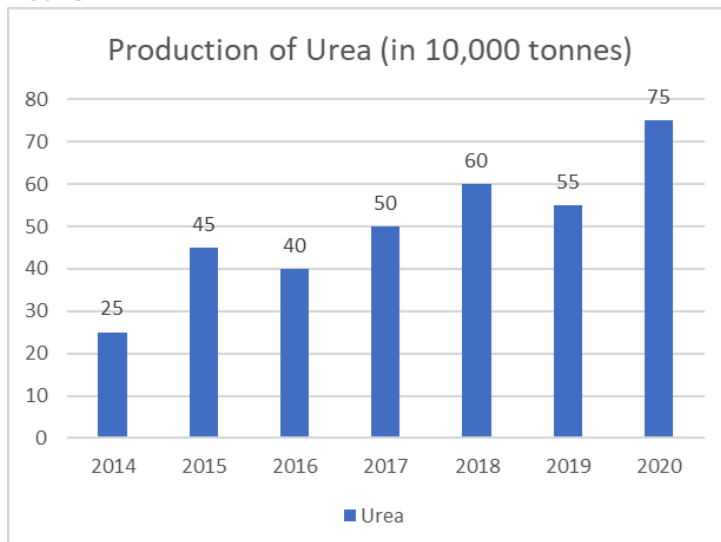
- Ans**
- ☐ 1. 20425
 - ☒ 2. 30450
 - ☐ 3. 30555
 - ☐ 4. 34050

Q.4 The mean monthly salary of 12 workers in a company is ₹13,560. One more worker with monthly salary ₹13,573 has also been taken into consideration. What is the mean monthly salary of 13 workers?

- Ans**
- ☐ 1. ₹13,560
 - ☒ 2. ₹13,561
 - ☐ 3. ₹13,562
 - ☐ 4. ₹13,563

Q.5 Study the following bar graph and answer the question based on it.

Production of Urea by a Company (in 10,000 tonnes) Over the Years



What was the approximate percentage decrease in the production of Urea in 2019 than the previous year?

- Ans**
- ☐ 1. 5.25%
 - ☐ 2. 6.67%
 - ☐ 3. 9.56%
 - ☒ 4. 8.33%

Q.6 A sum amounts to ₹13,310 in 2 years at 10% per annum compound interest, compounded annually. What was the principal?

- Ans
- ☐ 1. ₹11,500
 - ☐ 2. ₹12,000
 - ☒ 3. ₹11,000
 - ☐ 4. ₹12,100

Q.7 The fraction form of 0.96875 is:

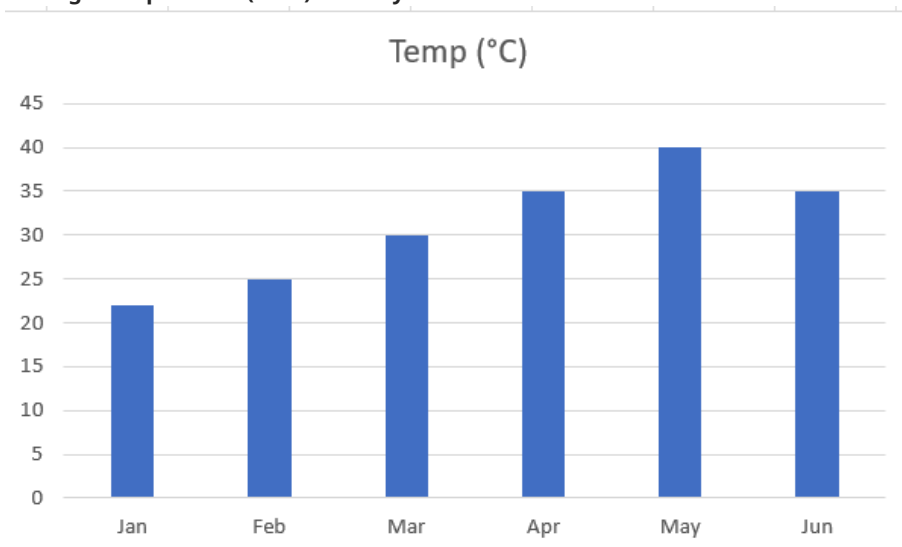
- Ans
- ☐ 1. $\frac{29}{32}$
 - ☐ 2. $\frac{31}{35}$
 - ☒ 3. $\frac{31}{32}$
 - ☐ 4. $\frac{29}{35}$

Q.8 Simplify the given expression.

$$[(7.49)^2 - (3.81)^2] \div [7.49 - 3.81] + \frac{15}{4}$$

- Ans
- ☐ 1. 13.05
 - ☐ 2. 14.05
 - ☒ 3. 15.05
 - ☐ 4. 12.05

Q.9 Average Temperature (in °C) in a City Over 6 Months



Between which two consecutive months was there a decrease in temperature?

- Ans
- ☒ 1. May and Jun
 - ☐ 2. Apr and May
 - ☐ 3. Feb and Mar
 - ☐ 4. Mar and Apr

Q.10 The price of a bus is ₹2,50,000. The value of the bus depreciates by 20% at the end of the first year and after that it depreciates by 10% every year. What will be the value of the bus after 3 years?

- Ans
- ☐ 1. ₹1,59,000
 - ☐ 2. ₹1,55,000
 - ☒ 3. ₹1,62,000
 - ☐ 4. ₹1,64,000

Q.11 What percentage of the numbers from 1 to 70 have 1 or 5 in the unit's digit?

- Ans
- ☐ 1. 11%
 - ☒ 2. 20%
 - ☐ 3. 10%
 - ☐ 4. 21%

Q.12 A number, when decreased by 4%, gives 2760. The number is:

- Ans
- ☐ 1. 8625
 - ☐ 2. 1438
 - ☒ 3. 2875
 - ☐ 4. 5750

Q.13 A student scores 60 marks in a test of 30 marks weightage and 40 marks in another test of 15 marks weightage. What is the weighted average of the marks? (correct to 2 decimal places)

- Ans
- ☐ 1. 55.34
 - ☒ 2. 53.33
 - ☐ 3. 54.34
 - ☐ 4. 56.34

Q.14 Two students appeared in an examination. One of them secured 7 marks more than the other and his marks were 64% of the sum of their marks. The sum of the marks obtained by them was:4524

- Ans
- ☒ 1. 25
 - ☐ 2. 32
 - ☐ 3. 18
 - ☐ 4. 26

Q.15 Three years ago, the population of a town was 65,000. If the annual increase during three successive years occurs at the rate of 10%, 8% and 5%, respectively, what is its present population?

- Ans
- ☐ 1. 68,750
 - ☒ 2. 81,081
 - ☐ 3. 78,700
 - ☐ 4. 72,680

Q.16 Rajat borrowed ₹1,500 at 12% per annum simple interest. What amount will Rajat pay to clear the debt after 5 years?

- Ans
- ☐ 1. ₹2,300
 - ☐ 2. ₹2,200
 - ☐ 3. ₹2,500
 - ☒ 4. ₹2,400

Q.17 The number 28786 is divisible by which of the following numbers?

- Ans
- ☒ 1. 74
 - ☐ 2. 64
 - ☐ 3. 78
 - ☐ 4. 83

Q.18 Two plumbers, X and Y, are paid a total of ₹660 per day by their employer. If X is paid 120% of the sum paid to Y, then how much is Y paid (in ₹) per day?

- Ans
- ☐ 1. 250
 - ☐ 2. 350
 - ☐ 3. 200
 - ☒ 4. 300

Q.19 By selling an article for ₹120, a man incurs a loss of 20%. At what price (in ₹) should he sell it to gain 30%?

- Ans
- ☐ 1. 215
 - ☐ 2. 185
 - ☐ 3. 205
 - ☒ 4. 195

Q.20 There are 72 members in group A, 90 members in group B, and 76 members in group C. All the members of these groups went to a restaurant. The average amount spent per member in groups A, B, and C is ₹101, ₹440, and ₹448 respectively. Find the overall average amount (in ₹) spent per member.

- Ans
- ☐ 1. 344
 - ☐ 2. 335
 - ☐ 3. 343
 - ☒ 4. 340

Section : Arithmetical and Numerical Ability1

Q.1 If a person covers three equal distances at the speed of 10 km/h, 6 km/h and 2 km/h, respectively, then find his average speed during the whole journey.

- Ans
- ☐ 1. $4\frac{21}{23}$ km/h
 - ☒ 2. $3\frac{21}{23}$ km/h
 - ☐ 3. $1\frac{21}{23}$ km/h
 - ☐ 4. $2\frac{21}{23}$ km/h

Q.2 Sandeep is going to a shop from home with the speed of A km/h, and after returning home, his speed is 48 km/h. If his average speed of the entire journey was 64 km/h, find the value of A.

- Ans
- ☐ 1. 85
 - ☐ 2. 89
 - ☐ 3. 92
 - ☒ 4. 96

Q.3 Three partners invested in a business in the ratio 6:5:7. They invested their capitals for 4 months, 6 months and 12 months, respectively. What was the ratio of their profits?

- Ans
- ☐ 1. 6:7:14
 - ☐ 2. 4:5:6
 - ☒ 3. 4:5:14
 - ☐ 4. 7:5:14

Q.4 If the times taken by A and B to complete a piece of work are in the ratio 4:5, and A can do one-twentieth of the work in a day, what percentage of the same work will they complete together in 4 days?

- Ans**
- ☐ 1. 24%
 - ☒ 2. 36%
 - ☐ 3. 30%
 - ☐ 4. 20%

Q.5 A boat can travel 26 km downstream in 2 hours and 18 km upstream in 3 hours. What is the speed of the boat in still water?

- Ans**
- ☐ 1. 9 km/hr
 - ☐ 2. 8.5 km/hr
 - ☒ 3. 9.5 km/hr
 - ☐ 4. 8 km/hr

Q.6 A solid cone has a radius of 12 cm and height of 5 cm. What is the total surface area of the cone?

- Ans**
- ☐ 1. $100\pi \text{ cm}^2$
 - ☐ 2. $600\pi \text{ cm}^2$
 - ☐ 3. $500\pi \text{ cm}^2$
 - ☒ 4. $300\pi \text{ cm}^2$

Q.7 A man sells a mobile phone for ₹600 and loses an amount. If he had sold it for ₹1,320, his gain would have been double the former loss. The cost price (in ₹) of the mobile phone is:

- Ans**
- ☒ 1. 840
 - ☐ 2. 850
 - ☐ 3. 860
 - ☐ 4. 830

Q.8 A large cube has a side length of 12 cm. It is cut into smaller cubes, each having a side length of 4 cm. Find the number of smaller cubes formed.

- Ans**
- ☐ 1. 31
 - ☐ 2. 29
 - ☐ 3. 23
 - ☒ 4. 27

Q.9 Pipe P and Pipe Q, when both opened together, can fill a tank in 3 hours. Pipe Q alone can fill it in 5 hours. Find the time in which pipe P alone will fill the tank.

- Ans**
- ☒ 1. 7.5 hours
 - ☐ 2. 8.5 hours
 - ☐ 3. 5.5 hours
 - ☐ 4. 9.5 hours

Q.10 If the two diagonals of a rhombus are 72 cm and 30 cm, then its perimeter is:

- Ans**
- ☐ 1. 144 cm
 - ☒ 2. 156 cm
 - ☐ 3. 164 cm
 - ☐ 4. 150 cm

Q.11 Two pipes A and B can fill a tank in 12 hours and 18 hours, while a third pipe C can empty it in 72 hours. If all three pipes are opened together, how much time will it take to fill the tank?

- Ans**
- ☐ 1. 4 hours
 - ☐ 2. 10 hours
 - ☐ 3. 6 hours
 - ☒ 4. 8 hours

Q.12 The fourth proportional to 6, 18 and 30 is P. The fourth proportional to 5, P and 20 is Q. Find the mean proportional to P and Q.

- Ans**
- ☐ 1. 150
 - ☒ 2. 180
 - ☐ 3. 170
 - ☐ 4. 140

Q.13 A is twice as efficient as B, and together they can complete a task in 6 days. How long will it take for B to complete the task alone?

- Ans**
- ☐ 1. 16 days
 - ☐ 2. 12 days
 - ☒ 3. 18 days
 - ☐ 4. 20 days

Q.14 By selling 5 articles for ₹30, a man makes a profit of 20%. Find his gain or loss percentage if he sells 8 articles for ₹55.2.

- Ans**
- ☐ 1. 28%, loss
 - ☐ 2. 38%, loss
 - ☐ 3. 28%, profit
 - ☒ 4. 38%, profit

Q.15 When x is subtracted from each of the numbers 3, 4, 6 and 10, the numbers so obtained in this order are in proportion. What is the mean proportional between $(2x + 2)$ and $(13x - 2)$?

- Ans**
- ☐ 1. 14
 - ☒ 2. 12
 - ☐ 3. 8
 - ☐ 4. 10

Q.16 A 3D printer prints a metallic sheet in the shape of a right triangle with legs 9 cm and 12 cm, and then cuts a circular hole (radius 3 cm) from its largest area. What is the remaining area? (Use $\pi = 3.14$)

- Ans**
- ☐ 1. 27.74 cm^2
 - ☐ 2. 25.54 cm^2
 - ☒ 3. 25.74 cm^2
 - ☐ 4. 27.54 cm^2

Q.17 Two trains of lengths 90 m and 97 m are moving in opposite directions at 10 m/s and 7 m/s, respectively. Find the time taken by the trains to cross each other.

- Ans**
- ☐ 1. 12 seconds
 - ☐ 2. 10 seconds
 - ☒ 3. 11 seconds
 - ☐ 4. 13 seconds

Q.20 Which of the following temples is considered a classic example of Nagara style architecture?

- Ans**
- ☐ 1. Meenakshi Temple, Madurai
 - ☐ 2. Brihadeeswarar Temple, Thanjavur
 - ☒ 3. Kandariya Mahadeva Temple, Khajuraho
 - ☐ 4. Chennakesava Temple, Belur

Section : **Arithmetical and Numerical Ability**

Q.1 A manufacturer sells a product to a wholesaler at a profit of 25%. The wholesaler, in turn, sells it to a retailer at a profit of 50%, and the retailer sells it to a customer at a profit of 25%. If the customer pays ₹750, find the cost price (in ₹) for the manufacturer.

- Ans**
- ☐ 1. 318
 - ☐ 2. 317
 - ☒ 3. 320
 - ☐ 4. 321

Q.2 In what time will ₹7,000 become ₹9,257.5 at 30% per annum, compounded half-yearly?

- Ans**
- ☒ 1. 12 months
 - ☐ 2. 18 months
 - ☐ 3. 24 months
 - ☐ 4. 6 months

Q.3 In what time will ₹12,000 become ₹13,891.5 at 10% per annum interest, compounded half-yearly?

- Ans**
- ☐ 1. 24 months
 - ☐ 2. 15 months
 - ☒ 3. 18 months
 - ☐ 4. 12 months

Q.4 The present cost of a apartment is ₹1,15,175. After a year, its cost increased to ₹1,59,299. The percentage increase in the cost of the apartment is: (rounded off to the nearest integer)

- Ans**
- ☐ 1. 26%
 - ☐ 2. 30%
 - ☐ 3. 52%
 - ☒ 4. 38%

Q.5 The average weight (in kg) of a family of five members whose weights are 40 kg, 49 kg, 57 kg, 71 kg and 35 kg is:

- Ans**
- ☐ 1. 51.4
 - ☐ 2. 49.4
 - ☐ 3. 52.4
 - ☒ 4. 50.4

Q.6 By selling an article for ₹120, a man incurs a loss of 20%. At what price (in ₹) should he sell it to gain 32%?

- Ans**
- ☐ 1. 188
 - ☐ 2. 208
 - ☐ 3. 218
 - ☒ 4. 198

Q.7 20% of a number is more than 20% of 570 by 170. The number is:

- Ans
- ☐ 1. 1270
 - ☐ 2. 1520
 - ☐ 3. 1470
 - ☒ 4. 1420

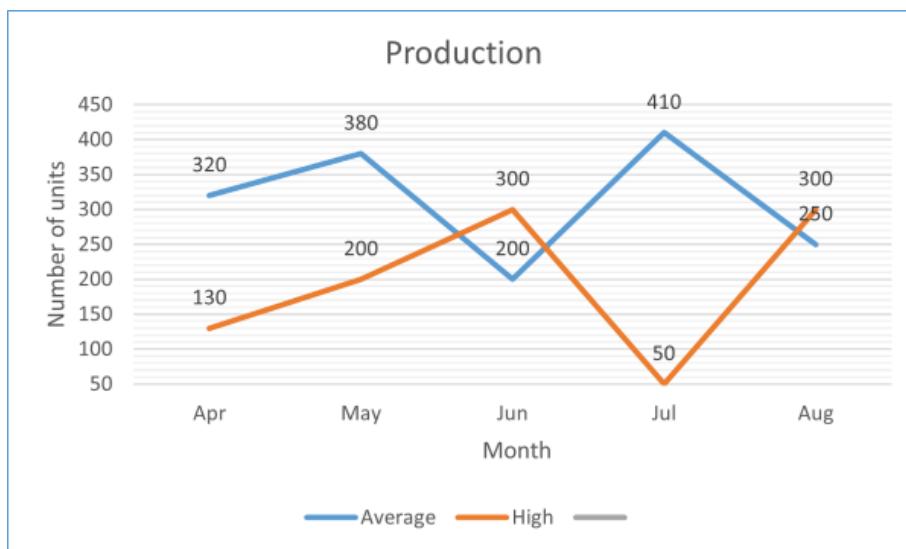
Q.8 Find the simple interest (in ₹) on ₹1,500 at 5% per month for 10 months.

- Ans
- ☐ 1. 125
 - ☒ 2. 750
 - ☐ 3. 82.50
 - ☐ 4. 62.50

Q.9 To prepare a mixture of milk and water with 65% milk, milk used is 4.5 liter more than water. How many liters of mixture is there?

- Ans
- ☐ 1. 12
 - ☐ 2. 15.5
 - ☐ 3. 12.5
 - ☒ 4. 15

Q.10 A company manufactures products of average and high quality. The line graph below shows the production of both qualities during the first five months of a financial year. Study the line graph and answer the question that follows.



In which month (April to August) was the company's total production the highest?

- Ans
- ☐ 1. Jun
 - ☐ 2. Aug
 - ☒ 3. May
 - ☐ 4. Jul

Q.11 Evaluate: $(-40) + (-11) \div (-2) \times 8$

- Ans
- ☒ 1. 4
 - ☐ 2. 1
 - ☐ 3. 3
 - ☐ 4. 2

Q.12 Tushar observes a 10% increase in sales in the first year and a 25% increase in the second year. If the current sales are ₹1,58,400, what were the sales (in ₹) two years ago?

- Ans
- ☒ 1. 1,15,200
 - ☐ 2. 1,26,720
 - ☐ 3. 1,44,000
 - ☐ 4. 95,200

Q.13 3% of a number is what percentage of 4% of the same number?5905

- Ans
- ☐ 1. 133.33%
 - ☒ 2. 75%
 - ☐ 3. 41.43%
 - ☐ 4. 21.43%

Q.14 Simplify: $\sqrt{2638 - \sqrt{1338 + \sqrt{1223 - 262}}}$

- Ans
- ☒ 1. 51
 - ☐ 2. 53
 - ☐ 3. 52
 - ☐ 4. 49

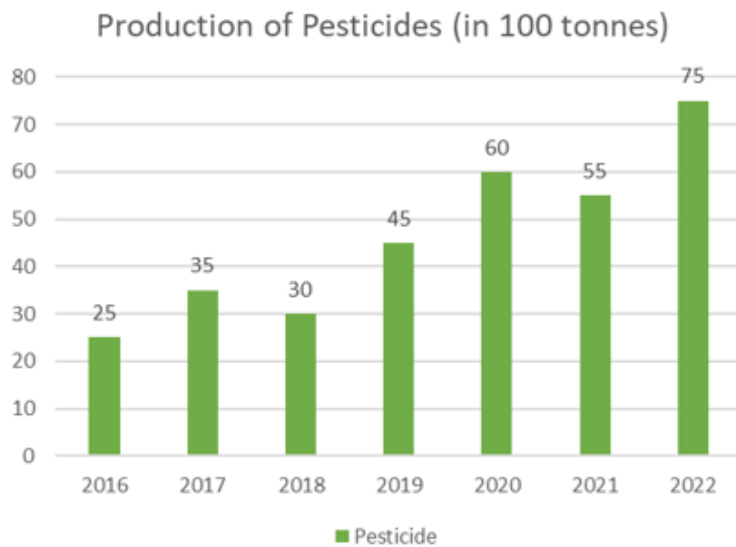
Q.15 In what time will ₹400 become ₹463.05 at 10% per annum, with interest compounded half-yearly?

- Ans
- ☐ 1. 24 months
 - ☐ 2. 12 months
 - ☒ 3. 18 months
 - ☐ 4. 15 months

Q.16 The average of the first nine prime numbers is:

- Ans
- ☐ 1. 9
 - ☐ 2. 11
 - ☒ 3. $11\frac{1}{9}$
 - ☐ 4. $11\frac{2}{9}$

- Q.17 Study the following bar graph and answer the question based on it.
Production of Pesticides by ABC Ltd. Company (in 100 tonnes) during 2016 to 2022



What was the percentage increase in the production of pesticides in 2022 compared to that in 2020?

- Ans
- ☐ 1. 15%
 - ☐ 2. 16%
 - ☐ 3. 20%
 - ☒ 4. 25%

- Q.18 Find the least number of square tiles required to pave the ceiling of a room 15 m, 17 cm long and 9 m, 2 cm broad.702

- Ans
- ☐ 1. 710
 - ☒ 2. 814
 - ☐ 3. 715
 - ☐ 4. 913

- Q.19 The number 6966 is divisible by which of the following numbers?

- Ans
- ☐ 1. 76
 - ☐ 2. 85
 - ☒ 3. 86
 - ☐ 4. 91

- Q.20 A shopkeeper mixes 2 kg of cashews costing ₹600 per kg with 3 kg of cashews costing ₹800 per kg. What is the average cost price (per kg) of the mixture?

- Ans
- ☐ 1. ₹780
 - ☒ 2. ₹720
 - ☐ 3. ₹700
 - ☐ 4. ₹750

Section : Arithmetical and Numerical Ability1

- Q.1 A dealer gives three successive discounts of 20%, 30% and 25% on an item. What is the single equivalent discount on the item?

- Ans
- ☐ 1. 52%
 - ☐ 2. 42%
 - ☒ 3. 58%
 - ☐ 4. 49%

Q.2 Mohini had to make a model of a cylindrical kaleidoscope for her science project. She wanted to use chart paper to make the curved surface of the kaleidoscope. What area of chart paper would be required if she wanted to make a kaleidoscope with a length of 35 cm and a radius of 3.5 cm?

(Use $\pi = \frac{22}{7}$)

- Ans**
- ☐ 1. 780 cm²
 - ☐ 2. 870 cm²
 - ☒ 3. 770 cm²
 - ☐ 4. 840 cm²

Q.3 Find the rate of discount being given on the marked price of an article whose selling price is ₹1,200 after deducting a discount of ₹350 on its marked price.

- Ans**
- ☐ 1. $19\frac{3}{29}\%$
 - ☐ 2. $12\frac{3}{17}\%$
 - ☒ 3. $22\frac{18}{31}\%$
 - ☐ 4. $15\frac{4}{27}\%$

Q.4 A cistern is being filled by two pipes. Pipe A can fill the cistern in 5 hours, and Pipe B can fill it in 10 hours. How long will it take for both pipes to fill the cistern together?

- Ans**
- ☒ 1. 3 hours 20 minutes
 - ☐ 2. 4 hours 20 minutes
 - ☐ 3. 2 hours 30 minutes
 - ☐ 4. 3 hours 30 minutes

Q.5 If $4A = 5B = 11C$, then $A : B : C$ is equal to:

- Ans**
- ☐ 1. 44 : 55 : 20
 - ☐ 2. 55 : 44 : 30
 - ☐ 3. 20 : 25 : 77
 - ☒ 4. 55 : 44 : 20

Q.6 A triangle is defined by the coordinates (1, 2), (7, 10), and (13, 2). Calculate the area of this triangle.

- Ans**
- ☐ 1. 42 square units
 - ☐ 2. 24 square units
 - ☐ 3. 44 square units
 - ☒ 4. 48 square units

Q.7 A person covers a certain distance with a speed of 16 km/h in 8 min. If he wants to cover the same distance in 5 min, what should be his speed?

- Ans**
- ☐ 1. 24.6 km/h
 - ☐ 2. 26.6 km/h
 - ☐ 3. 23.6 km/h
 - ☒ 4. 25.6 km/h

Q.8 Which of the following ratios is the largest? ($x > 10$)

- Ans**
- ☐ 1. $(x - 5):(x + 3)$
 - ☐ 2. $(x - 3):(x + 5)$
 - ☐ 3. $(x - 1):(x + 7)$
 - ☒ 4. $(x - 2):(x + 4)$

Q.9 Three pipes A, B and C can fill an empty cistern in 2, 4 and 8 hours, respectively. If all the pipes are opened together in an empty tank, in what time will the cistern be full?

- Ans
- ☒ 1. $1\frac{2}{7}$ hours
 - ☒ 2. $1\frac{1}{8}$ hours
 - ☒ 3. $\frac{7}{8}$ hours
 - ☒ 4. $1\frac{1}{7}$ hours

Q.10 Anjali gets a 86% discount on a dryer whose marked price is ₹4,500. She receives a further 30% discount on the reduced price for paying by credit card. How much does she pay (in ₹)?

- Ans
- ☒ 1. 440
 - ☒ 2. 441
 - ☒ 3. 442
 - ☒ 4. 438

Q.11 If a person covers three equal distances at speeds of 32 km/h, 15 km/h and 10 km/h respectively, then find out his average speed during the whole journey.

- Ans
- ☒ 1. $16\frac{3}{19}$ km/h
 - ☒ 2. $13\frac{3}{19}$ km/h
 - ☒ 3. $15\frac{3}{19}$ km/h
 - ☒ 4. $14\frac{3}{19}$ km/h

Q.12 Nirbhay can do $\frac{1}{5}$ th of a piece of work in 5 days and Vismay can do

Find the number of days taken to complete the work if both work together.
(Round the answer to one decimal place.)

- Ans
- ☒ 1. 10.6
 - ☒ 2. 18.6
 - ☒ 3. 17.9
 - ☒ 4. 19.8

Q.13 A sells a MacBook to B at a loss of 60%, and B sells the MacBook to C at a profit of 25%. If C purchased the MacBook for ₹97,041, then what was the cost (in ₹) of the MacBook for A?

- Ans
- ☒ 1. 1,94,082
 - ☒ 2. 1,94,077
 - ☒ 3. 1,94,080
 - ☒ 4. 1,94,086

Q.14 A tank is filled in 3 hours by three pipes A, B and C working together . Pipe C is twice as fast as B, and B is twice as fast as A. How much time will pipe A alone take to fill the tank?

- Ans
- ☐ 1. 18 hours
 - ☐ 2. 15 hours
 - ☐ 3. 20 hours
 - ☒ 4. 21 hours

Q.15 Find the total surface area of a sphere of diameter $8\sqrt{11}$ cm. (Use $\pi = \frac{22}{7}$ and round off your answer to two decimal places.)

- Ans
- ☐ 1. 2412.77 cm²
 - ☐ 2. 2312.67 cm²
 - ☒ 3. 2212.57 cm²
 - ☐ 4. 2512.87 cm²

Q.16 Nikhil covers 800 km by plane at 200 km/hr, 540 km by ship at 90 km/hr, and 320 km by train at 40 km/hr. What is his average speed (in km/hr, correct to two decimal places) for the entire journey?

- Ans
- ☐ 1. 102.22
 - ☐ 2. 82.22
 - ☐ 3. 72.22
 - ☒ 4. 92.22

Q.17 Find the volume of a cone with base radius 7 cm and height 14.8 cm (rounded off to two decimal places). (Use $\pi = 22/7$)

- Ans
- ☐ 1. 739.23 cm³
 - ☐ 2. 779.23 cm³
 - ☐ 3. 719.73 cm³
 - ☒ 4. 759.73 cm³

Q.18 In a class, boys to girls are in the ratio 4 : 5. If 6 more boys join, the ratio becomes 5 : 6. Find the original number of students.

- Ans
- ☐ 1. 500
 - ☐ 2. 300
 - ☐ 3. 354
 - ☒ 4. 324

Q.19 A boat travels 30 km downstream and returns the same distance upstream. If the speed of the current is 5 km/hr, find the speed of the boat in still water.

- Ans
- ☒ 1. 15 km/hr
 - ☐ 2. 17 km/hr
 - ☐ 3. 12 km/hr
 - ☐ 4. 10 km/hr

Q.20 Find the fourth proportional to 44, 132 and 152.

- Ans
- ☐ 1. 440
 - ☐ 2. 462
 - ☐ 3. 400
 - ☒ 4. 456

Q.19 The abolition of untouchability is provided under which of the following Articles of the Indian Constitution?

- Ans**
- ☒ 1. Article 15
 - ☒ 2. Article 17
 - ☒ 3. Article 16
 - ☒ 4. Article 18

Q.20 In which of the following states of India is the primitive form of cultivation known as 'Dipa'?

- Ans**
- ☒ 1. Madhya Pradesh
 - ☒ 2. Odisha
 - ☒ 3. Andhra Pradesh
 - ☒ 4. Chhattisgarh

Section : **Arithmetical and Numerical Ability**

Q.1 A company's revenue falls from ₹20 lakh to ₹18 lakh in a year. Find the percentage decrease in the revenue.

- Ans**
- ☒ 1. 12%
 - ☒ 2. 5%
 - ☒ 3. 10%
 - ☒ 4. 2%

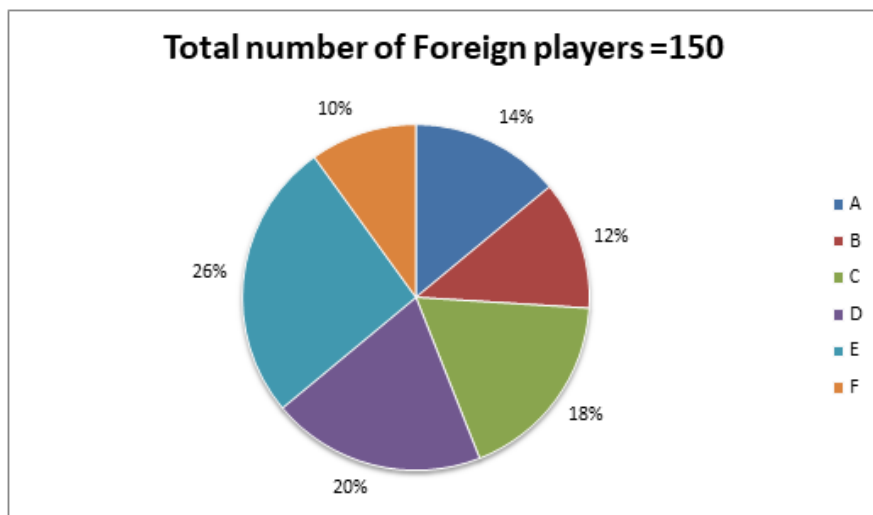
Q.2 Study the following table and answer the questions based on it.
Given table shows that the courier charges (in ₹) for sending a 1 kg parcel from one city to another.

Cities	Delhi	Kolka	Luckno	Chandiga	Mumb
		ta	w	rh	ai
Delhi	.	60	50	40	90
Kolkata	60	.	50	60	60
Lucknow	50	50	.	50	55
Chandigarh	40	60	50	.	100
Mumbai	90	60	55	100	.

For sending a parcel from Mumbai the least charges will be for:

- Ans**
- ☒ 1. Lucknow
 - ☒ 2. Delhi
 - ☒ 3. Kolkata
 - ☒ 4. Chandigarh

Q.3 The following pie chart shows the percentage of foreign players in various teams in a cricket league. Study the pie chart carefully and answer the question that follows:



Find the number of foreign players in team E.

- Ans
- ☐ 1. 31
 - ☒ 2. 39
 - ☐ 3. 36
 - ☐ 4. 34

Q.4 If $x > 0$, and $\sqrt{x} = (7)^{15}$, then x is equal to:

- Ans
- ☐ 1. $\sqrt{(7)^{30}}$
 - ☒ 2. 7^{30}
 - ☐ 3. 7
 - ☐ 4. 7^{15}

Q.5 20% of a number is more than 20% of 570 by 200. The number is: 4506

- Ans
- ☐ 1. 1620
 - ☐ 2. 1420
 - ☒ 3. 1570
 - ☐ 4. 1670

Q.6 The product of the HCF and LCM of two numbers is 576. Find the second number, if the first number is 72.

- Ans
- ☐ 1. 16
 - ☒ 2. 8
 - ☐ 3. 24
 - ☐ 4. 32

Q.7 A manufacturer sells a product to a wholesaler at a profit of 25%. The wholesaler, in turn, sells it to a retailer at a profit of 60%, and the retailer sells it to a customer at a profit of 32%. If the customer pays ₹858, find the cost price (in ₹) for the manufacturer.

- Ans
- ☐ 1. 324
 - ☒ 2. 325
 - ☐ 3. 322
 - ☐ 4. 326

Q.8 A sum of ₹23,000 is invested at 10% per annum compounded annually for 3 years. What will be the compound interest?

- Ans
- ☐ 1. ₹7,480
 - ☐ 2. ₹7,173
 - ☒ 3. ₹7,613
 - ☐ 4. ₹7,250

Q.9 ₹5100 is lent at compound interest, compounded annually at 4% per annum for 2 years. Find the amount (in ₹) after two years.

- Ans
- ☐ 1. 5616.16
 - ☐ 2. 5505.05
 - ☒ 3. 5516.16
 - ☐ 4. 5556.56

Q.10 Find the square root of $\frac{(8-4\sqrt{2})(8+4\sqrt{2})}{(7-3\sqrt{5})(7+3\sqrt{5})}$.

- Ans
- ☐ 1. $\sqrt{2}$
 - ☐ 2. 2
 - ☒ 3. $2\sqrt{2}$
 - ☐ 4. $3\sqrt{2}$

Q.11 A store offers two kinds of fruits: apples priced at ₹30 each and oranges priced at ₹50 each. If a customer buys 4 apples and 6 oranges, what is the weighted average cost per fruit?

- Ans
- ☒ 1. ₹42
 - ☐ 2. ₹46
 - ☐ 3. ₹44
 - ☐ 4. ₹40

Q.12 Find the simple interest (in ₹) on ₹1,500 at 5% per month for 12 months.

- Ans
- ☒ 1. 900
 - ☐ 2. 150
 - ☐ 3. 112.50
 - ☐ 4. 75

Q.13 The product of the two numbers is 1500 and their HCF is 10. The numbers are

- Ans
- ☐ 1. 4
 - ☒ 2. 2
 - ☐ 3. 1
 - ☐ 4. 3

Q.14 The average of 9 numbers is 21. Eight of the numbers are 12, 20, 15, 18, 20, 21, 25, and 15. What is the ninth number?

- Ans
- ☐ 1. 53
 - ☐ 2. 28
 - ☒ 3. 43
 - ☐ 4. 33

Q.15 The average of 13 numbers is 21. If each number is multiplied by 7, then what will the new average be?

- Ans**
- ☐ 1. 21
 - ☒ 2. 147
 - ☐ 3. 13
 - ☐ 4. 7

Q.16 Kiran finds a 12% increase in the sales in the first year and 25% in the second year. If the current sales is ₹1,31,600, what was the sales (in ₹) two years ago?

- Ans**
- ☐ 1. 1,17,500
 - ☒ 2. 94,000
 - ☐ 3. 1,05,280
 - ☐ 4. 74,000

Q.17 By selling an article for ₹120, a man incurs a loss of 20%. At what price (in ₹) should he sell the article to gain 24%?

- Ans**
- ☐ 1. 176
 - ☐ 2. 206
 - ☒ 3. 186
 - ☐ 4. 196

Q.18 What will be the difference in the compound interests earned on a sum of ₹2,500 at 12% per annum for 1 year, when the interest is paid half yearly and yearly, respectively?

- Ans**
- ☐ 1. ₹35
 - ☒ 2. ₹9
 - ☐ 3. ₹15
 - ☐ 4. ₹26

Q.19 The price of a mobile was increased from ₹27,000 to ₹31,700. Find the percentage increase in the price (rounded off to two decimal places).

- Ans**
- ☐ 1. 17.07%
 - ☐ 2. 17.93%
 - ☐ 3. 17.78%
 - ☒ 4. 17.41%

Q.20 The marks of 5 students in a quiz are 40, 80, 50, 60, and 70. What is the average marks?

- Ans**
- ☐ 1. 65
 - ☐ 2. 52
 - ☒ 3. 60
 - ☐ 4. 72

Section : **Arithmetical and Numerical Ability1**

Q.1 Two pipes A and B together can fill a cistern in 4 hours. Had they been opened separately, then B would have taken 6 hours more than A to fill the cistern. How much time will be taken by B to fill two such cisterns separately?

- Ans**
- ☐ 1. 16 hours
 - ☐ 2. 12 hours
 - ☐ 3. 18 hours
 - ☒ 4. 24 hours

Q.2 A square and a rectangle have the same perimeter. The side of the square is 4 m more than the breadth of the rectangle. The length of the rectangle is 8 m more than its breadth. If the area of the square is 841 m^2 , find the difference between the area of the square and the area of the rectangle.

Ans ☒ 1. 16 m²

☐ 2. 18 m²

☐ 3. 14 m²

☐ 4. 12 m²

Q.3 ₹3,080 is divided into three parts in such a way that half of the first part, one-fourth of the second part and one-eighth of the third part are equal. What is the value of first part (in ₹)?

Ans ☐ 1. 740

☒ 2. 440

☐ 3. 240

☐ 4. 540

Q.4 A pipe can fill a tank in 7 hours. If the tank is already half filled, how much time will the pipe take to fill the remaining part?

Ans ☐ 1. 2.5 hours

☒ 2. 3.5 hours

☐ 3. 5.5 hours

☐ 4. 4.5 hours

Q.5 A shopkeeper sells one mobile for ₹17,160 at a profit of 4% and another mobile for ₹17,280 at a loss of 4%. What is the total gain or loss percentage of the shopkeeper?

Ans ☐ 1. $\frac{6}{34}\%$ Loss

☐ 2. 0% Profit

☒ 3. $\frac{4}{23}\%$ Loss

☐ 4. $\frac{8}{13}\%$ Profit

Q.6 Anil goes to his hometown at a speed of 30 km/hr and returns at a speed of 60 km/hr. If he takes a total of 23 hours, then what is his average speed (in km/hr) for the entire journey?

Ans ☐ 1. 38

☐ 2. 42

☒ 3. 40

☐ 4. 46

Q.7 A sphere has a surface area of 616 sq. cm. What is its radius? (Use $\pi = \frac{22}{7}$)

Ans ☒ 1. 7 cm

☐ 2. 5 cm

☐ 3. 7.5 cm

☐ 4. 3.5 cm

Q.8 Pipe M can fill the entire tank in 24 minutes while pipe N can empty it how long will it take to fill or empty the tank completely, if initially, or



- Ans
- ☐ 1. Emptied in 8 minutes
 - ☐ 2. Filled in 5 minutes
 - ☒ 3. Emptied in 5 minutes
 - ☐ 4. Filled in 8 minutes

Q.9 If x is inversely proportional to y , and $y = 8$ when $x = 9$, find the value of x when $y = 24$.

- Ans
- ☐ 1. 5
 - ☐ 2. 2
 - ☐ 3. 4
 - ☒ 4. 3

Q.10 Find the total surface area of a sphere of diameter $10\sqrt{13}$ cm. (Use $\pi = 22/7$) (Round off your answer to two decimal places)

- Ans
- ☐ 1. 4095.93 cm²
 - ☒ 2. 4085.71 cm²
 - ☐ 3. 4075.54 cm²
 - ☐ 4. 4065.47 cm²

Q.11 If x is the mean proportional between 8 and $2x$, find the positive value of x .

- Ans
- ☐ 1. 8
 - ☐ 2. 32
 - ☒ 3. 16
 - ☐ 4. 12

Q.12 A train running at speed of 90 km per hour crosses a platform double its length in 18 seconds. What is the length of the platform in meters?

- Ans
- ☐ 1. 250
 - ☐ 2. 340
 - ☐ 3. 285
 - ☒ 4. 300

Q.13 The labelled price of a product is ₹2,550. If it is sold at a 20% discount and still the dealer earns a 25% profit, what is the cost price?

- Ans
- ☐ 1. ₹1,789
 - ☒ 2. ₹1,632
 - ☐ 3. ₹1,972
 - ☐ 4. ₹1,882

Q.14 Maya gets a 37% discount on a grinder whose marked price is ₹5000. She receives a further 6% discount on the reduced price for paying by credit card. How much does she pay (in ₹)?

- Ans
- ☐ 1. 2958
 - ☐ 2. 2959
 - ☒ 3. 2961
 - ☐ 4. 2964

Q.17 The largest peninsular river, Godavari, originates from which of the following states?

- Ans**
- ☐ 1. Andhra Pradesh
 - ☐ 2. Madhya Pradesh
 - ☐ 3. Gujarat
 - ☒ 4. Maharashtra

Q.18 Which of the following is NOT classified as a Dravidian language?

- Ans**
- ☒ 1. Maithili
 - ☐ 2. Tulu
 - ☐ 3. Telugu
 - ☐ 4. Kannada

Q.19 Which of the following statements is FALSE about the Prime Minister's Employment Generation Programme?

- Ans**
- ☐ 1. Its objective is to create job opportunities in both rural and urban regions.
 - ☐ 2. Both existing and new enterprises are eligible under the scheme.
 - ☒ 3. The scheme is implemented by Ministry of Labour and Employment.
 - ☐ 4. It is a program that offers credit-linked subsidies.

Q.20 Which Article of the Indian Constitution deals with the composition of the Parliament?

- Ans**
- ☐ 1. Article 80
 - ☐ 2. Article 82
 - ☐ 3. Article 81
 - ☒ 4. Article 79

Section : Arithmetical and Numerical Ability

Q.1 A manufacturer sells a product to a wholesaler at a profit of 40%. The wholesaler, in turn, sells it to a retailer at a profit of 25%, and the retailer sells it to a customer at a profit of 44%. If the customer pays ₹630, find the cost price (in ₹) for the manufacturer.

- Ans**
- ☒ 1. 250
 - ☐ 2. 252
 - ☐ 3. 247
 - ☐ 4. 251

Q.2 A town has a current population of 40,000 people and an annual growth rate of 2.5%. Assuming the population grows exponentially, calculate the population after 4 years (rounded off to the nearest integer).

- Ans**
- ☐ 1. 44,353
 - ☐ 2. 44,193
 - ☐ 3. 44,079
 - ☒ 4. 44,153

Q.3 The population of a Meerut 2 years ago was 2,20,000. Due to migration to cities, it decreases every year at the rate of 5% per annum. Find its present population.

- Ans**
- ☐ 1. 1,94,560
 - ☐ 2. 1,96,500
 - ☒ 3. 1,98,550
 - ☐ 4. 1,89,550

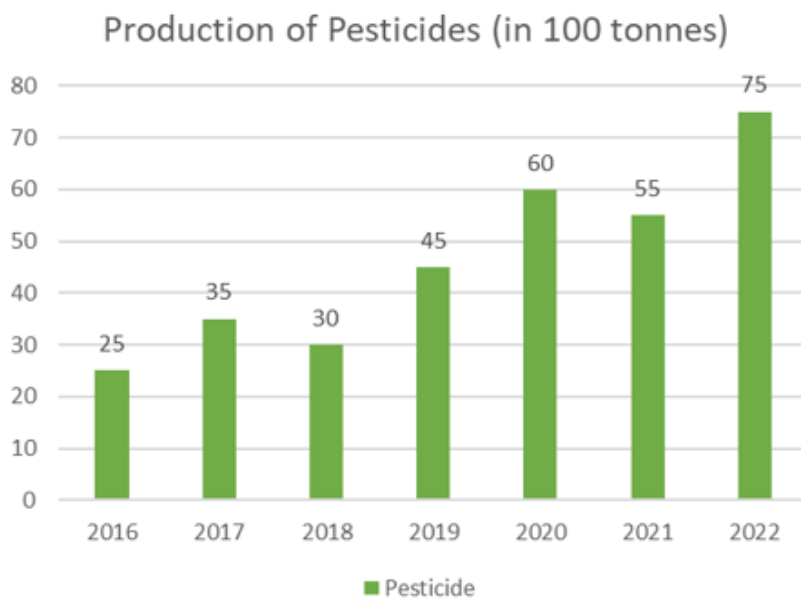
Q.4 ₹32,000 is lent out for 2 years at 20% compound interest per annum. If the interest had been compounded half yearly instead of compounded annually, then ₹X more would have been earned as interest. What is the value of X?
(Nearest to its integer)

- Ans
- ☐ 1. 781
 - ☐ 2. 791
 - ☐ 3. 761
 - ☒ 4. 771

Q.5 In Grade 10 of a school, section A has 120 students and section B has 80 students. The average score in a mathematics test is 78 for Section A and 84 for Section B. Find the overall average score of all the students of Grade 10.

- Ans
- ☒ 1. 80.4
 - ☐ 2. 84
 - ☐ 3. 81.5
 - ☐ 4. 78

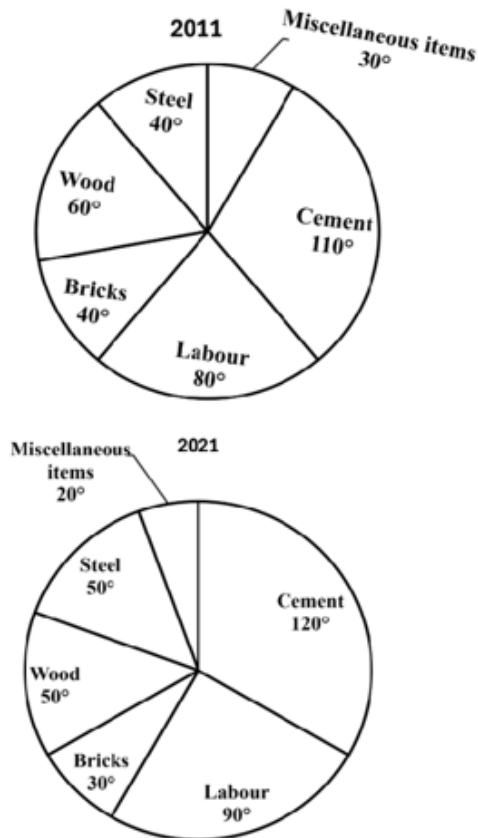
Q.6 Study the following bar graph and answer the question based on it.
Production of Pesticides by ABC Ltd. Company (in 100 tonnes)
from 2016 to 2022.



What was the percentage increase in the production of pesticides in 2019 compared to that in 2018?

- Ans
- ☐ 1. 45%
 - ☒ 2. 50%
 - ☐ 3. 55%
 - ☐ 4. 60%

Q.7 The following pie-charts show the expenses on various heads in construction of a house in 2011 and 2021.



The percentage increase in the amount spent on labour from 2011 to 2021, given that the total amount spent on the construction of the house is ₹ 3,60,000 in 2011 and ₹ 4,80,000 in 2021, is:

- Ans
- ☒ 1. 45%
 - ☒ 2. 50%
 - ☒ 3. 40%
 - ☒ 4. 55%

Q.8 The value of $\sqrt{100 \div 0.01 \times 0.25}$ is:

- Ans
- ☒ 1. 50
 - ☒ 2. 38
 - ☒ 3. 48
 - ☒ 4. 52

Q.9 If 723y56z is a seven-digit number that is divisible by 6, which of the options below can be a possible pair of values of y and z?

- Ans
- ☒ 1. y = 3; z = 0
 - ☒ 2. y = 1; z = 0
 - ☒ 3. y = 0; z = 1
 - ☒ 4. y = 3; z = 2

Q.10 The LCM of $3^3 \times 8^2 \times 13$, $3^2 \times 13^2 \times 17$, and $8^3 \times 13^2 \times 17^2$ is:

- Ans
- ☒ 1. $33 \times 82 \times 132 \times 17$
 - ☒ 2. $32 \times 82 \times 132 \times 173$
 - ☒ 3. $32 \times 83 \times 13 \times 172$
 - ☒ 4. $33 \times 83 \times 132 \times 172$

Q.11 A manufacturer sells a product to a wholesaler at a profit of 25%. The wholesaler, in turn, sells it to a retailer at a profit of 60%, and the retailer sells it to a customer at a profit of 25%. If the customer pays ₹485, find the cost price (in ₹) for the manufacturer.

Ans ☒ 1. 194

☐ 2. 191

☐ 3. 193

☐ 4. 192

Q.12 Find the simple interest (in ₹) on ₹1,500 at 5% per month for 6 months.

Ans ☐ 1. 37.50

☐ 2. 57.50

☐ 3. 75

☒ 4. 450

Q.13 The HCF and LCM of two numbers are 15 and 180, respectively. If one of the numbers is 45, find the other one.

Ans ☒ 1. 60

☐ 2. 105

☐ 3. 120

☐ 4. 75

Q.14 The average weight (in kg) of a family of five members whose weights are 40 kg, 49 kg, 57 kg, 71 kg and 36 kg is:

Ans ☒ 1. 50.6

☐ 2. 51.6

☐ 3. 49.6

☐ 4. 52.6

Q.15 There are 29 members in group A, 11 members in group B, and 53 members in group C. All the members of these groups went to a restaurant. The average amount spent per member in groups A, B, and C is ₹461, ₹399, and ₹244 respectively. Find the overall average amount spent per member (in ₹).

Ans ☐ 1. 326

☐ 2. 333

☐ 3. 327

☒ 4. 330

Q.16 20% of a number is more than 20% of 580 by 180. The number is:

Ans ☐ 1. 1330

☐ 2. 1580

☐ 3. 1530

☒ 4. 1480

Q.17 20% of a number is more than 20% of 580 by 170. The number is:

Ans ☐ 1. 1280

☐ 2. 1480

☐ 3. 1530

☒ 4. 1430

Q.18 The average of 13 numbers is 21. If each number is multiplied by 3, then what will the new average be?

- Ans
- ☐ 1. 21
 - ☒ 2. 63
 - ☐ 3. 3
 - ☐ 4. 13

Q.19 The monthly salary of a person is ₹40,000. He received an increment of ₹5,000 per month. What is the percentage increase in his monthly salary?

- Ans
- ☒ 1. 12.5%
 - ☐ 2. 10.5%
 - ☐ 3. 20.5%
 - ☐ 4. 18.5%

Q.20 3% of a number is what percentage of 2% of the same number?

- Ans
- ☐ 1. 66.67%
 - ☐ 2. 60%
 - ☐ 3. 30%
 - ☒ 4. 150%

Section : Arithmetical and Numerical Ability1

Q.1 A container contains a mixture of two types of liquids, X and Y in the ratio 5:4. If 18 litres of mixture is removed and the same quantity of liquid Y is added, then the ratio becomes 5:7. Select the correct statement from the following:

- Ans
- ☐ 1. The quantity of liquid Y after removal is 34 litres.
 - ☒ 2. The quantity of liquid X after removal is 30 litres.
 - ☐ 3. The quantity of liquid after removal is 52 litres.
 - ☐ 4. The quantity of liquid before removal is 70 litres.

Q.2 What is the perimeter (in cm) of a regular hexagon whose side measures 4.5 cm?

- Ans
- ☒ 1. 27
 - ☐ 2. 36
 - ☐ 3. 25
 - ☐ 4. 31

Q.3 M and N are two towns. A man drives from M to N at a speed of 80 km/h. He stops at N for 5 hours and then heads back to M at a speed of 64 km/h, following the same route. What is his average speed (in km/h), including the period of rest, if he takes 32 hours for the entire trip?

- Ans
- ☒ 1. 60
 - ☐ 2. 57
 - ☐ 3. 64
 - ☐ 4. 55

Q.4 Amit takes 50% more time to complete the work than Sumit. Working together, they take 20 days to complete the work. How much time will Amit take to complete the work alone?

- Ans
- ☐ 1. 60 days
 - ☐ 2. $33\frac{1}{3}$ days
 - ☐ 3. 40 days
 - ☒ 4. 50 days

Q.5 Ranjeeth bought a certain article for ₹86,000. He intends to sell it with a profit of 20%. What should be the selling price of the article?

- Ans
- ☐ 1. ₹1,72,000
 - ☐ 2. ₹1,08,200
 - ☒ 3. ₹1,03,200
 - ☐ 4. ₹1,02,400

Q.6 A seller allows a 10% discount on the marked price of an article and still makes a profit of 25%. What will be the profit percentage if the discount is increased to 20%?

- Ans
- ☐ 1. 10%
 - ☐ 2. $11\frac{1}{11}\%$
 - ☒ 3. $11\frac{1}{9}\%$
 - ☐ 4. 14%

Q.7 Three pipes, X, Y and Z, can fill a tank from empty to full in 1 hour, 40 minutes and 20 minutes, respectively. When the tank is empty, all three pipes are opened simultaneously. Pipe X discharges chemical solution A, pipe Y discharges solution B, and pipe Z discharges solution C. What is the proportion of solution C in the liquid in the tank after 6 minutes?

- Ans
- ☐ 1. $\frac{9}{11}$
 - ☐ 2. $\frac{3}{11}$
 - ☒ 3. $\frac{6}{11}$
 - ☐ 4. $\frac{4}{11}$

Q.8 Two pipes A and B can fill a tank in 21 minutes and 12 minutes, respectively. Both the pipes are opened together but after 4 minutes, pipe A is turned off. What is the total time (in minutes) required to fill the remaining tank?

- Ans
- ☐ 1. $\frac{39}{7}$
 - ☐ 2. $\frac{43}{7}$
 - ☐ 3. $\frac{38}{7}$
 - ☒ 4. $\frac{40}{7}$

Q.9 A cuboid has dimensions in the ratio 6:5:3. If its total surface area is 882 cm², find its volume (rounded off to two decimal places).

- Ans
- ☐ 1. 1,646.12 cm³
 - ☐ 2. 1,626.82 cm³
 - ☒ 3. 1,666.82 cm³
 - ☐ 4. 1,606.12 cm³

Q.10 A, B and C started a business, investing amounts of ₹1125, ₹1250, and ₹1375 respectively. If B's share in the profit earned by them is ₹900, what is the difference in the profit (in ₹) earned by A and C?

- Ans
- ☐ 1. 210
 - ☐ 2. 175
 - ☐ 3. 195
 - ☒ 4. 180

Q.11 A station is located 168 km from another station. A train departed at a speed of 52 km/hr from the first station to the second one. At the same time, another train started from the second station to the first one at a speed of 39 km/hr. At what distance (in km) from the first station do the trains meet?

- Ans
- ☐ 1. 90
 - ☐ 2. 72
 - ☐ 3. 82
 - ☒ 4. 96

Q.12 If a shopkeeper gives an offer on his items "Buy 4, get 3 free", then what is the discount percentage (rounded off to two decimal places) given by the shopkeeper?

- Ans
- ☐ 1. 52.86%
 - ☐ 2. 46.86%
 - ☒ 3. 42.86%
 - ☐ 4. 38.86%

Q.13 The marked price of a ceiling fan is ₹1,860, and the shopkeeper allows a discount of 12% on it. Find the selling price of the fan.

- Ans
- ☒ 1. ₹1,636.80
 - ☐ 2. ₹1,570.70
 - ☐ 3. ₹1,345.20
 - ☐ 4. ₹1,480.60

Q.14 A conical tent is H metres high and the base circumference is 88 metres. If one square metres canvas costs ₹10, then the cost of the canvas required to make it is ₹6,600. The value of H is: (Use $\pi=22/7$)

- Ans
- ☐ 1. 5.23
 - ☐ 2. 6
 - ☐ 3. $5\frac{6}{7}$
 - ☒ 4. $\sqrt{29}$

Q.15 Aman travels a distance of 5 km in 2 hours 30 minutes. What is his speed?

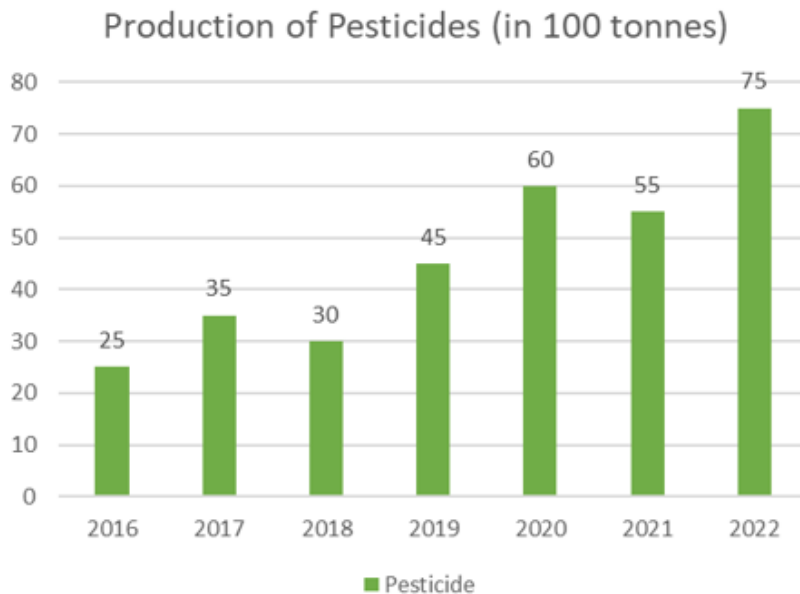
- Ans
- ☒ 1. 2 km/h
 - ☐ 2. 4 km/h
 - ☐ 3. 5 km/h
 - ☐ 4. 3 km/h

Q.16 A pipe can fill a tank in 8 hours. Another pipe can empty the filled tank in 40 hours. If both the pipes are opened simultaneously, then the time (in hours) in which the tank will be filled is:

- Ans
- ☐ 1. 13
 - ☐ 2. 11
 - ☐ 3. 12
 - ☒ 4. 10

Q.1 Study the following bar graph and answer the question based on it.

Production of Pesticides by ABC Ltd. Company (in 100 tonnes) from 2016 to 2022.



The production for the year 2018 is what percent of the production for the year 2020?

- Ans
- ☐ 1. 45%
 - ☐ 2. 55%
 - ☒ 3. 50%
 - ☐ 4. 60%

Q.2 The average salary of 18 workers in a factory is ₹12,000 per month. The average salary of 7 supervisors is ₹22,000 per month. Find the average monthly salary of all 25 employees together.

- Ans
- ☐ 1. ₹14,600
 - ☐ 2. ₹14,400
 - ☒ 3. ₹14,800
 - ☐ 4. ₹14,200

Q.3 There are 17 members in group A, 88 members in group B, and 63 members in group C. All the members of these groups went to a restaurant. The average amount spent per member in groups A, B, and C is ₹127, ₹148, and ₹135, respectively. Find the overall average amount spent per member (in ₹).

- Ans
- ☒ 1. 141
 - ☐ 2. 139
 - ☐ 3. 146
 - ☐ 4. 137

Q.4 Study the following bar graph and answer the question based on it.

The given chart shows the number of students in Class 7, Class 8, Class 9, and Class 10 who got first division, second division and failed in the final examinations.



What is pass percentage (rounded off to two decimal places) of Class 7?

- Ans
- ☐ 1. 92.92%
 - ☐ 2. 83.33%
 - ☐ 3. 88.88%
 - ☒ 4. 85.71%

Q.5 Dina appears in an examination, where the overall percentage of marks in three subjects (with equal maximum marks) taken together required to pass the examination is 45%. Dina scores 59, 54 and 66 in the three subjects and clears the examination by scoring 17 marks more than the pass marks. By what percent should Dina's marks increase to achieve 55% in the subject with the least score?

- Ans
- ☐ 1. $17\frac{3}{4}\%$
 - ☐ 2. 10%
 - ☒ 3. $22\frac{2}{9}\%$
 - ☐ 4. 12%

Q.6 Find the compound interest on ₹64000 for 2 years at the rate of 10% per annum compounded half yearly.

- Ans
- ☐ 1. ₹14454.60
 - ☒ 2. ₹13792.40
 - ☐ 3. ₹12787.80
 - ☐ 4. ₹13225.60

Q.7 A manufacturer sells a product to a wholesaler at a profit of 25%. The wholesaler, in turn, sells it to a retailer at a profit of 40%, and the retailer sells it to a customer at a profit of 28%. If the customer pays ₹336, find the cost price (in ₹) for the manufacturer.

- Ans
- ☒ 1. ₹150
 - ☐ 2. ₹148
 - ☐ 3. ₹152
 - ☐ 4. ₹149

Q.8 A worker earns ₹500 per day for 8 days and ₹700 per day for 2 days. What are his average daily earnings (in ₹)?

- Ans
- ☐ 1. 440
 - ☒ 2. 540
 - ☐ 3. 230
 - ☐ 4. 640

Q.9 There are 66 members in group A, 34 members in group B, and 57 members in group C. All the members of these groups went to a restaurant. The average amount spent per member in groups A, B, and C is ₹364, ₹145, and ₹255 respectively. Find the overall average amount spent per member (in ₹).

- Ans
- ☐ 1. 278
 - ☐ 2. 282
 - ☒ 3. 277
 - ☐ 4. 276

Q.10 Find the simple interest (in ₹) on ₹1,500 at 5% per month for 1 month.

- Ans
- ☐ 1. 18.75
 - ☐ 2. 12.50
 - ☒ 3. 75
 - ☐ 4. 6.25

Q.11 The LCM of $2^3 \times 6^2 \times 11$, $2^2 \times 11^2 \times 16$ and $6^3 \times 11^2 \times 16^2$ is:

- Ans
- ☒ 1. $211 \times 33 \times 112$
 - ☐ 2. $212 \times 33 \times 112$
 - ☐ 3. $211 \times 34 \times 112$
 - ☐ 4. $211 \times 33 \times 113$

Q.12 The price of electronic items increased by 30% and then decreased by 30%. The net change in value is:

- Ans
- ☒ 1. decrease of 9%
 - ☐ 2. increase of 9%
 - ☐ 3. decrease of 6%
 - ☐ 4. increase of 6%

Q.13 If 3584y8 is a six-digit number that is divisible by 6, what is the smallest possible value of y?

- Ans
- ☐ 1. 4
 - ☐ 2. 3
 - ☐ 3. 5
 - ☒ 4. 2

Q.14 20% of a number is more than 20% of 570 by 230. The number is:4503

- Ans
- ☐ 1. 1770
 - ☒ 2. 1720
 - ☐ 3. 1570
 - ☐ 4. 1820

Q.15 A sells a Laptop to B at a loss of 32% and B sells the laptop to C at a profit of 6%. If C purchased the laptop for ₹8109, then what was the cost price (in ₹) of the laptop for A?2626

- Ans**
- ☐ 1. 10,899
 - ☐ 2. 11,267
 - ☐ 3. 11,268
 - ☒ 4. 11,250

Q.16 The price of a mobile was increased from ₹37,000 to ₹47,000. Find the percentage increase in its price (rounded off to two decimal places).

- Ans**
- ☒ 1. 27.03%
 - ☐ 2. 27.87%
 - ☐ 3. 27.31%
 - ☐ 4. 27.43%

Q.17 Three bells toll together in the beginning and then toll at intervals of 12 seconds, 15 seconds and 75 seconds, respectively. How many times will they toll together in 30 minutes, excluding the initial toll, but including the final one?

- Ans**
- ☐ 1. 2
 - ☐ 2. 4
 - ☒ 3. 6
 - ☐ 4. 5

Q.18 The simplified value of $228 \div \left[\frac{6}{3} \times \{ 4 + 4 - (5 + 7 - (3 + 3)) \} \right]$ is

- Ans**
- ☐ 1. 61
 - ☒ 2. 57
 - ☐ 3. 58
 - ☐ 4. 60

Q.19 The population of a village 2 years ago was 2,27,500. Due to migration to cities, it decreases at the rate of 30% every year. What is the decrease in its population in two years?

- Ans**
- ☐ 1. 1,15,650
 - ☒ 2. 1,16,025
 - ☐ 3. 1,15,620
 - ☐ 4. 1,16,250

Q.20 A certain sum of money becomes 1.96 times of itself in 2 years. Find the rate of interest per annum, compounded annually.

- Ans**
- ☒ 1. 40%
 - ☐ 2. 45%
 - ☐ 3. 42%
 - ☐ 4. 35%

Q.1 ₹5,180 into three parts in such a way that half of the first part, one-fourth of the second part and one-eighth of the third part are equal. What is the value of the first part (in ₹)?

- Ans
- ☐ 1. 1,040
 - ☐ 2. 540
 - ☐ 3. 440
 - ☒ 4. 740

Q.2 What would be the difference (in ₹) between a single discount of 25% and two successive discounts of 20% and 5%, on a purchase of ₹2684?

- Ans
- ☐ 1. 13.20
 - ☐ 2. 134.20
 - ☐ 3. 268.40
 - ☒ 4. 26.84

Q.3 The length, breadth and height of a cuboid are 10.50 cm, 7.70 cm and 5.25 cm. Find the difference between its total surface area and lateral surface area.

- Ans
- ☐ 1. 165.70 cm²
 - ☐ 2. 111.70 cm²
 - ☒ 3. 161.70 cm²
 - ☐ 4. 141.70 cm²

Q.4 A train whose length is 750 m, passes a pole in 20 seconds. Find the speed of the train (km/hr).

- Ans
- ☐ 1. 153
 - ☐ 2. 144
 - ☒ 3. 135
 - ☐ 4. 126

Q.5 Ajeet walks to a viewpoint and returns to the starting point by car, taking a total time of 6 hours and 45 minutes. He would have saved 2 hours if he had driven both ways. How long would it have taken him to walk both ways?

- Ans
- ☐ 1. 10 hours and 45 minutes
 - ☐ 2. 7 hours and 30 minutes
 - ☒ 3. 8 hours and 45 minutes
 - ☐ 4. 9 hours and 30 minutes

Q.6 When the radius of a spherical balloon increases from 5 cm to 10 cm, how many times is its final volume compared to its initial volume?

- Ans
- ☒ 1. 8 times
 - ☐ 2. 4 times
 - ☐ 3. 16 times
 - ☐ 4. 2 times

Q.7 ₹9855 is divided among S, B, and C in such a way that if ₹18, ₹23, and ₹22 are to be deducted from their respective shares, they have money in the ratio 2 : 3 : 4. Find the difference between B's and C's shares.

- Ans
- ☒ 1. ₹1087
 - ☐ 2. ₹1012
 - ☐ 3. ₹1186
 - ☐ 4. ₹1106

Q.8 A solid sphere of radius 6 cm is melted and recast into 8 identical smaller solid spheres. What will be the total surface area of all the smaller spheres?

- Ans
- ☐ 1. $308\pi \text{ cm}^2$
 - ☒ 2. $288\pi \text{ cm}^2$
 - ☐ 3. $328\pi \text{ cm}^2$
 - ☐ 4. $428\pi \text{ cm}^2$

Q.9 Two pipes, A and B, can fill a tank in 34 hours and 18 hours, respectively. If both the pipes are opened simultaneously, then the time taken to fill the tank is:

- Ans
- ☒ 1. $11\frac{10}{13} \text{ hours}$
 - ☐ 2. $14\frac{10}{13} \text{ hours}$
 - ☐ 3. $19\frac{10}{13} \text{ hours}$
 - ☐ 4. $15\frac{10}{13} \text{ hours}$

Q.10 A cyclist covers 48 km in 3 hours. How far does he go in 30 minutes?

- Ans
- ☐ 1. 9 km
 - ☐ 2. 10 km
 - ☐ 3. 7 km
 - ☒ 4. 8 km

Q.11 Pipe X can fill a tank in 10 hours. Pipe Y can empty it in 24 hours. If both the pipes are opened simultaneously, how much time will it take to fill the tank?

- Ans
- ☐ 1. $15\frac{1}{7} \text{ hours}$
 - ☐ 2. $16\frac{1}{7} \text{ hours}$
 - ☒ 3. $17\frac{1}{7} \text{ hours}$
 - ☐ 4. $18\frac{1}{7} \text{ hours}$

Q.12 A shopkeeper allows a discount of 22% on the marked price of an item, but charges a sales tax of 12% on the discounted price. If the customer pays ₹33,852 as the price including the sales tax, then the marked price (in ₹) is:

- Ans
- ☐ 1. 34,500
 - ☒ 2. 38,750
 - ☐ 3. 37,900
 - ☐ 4. 35,679

Q.13 Two men walk from a place with speeds of 13 km/hr and 20 km/hr, respectively. The first man takes 42 minutes more than the second one to cover the same distance. Find the distance (in km) of the journey.

- Ans
- ☒ 1. 26
 - ☐ 2. 21
 - ☐ 3. 24
 - ☐ 4. 28

Q.14 Rao bought a second-hand table for ₹ x . After this, Rao paid 5% of x for its transportation, 10% of x for repair, and 5% of x for painting. If Rao sold the table to Seth at a profit of 20%, what percentage more than x did Seth pay?

- Ans**
- ☒ 1. 44%
 - ☐ 2. 20%
 - ☐ 3. 40%
 - ☐ 4. 12.4%

Q.15 Two pipes can fill a tank in 30 and 35 minutes, respectively. Another pipe can empty 5 litres per minute. All three pipes together can fill the tank in 30 minutes. Find the capacity of the tank.

- Ans**
- ☐ 1. 125 litres
 - ☐ 2. 145 litres
 - ☒ 3. 175 litres
 - ☐ 4. 168 litres

Q.16 If $1.5 : 2.7 :: 4.2 : x$, then what is the value of x ?

- Ans**
- ☒ 1. 7.56
 - ☐ 2. 6.82
 - ☐ 3. 7.20
 - ☐ 4. 8.01

Q.17 An ice-cream cone has a radius of 3 cm and a height of 8 cm. What is the volume of the cone? (Use $\pi = 3.14$)

- Ans**
- ☐ 1. 56.52 cm^3
 - ☐ 2. 94.20 cm^3
 - ☒ 3. 75.36 cm^3
 - ☐ 4. 113.04 cm^3

Q.18 A furniture seller gains 80% by selling a wardrobe for ₹162 and gains 30% by selling a stool for ₹5,161. If he sells the wardrobe for ₹482, then what is the least price on which he must sell the stool to avoid any loss on the whole transaction?

- Ans**
- ☐ 1. ₹3,577
 - ☐ 2. ₹3,576
 - ☐ 3. ₹3,575
 - ☒ 4. ₹3,578

Q.19 In a company, a woman works for 14 hours to complete 7 applications, while a man works for 10 hours to complete 5 applications. How many applications can 11 men and 14 women complete after working for 6 hours?

- Ans**
- ☐ 1. 83
 - ☐ 2. 65
 - ☐ 3. 72
 - ☒ 4. 75

Q.20 ₹981 is divided among Sachin, Bharat, and Chitra in such a way that if ₹15, ₹20, and ₹19 be deducted from their respective shares, they have money in the ratio of 2:3:4. Find Bharat's share.

- Ans**
- ☐ 1. ₹399
 - ☐ 2. ₹309
 - ☐ 3. ₹359
 - ☒ 4. ₹329

Q.20 Which among the following pigments gives plants their green colour and helps plants create their own food through photosynthesis?

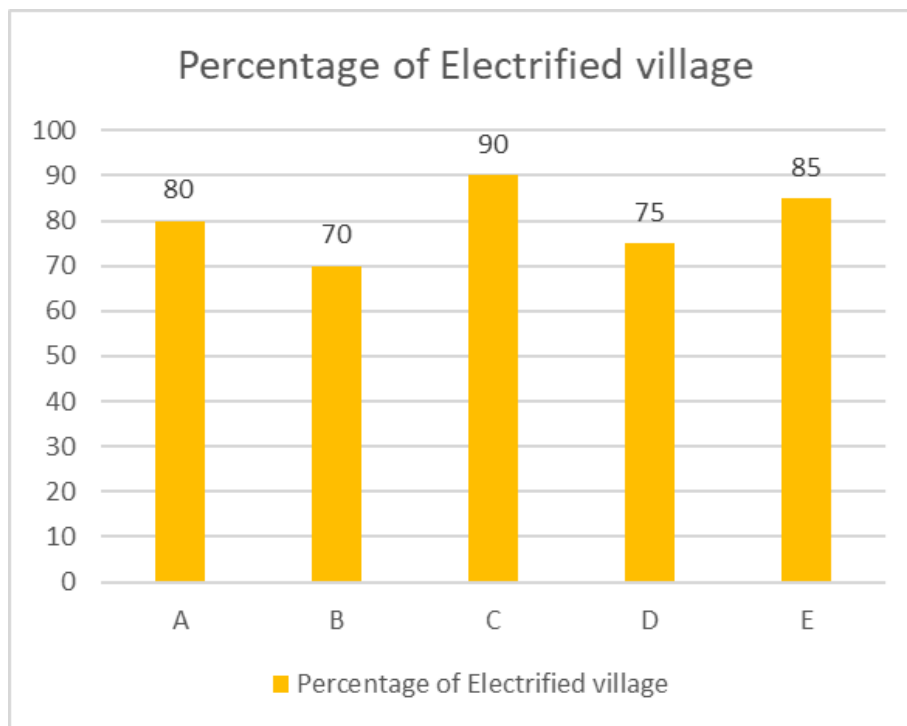
- Ans
- ☐ 1. Carotene
 - ☐ 2. Melanin
 - ☐ 3. Anthocyanin
 - ☒ 4. Chlorophyll

Section : Arithmetical and Numerical Ability

Q.1 Simplify: $(\sqrt{196} - \sqrt{144})^2 + (\sqrt{25} \times \sqrt{49}) - \sqrt{676} + \frac{\sqrt{81}}{\sqrt{9}}$

- Ans
- ☐ 1. 14
 - ☐ 2. 15
 - ☐ 3. 13
 - ☒ 4. 16

Q.2 Study the following bar graph and answer the questions based on it.
The given bar graph represents the Percentage of electrified villages in 5 states A, B, C, D, and E.



How many states have at least 85% electrified villages?

- Ans
- ☐ 1. 3
 - ☐ 2. 4
 - ☒ 3. 2
 - ☐ 4. 1

Q.3 Gopal's salary was first reduced by 40% and subsequently raised by 58%. How much per cent was his final salary lower compared to his initial salary?

- Ans
- ☐ 1. 58%
 - ☒ 2. 5.2%
 - ☐ 3. 23.2%
 - ☐ 4. 4.2%

Q.4 In what time will ₹56,200 become ₹61,960.5 at 5% per annum compounded annually?

- Ans
- ☒ 1. 1 year
 - ☒ 2. 2 years
 - ☒ 3. 3 years
 - ☒ 4. 4 years

Q.5 A sum of money amounts to ₹48,400 in two years and ₹53,240 in three years at the same rate of compound interest, compounded annually. Find the sum.

- Ans
- ☒ 1. ₹42,500
 - ☒ 2. ₹45,750
 - ☒ 3. ₹36,400
 - ☒ 4. ₹40,000

Q.6 In what ratio must a grocer mix two varieties of rice costing ₹268 and ₹178 per kg, respectively, to get a mixture of rice worth ₹246 per kg?¹⁴⁷⁷

- Ans
- ☒ 1. 11:34
 - ☒ 2. 13:37
 - ☒ 3. 12:29
 - ☒ 4. 14:31

Q.7 There are 60 members in group A, 42 members in group B, and 45 members in group C. All the members of these groups went to a restaurant. The average amount spent per member in groups A, B, and C is ₹335, ₹496, and ₹188 respectively. Find the overall average amount (in ₹) spent per member.

- Ans
- ☒ 1. 331
 - ☒ 2. 336
 - ☒ 3. 338
 - ☒ 4. 335

Q.8 A number when increased by 20%, gives 2610. The number is:

- Ans
- ☒ 1. 2175
 - ☒ 2. 1088
 - ☒ 3. 4350
 - ☒ 4. 6525

Q.9

Simplify: $\sqrt{55 + \sqrt{73 + \sqrt{55 + \sqrt{76 + \sqrt{25}}}}}$

- Ans
- ☒ 1. 8
 - ☒ 2. 4
 - ☒ 3. 12
 - ☒ 4. 11

Q.10 The average of three numbers is 21. If two numbers are 15 and 23, the third number is:⁴³⁷⁷

- Ans
- ☒ 1. 24
 - ☒ 2. 27
 - ☒ 3. 26
 - ☒ 4. 25

Q.11 100 men have provisions for 17 weeks. They are joined by 70 men. How long (in weeks) will the provisions last?265

- Ans ☒ 1. 10
☐ 2. 14
☐ 3. 12
☐ 4. 8

Q.12 Find the value of $\frac{(1.86)^2 - (0.96)^2}{3 \times 0.3}$ 4070

- Ans ☐ 1. 0.96
☐ 2. 0.9
☒ 3. 2.82
☐ 4. 1.86

Q.13 A sum of money placed at compound interest, compounded annually doubles itself in 3 years. In how many years will it amount to 16 times itself?

- Ans ☐ 1. 10
☐ 2. 13
☒ 3. 12
☐ 4. 11

Q.14 The price of a commodity increased by x%, and accordingly, the consumption of the commodity by a family decreased by 8% in order to keep their monthly expenditure the same. Find the value of x. (Round off your answer to one decimal place.)

- Ans ☐ 1. 4.7
☐ 2. 3.7
☒ 3. 8.7
☐ 4. 6.7

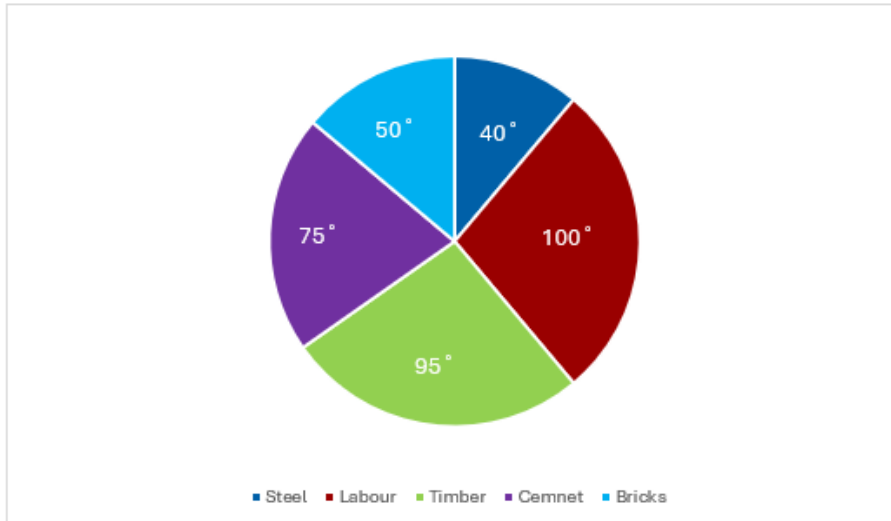
Q.15 Find the simple interest (in ₹) on ₹1,500 at 6% per month for 1 month.

- Ans ☐ 1. 7.50
☐ 2. 22.50
☒ 3. 90
☐ 4. 15

Q.16 Study the pie chart and answer the question that follows.

The following pie chart represents a total expenditure of ₹8,10,000 on different items in constructing a flat in a town.

The percentage of the total expenditure spent on labour, timber and cement is:



- Ans
- ☐ 1. 50%
 - ☐ 2. 90%
 - ☐ 3. 25%
 - ☒ 4. 75%

Q.17 Akshay spends 40% of his income. If he saves ₹36,000, then his income (in ₹) is:

- Ans
- ☐ 1. 14,400
 - ☐ 2. 59,000
 - ☐ 3. 61,000
 - ☒ 4. 60,000

Q.18 The average age of a certain number of people in a club was 51 years. A new group of 35 people, whose average age is 69 years, joined the club at the same time. As a result, the average age of all the members increased by 15 years. Now the number of members in the club is:1532

- Ans
- ☒ 1. 42
 - ☐ 2. 46
 - ☐ 3. 45
 - ☐ 4. 39

Q.19 A manufacturer sells a product to a wholesaler at a profit of 48%. The wholesaler, in turn, sells it to a retailer at a profit of 25%, and the retailer sells it to a customer at a profit of 25%. If the customer pays ₹629, find the cost price (in ₹) for the manufacturer.

- Ans
- ☐ 1. 274
 - ☐ 2. 271
 - ☐ 3. 269
 - ☒ 4. 272

Q.20 A manufacturer sells a product to a wholesaler at a profit of 28%. The wholesaler, in turn, sells it to a retailer at a profit of 25%, and the retailer sells it to a customer at a profit of 25%. If the customer pays ₹850, find the cost price (in ₹) for the manufacturer.

Ans ☒ 1. 425

☐ 2. 428

☐ 3. 426

☐ 4. 423

Section : Arithmetical and Numerical Ability1

Q.1 A playground is formed by joining a rectangle (30 m × 10 m) and a right triangle (base 10 m, height 12 m) along their common side of length 10 m. A circular flower bed of radius 5 m is placed inside the playground. Find the area left for playing. (Take $\pi = 3.14$)

Ans ☒ 1. 281.5 square meters

☐ 2. 320 square meters

☐ 3. 373.5 square meters

☐ 4. 348.5 square meters

Q.2 Certain products pass successively through the hands of three traders, and each of them sells the products at a profit of 30% of his cost price. If the last trader sold the products for ₹30,000, then how much (in ₹) did the first trader pay for them? (Correct to the nearest rupee.)

Ans ☐ 1. 15,536

☐ 2. 15,365

☒ 3. 13,655

☐ 4. 16,355

Q.3 A boat can travel 27 km downstream in 3 hours and 18 km upstream in 3 hours. What is the speed of the boat in still water?

Ans ☐ 1. 9.5 km/hr

☒ 2. 7.5 km/hr

☐ 3. 6.5 km/hr

☐ 4. 8.5 km/hr

Q.4 If $(x+2):(2x-3)=4:7$, find the value of x.

Ans ☐ 1. 22

☒ 2. 26

☐ 3. 13

☐ 4. 17

Q.5 A can complete a piece of work in 17 days, and B can complete the same work in 17 days. If they work together, how long will they take to finish the work?

Ans ☐ 1. 4.5 days

☒ 2. 8.5 days

☐ 3. 7.5 days

☐ 4. 6.5 days

Q.6 Pipes P and Q can fill a tank in 10 hours and 15 hours, respectively. Pipe R can empty the full tank in 30 hours. All the three pipes are opened together, but R is closed 4 hours before the tank is filled. In how many hours in total is the tank filled?

- Ans**
- ☐ 1. 5
 - ☐ 2. 5.5
 - ☒ 3. 6.5
 - ☐ 4. 6

Q.7 A man takes 9 hours and 37 minutes to walk to a certain place and ride back. He would have taken 3 hours less if he had ridden both ways. How much time would he take to walk both ways, if he takes a break of 40 minutes after walking one way?

- Ans**
- ☐ 1. 12 hours 17 minutes
 - ☐ 2. 12 hours 37 minutes
 - ☒ 3. 13 hours 17 minutes
 - ☐ 4. 13 hours 37 minutes

Q.8 A train, 240 m long, passes a railway platform, 320 m long, in 24 seconds. Find the speed of the train (rounded off to two decimal places).

- Ans**
- ☐ 1. 26.67 m/s
 - ☐ 2. 19.19 m/s
 - ☒ 3. 23.33 m/s
 - ☐ 4. 29.29 m/s

Q.9 In a certain school, the ratio of boys to girls is 4:9. If there are 2600 students in the school, then how many girls are there?

- Ans**
- ☐ 1. 1900
 - ☐ 2. 1700
 - ☐ 3. 1600
 - ☒ 4. 1800

Q.10 The incomes of A and B are in the ratio 7: 9, and their expenditures are in the ratio 4: 5. If A saves 12,000 and B saves 18,000 per month, find the monthly income of A.

- Ans**
- ☐ 1. ₹74,000
 - ☐ 2. ₹94,000
 - ☒ 3. ₹84,000
 - ☐ 4. ₹80,000

Q.11 If P, Q and R are three numbers such that $P : Q = 4 : 5$ and $Q : R =$



- Ans**
- ☐ 1. 12 : 13
 - ☒ 2. 24 : 35
 - ☐ 3. 16 : 21
 - ☐ 4. 18 : 29

Q.12 How much metal is required to make a solid cylinder of radius 4 cm and height 10 cm? (Use $\pi = 3.14$)

- Ans**
- ☐ 1. 492.4 cm³
 - ☐ 2. 512.4 cm³
 - ☒ 3. 502.4 cm³
 - ☐ 4. 506.4 cm³

Q.13 If Mohit can cover a distance of 1189 km in 29 hours, then what is his speed?

- Ans
- ☒ 1. 41 km/h
 - ☐ 2. 40 km/h
 - ☐ 3. 39 km/h
 - ☐ 4. 43 km/h

Q.14 A shopkeeper marks the price of a fan at 25% above its cost price and offers a 12% discount on its marked price. If he earns a profit of ₹256, what is the marked price of the fan?

- Ans
- ☐ 1. ₹3,650
 - ☐ 2. ₹3,520
 - ☐ 3. ₹3,000
 - ☒ 4. ₹3,200

Q.15 Eleven girls and nine boys can write a total of twenty-nine books in three days. Similarly, three girls and seventeen boys can write a total of thirty-seven books in the same amount of time. How many total books can seven boys and thirteen girls write in two days?

- Ans
- ☒ 1. 18
 - ☐ 2. 16
 - ☐ 3. 27
 - ☐ 4. 22

Q.16 An article is sold for ₹1,474 after a 33% discount. What was its marked price (in ₹)?

- Ans
- ☐ 1. 2272
 - ☐ 2. 2302
 - ☒ 3. 2200
 - ☐ 4. 2250

Q.17 Pipe A can fill a tank in 12 hours and pipe B in 15 hours. If both pipes are opened to fill an empty tank, how much time (in hours) will they take to fill the tank?

- Ans
- ☒ 1. $6\frac{2}{3}$
 - ☐ 2. $5\frac{2}{3}$
 - ☐ 3. $6\frac{1}{3}$
 - ☐ 4. $5\frac{1}{3}$

Q.18 The pillars of a temple are cylindrically shaped. If each pillar has a circular base of radius 50 cm and height 20 m, how much concrete mixture would be required to build 14 such pillars?

$\left(\text{Use } \pi = \frac{22}{7} \right)$

- Ans
- ☐ 1. 320 m³
 - ☐ 2. 380 m³
 - ☐ 3. 302 m³
 - ☒ 4. 220 m³

Q.17 मध्य प्रदेश का कौन-सा मंदिर अपनी कामोद्दीपक मूर्तियों के लिए प्रसिद्ध है, जो नागर शैली की वास्तुकला को निरूपित करता है?

- Ans
- ☐ 1. नवकाशी युक्त चेन्नाकेशव मंदिर
 - ☒ 2. शिखर युक्त खजुराहो मंदिर
 - ☐ 3. गोपुरम सहित मीनाक्षी मंदिर
 - ☐ 4. पहियों वाला कोणार्क मंदिर

Q.18 Which of the following scenarios illustrates how the endocrine and nervous systems coordinate in maintaining homeostasis?

- Ans
- ☐ 1. Sweating to cool down
 - ☐ 2. Muscle contraction during movement
 - ☐ 3. Producing saliva during eating
 - ☒ 4. Adrenal glands releasing hormones during stress

Q.19 The Great Stupa at Sanchi, a major Buddhist monument originally commissioned by Emperor Ashoka in the 3rd century BCE, and later expanded with surrounding structures, including a temple built in the 5th century CE, is situated in which present-day Indian state?

- Ans
- ☐ 1. Rajasthan
 - ☐ 2. Bihar
 - ☒ 3. Madhya Pradesh
 - ☐ 4. Uttar Pradesh

Q.20 भारतीय संविधान के अनुसार, नागरिकों के लिए यह आवश्यक है कि वे व्यक्तिगत और सामूहिक गतिविधियों के सभी क्षेत्रों में उत्कृष्टता की ओर प्रयास करें, ताकि राष्ट्र को उपलब्धि के उच्चतर स्तरों तक पहुंचाया जा सके। यह निम्नलिखित में से क्या है?

- Ans
- ☐ 1. सरकारी नीति
 - ☐ 2. मौलिक अधिकार
 - ☒ 3. मौलिक कर्तव्य
 - ☐ 4. राज्य के नीति निर्देशक सिद्धांत

Section : Arithmetical and Numerical Ability

Q.1 20% of a number is more than 20% of 580 by 160. The number is

- Ans
- ☐ 1. 1430
 - ☐ 2. 1480
 - ☐ 3. 1230
 - ☒ 4. 1380

Q.2 3% of a number is what percentage of the 6% of the same number?5903

- Ans
- ☐ 1. 33.33%
 - ☐ 2. 16.67%
 - ☒ 3. 50%
 - ☐ 4. 200%

Q.3 The number 15904 is divisible by which of the following numbers?

- Ans
- ☐ 1. 63
 - ☐ 2. 60
 - ☒ 3. 56
 - ☐ 4. 65

Q.4 The price of a car is ₹5,50,000. The value of the car depreciates by 10% at the end of the first year and after that it depreciates by 20% every year. What will be the value of the car after 3 years?

- Ans
- ☒ 1. ₹3,16,800
 - ☐ 2. ₹3,04,400
 - ☐ 3. ₹3,22,200
 - ☐ 4. ₹3,27,400

Q.5 A sum of ₹5,000 is invested at 8% per annum compounded annually for 2 years. What is the amount?

- Ans
- ☐ 1. ₹5,850
 - ☐ 2. ₹5,820
 - ☐ 3. ₹5,839
 - ☒ 4. ₹5,832

Q.6 If $\sqrt{6} = 4.899$, find the value of $\frac{3\sqrt{2}}{2\sqrt{3}}$.

- Ans
- ☐ 1. 2.3235
 - ☐ 2. 2.5485
 - ☒ 3. 2.4495
 - ☐ 4. 1.9875

Q.7 A trader bought a painting for ₹5,000. He sold it to his friend at a profit of 15%. Later, his friend sold it to another buyer at a loss of 10%. What is the final selling price?

- Ans
- ☐ 1. ₹5,125
 - ☒ 2. ₹5,175
 - ☐ 3. ₹5,150
 - ☐ 4. ₹5,200

Q.8 What is the smallest square number that is divisible by each of the numbers 4, 15, 18?

- Ans
- ☐ 1. 784
 - ☒ 2. 900
 - ☐ 3. 961
 - ☐ 4. 1024

Q.9 A batter scored 23, 24, 48, 77 and 40 in five innings of cricket matches. Find the average score of the batter in these innings.

- Ans
- ☐ 1. 42.5
 - ☐ 2. 40.4
 - ☒ 3. 42.4
 - ☐ 4. 42.0

Q.10 Ashish finds a 12% increase in the sales in the first year and 25% in the second year. If the current sales is ₹128800, what was the sales (in ₹) two years ago?

- Ans
- ☐ 1. 103040
 - ☐ 2. 115000
 - ☒ 3. 92000
 - ☐ 4. 72000

Q.11 Find the simple interest (in ₹) on ₹1,500 at 5% per month for 9 months.

- Ans**
- ☐ 1. 112.50
 - ☐ 2. 56.25
 - ☒ 3. 675
 - ☐ 4. 76.25

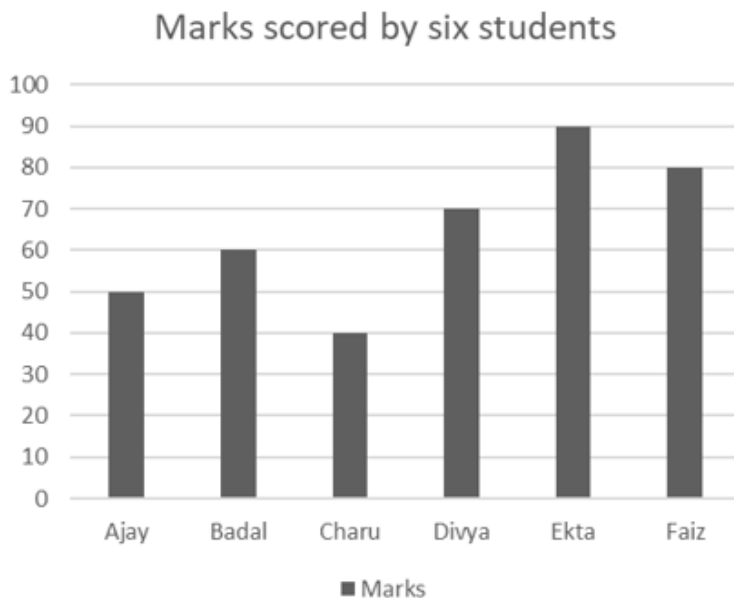
Q.12 A manufacturer sells a product to a wholesaler at a profit of 17%. The wholesaler, in turn, sells it to a retailer at a profit of 50%, and the retailer sells it to a customer at a profit of 25%. If the customer pays ₹351, find the cost price (in ₹) for the manufacturer.

- Ans**
- ☐ 1. 157
 - ☐ 2. 162
 - ☐ 3. 163
 - ☒ 4. 160

Q.13 A company has three categories of employees: Staff, Supervisors, and Executives. Out of the total employees, 50% are Staff, 30% are Supervisors, and the remaining are Executives. The average years of experience of Staff, Supervisors, and Executives are 2 years, 6 years, and 12 years, respectively. Find the overall average experience of the company.

- Ans**
- ☐ 1. 6.1 years
 - ☒ 2. 5.2 years
 - ☐ 3. 5.8 years
 - ☐ 4. 4.8 years

Q.14 Study the following bar graph and answer the questions based on it. The bar graph shows marks scored by 6 students of Standard XII in Hindi exam. The maximum marks for Hindi are 100.



Which student secured the second highest marks in Hindi exam?

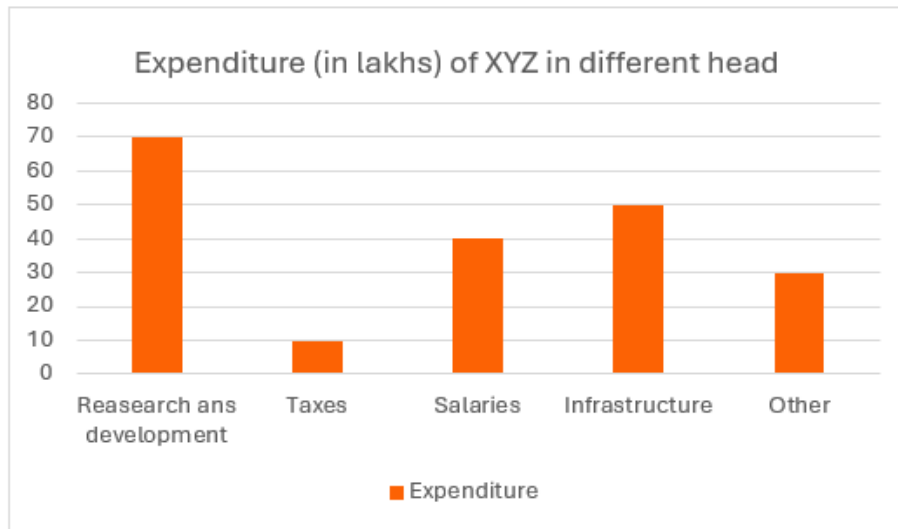
- Ans**
- ☐ 1. Ajay
 - ☒ 2. Faiz
 - ☐ 3. Badal
 - ☐ 4. Charu

Q.15 3% of a number is what percentage of 5% of the same number?5904

- Ans
- ☒ 1. 60%
 - ☐ 2. 18.75%
 - ☐ 3. 37.5%
 - ☐ 4. 166.67%

Q.16 Study the following bar graph and answer the questions based on it.

The graph below shows the expenditure of a public sector company "XYZ" under different heads for the financial year 2021 – 22



How much did company "XYZ" spend on "Others" in 2021 – 22?

- Ans
- ☐ 1. 40 lakhs
 - ☐ 2. 25 lakhs
 - ☒ 3. 30 lakhs
 - ☐ 4. 35 lakhs

Q.17 What is the average of first five natural numbers?

- Ans
- ☒ 1. 3
 - ☐ 2. 4
 - ☐ 3. 5
 - ☐ 4. 6

Q.18 The average of 13 numbers is 20. If each number is multiplied by 5, then what will the new average be?

- Ans
- ☒ 1. 100
 - ☐ 2. 20
 - ☐ 3. 13
 - ☐ 4. 5

Q.19 The HCF and LCM of two numbers are 13 and 182, respectively. If one of the numbers is 91, find the other one.

- Ans
- ☐ 1. 40
 - ☐ 2. 30
 - ☐ 3. 85
 - ☒ 4. 26

Q.20 The present population of a town is 2,25,000. It has increased at the rate of 20% every year. What was its population 2 years ago?

- Ans**
- ☐ 1. 1,65,255
 - ☐ 2. 1,25,650
 - ☒ 3. 1,56,250
 - ☐ 4. 1,55,650

Section : **Arithmetical and Numerical Ability1**

Q.1 When x is subtracted from each of the numbers 8, 18, 11 and 27, the numbers so obtained in this order are in proportion. What is the mean proportional between $(3x + 3)$ and $(2x - 3)$?

- Ans**
- ☐ 1. 5
 - ☐ 2. 7
 - ☐ 3. 4
 - ☒ 4. 6

Q.2 A and B can do a piece of work in 12 days, B and C in 15 days, and C and A in 20 days. How long would C take alone to do the same work?

- Ans**
- ☐ 1. 42 days
 - ☒ 2. 60 days
 - ☐ 3. 55 days
 - ☐ 4. 48 days

Q.3 Two-fifths of the marked price is equal to half of the selling price. What is the discount percentage?

- Ans**
- ☐ 1. 12%
 - ☐ 2. 17.5%
 - ☒ 3. 20%
 - ☐ 4. 33.3%

Q.4 A, B and C together can complete a piece of work in 8 days, while A alone can complete it in 24 days and C alone can complete it in 18 days. In how many days can B complete the work alone?

- Ans**
- ☐ 1. 32 days
 - ☒ 2. 36 days
 - ☐ 3. 42 days
 - ☐ 4. 48 days

Q.5 ₹2,793 is divided into three parts in such a way that half of the first part, one-fourth of the second part and one-eighth of the third part are equal. What is the value of third part (in ₹)?

- Ans**
- ☐ 1. 1,696
 - ☒ 2. 1,596
 - ☐ 3. 1,396
 - ☐ 4. 1,296

Q.6 A and B can do a piece of work in 28 days, while A and C can do the same work in 22 days. If B and C together can complete the work in 24 days, how long will it take for A, B and C working together to complete the work (rounded off to two decimal places)?

- Ans
- ☐ 1. 16.78 days
 - ☒ 2. 16.28 days
 - ☐ 3. 16.67 days
 - ☐ 4. 16.59 days

Q.7 A man travels the first part of his journey at 40 km/h and the second part at 60 km/h, and covers a total distance of 1920 km to his destination in 40 hours. How long did the second part of his journey last?

- Ans
- ☒ 1. 16 hours
 - ☐ 2. 12 hours
 - ☐ 3. 24 hours
 - ☐ 4. 20 hours

Q.8 A man walks at $\frac{5}{6}$ of his usual speed and arrives 15 minutes late to his work place. What is his usual time to complete the journey?

- Ans
- ☐ 1. 55 minutes
 - ☐ 2. 65 minutes
 - ☐ 3. 85 minutes
 - ☒ 4. 75 minutes

Q.9 किसी वस्तु के क्रय मूल्य में 10% की वृद्धि होती है। इसलिए दुकानदार विक्रय मूल्य में 15% की वृद्धि करता है। यदि प्रारंभिक लाभ ₹270 था और लाभ दर 18% थी, तो वर्तमान लाभ (₹ में) ज्ञात कीजिए।

- Ans
- ☐ 1. 25.7
 - ☒ 2. 385.50
 - ☐ 3. 135.50
 - ☐ 4. 253.7

Q.10 A candidate reaches the bus station at a speed of 24 km/h on bike, then boards a bus, whose speed is 40 km/h, to the X point. From X to the rickshaw stand, he gets a lift from a cycle which travels at a speed of 60 km/h. From the rickshaw stand to the exam center, he travels at a speed of 48 km/h. If the distance between home to the bus station, bus station to X, X to rickshaw stand, and rickshaw stand to exam center is equal, find the candidate's average speed (in km/h) for the whole journey.

- Ans
- ☒ 1. 38.4
 - ☐ 2. 32.6
 - ☐ 3. 47.4
 - ☐ 4. 42.6

Q.11 Find the final price as a percentage of the original amount after applying three successive discounts of 16%, 15%, and 10%.

- Ans
- ☐ 1. 61.25%
 - ☒ 2. 64.26%
 - ☐ 3. 35.76%
 - ☐ 4. 52.86%

Q.12 Find the amount of concrete required to construct a concrete pillar whose circular base has a perimeter of 8.8 m and curved surface area is 17.6 m^2 . (Use $\pi = 22/7$)

- Ans
- ☐ 1. 14.24 m³
 - ☒ 2. 12.32 m³
 - ☐ 3. 12.56 m³
 - ☐ 4. 13.44 m³

Q.13 Pipe A and Pipe B, when both opened together, can fill a tank in 8 minutes. Pipe A alone can fill it in 12 minutes. Find the time in which Pipe B alone will fill the tank.

- Ans
- ☒ 1. 24 minutes
 - ☐ 2. 20 minutes
 - ☐ 3. 30 minutes
 - ☐ 4. 28 minutes

Q.14 A cylindrical tank has a diameter of 14 meters and height of 5 meters. It is partially filled with water such that the water fills only 75% of the tank. How many liters of water are currently in the tank? (Use $\pi = 22/7$)

- Ans
- ☐ 1. 4,77,500
 - ☒ 2. 5,77,500
 - ☐ 3. 5,76,500
 - ☐ 4. 5,77,550

Q.15 Sunil travels from City A to City B at a speed of 100 km/hr and returns at a speed of 150 km/hr. What is his average speed (in km/hr) for the entire journey?

- Ans
- ☒ 1. 120
 - ☐ 2. 130
 - ☐ 3. 115
 - ☐ 4. 125

Q.16 The present ages of Nishi and Vineet are in the ratio of 3:5, respectively. After 8 years from now, the ratio of their ages will be 5:7. What is the difference in their present ages?

- Ans
- ☐ 1. 10 years
 - ☒ 2. 8 years
 - ☐ 3. 5 years
 - ☐ 4. 12 years

Q.17 A rectangular box has a length of 5 cm, a width of 3 cm, and a height of 2 cm. Find its volume in cubic centimetres.

- Ans
- ☐ 1. 10
 - ☐ 2. 42
 - ☐ 3. 18
 - ☒ 4. 30

Q.18 Find the fourth proportional to $\sqrt{2}$, $2\sqrt{2}$ and $4\sqrt{2}$

- Ans
- ☒ 1. $8\sqrt{2}$
 - ☐ 2. $4\sqrt{2}$
 - ☐ 3. $5\sqrt{2}$
 - ☐ 4. $\sqrt{2}$

Q.18 Which Article empowers the High Courts to issue writs for the enforcement of fundamental rights?

- Ans**
- ☒ 1. Article 226
 - ☐ 2. Article 232
 - ☐ 3. Article 252
 - ☐ 4. Article 256

Q.19 Members of Lok Sabha are elected for a period of how many years?

- Ans**
- ☐ 1. Three
 - ☐ 2. Seven
 - ☒ 3. Five
 - ☐ 4. Four

Q.20 Which among the following is an example of one of the most nutritionally important and abundant monosaccharides?

- Ans**
- ☐ 1. Starch
 - ☐ 2. Cellulose
 - ☐ 3. Sucrose
 - ☒ 4. Glucose

Section : **Arithmetical and Numerical Ability**

Q.1 Evaluate the given expression.

$$11 - 2 + 8 \div 4 \times 2$$

- Ans**
- ☐ 1. 9
 - ☒ 2. 13
 - ☐ 3. 14
 - ☐ 4. 16

Q.2 There are 12 members in group A, 22 members in group B, and 72 members in group C. All the members of these groups went to a restaurant. The average amount spent per member in groups A, B, and C is ₹139, ₹500, and ₹251 respectively. Find the overall average amount spent per member (in ₹).

- Ans**
- ☐ 1. 289
 - ☒ 2. 290
 - ☐ 3. 285
 - ☐ 4. 295

Q.3 The monthly incomes of two friends Rakesh and Shivam are in the ratio 5 : 9 and each of them saves ₹93,000 every month. If the ratio of their monthly expenditure is 1 : 3, find the monthly income of Rakesh (in ₹).⁷

- Ans**
- ☒ 1. 1,55,000
 - ☐ 2. 2,17,000
 - ☐ 3. 1,54,000
 - ☐ 4. 1,56,000

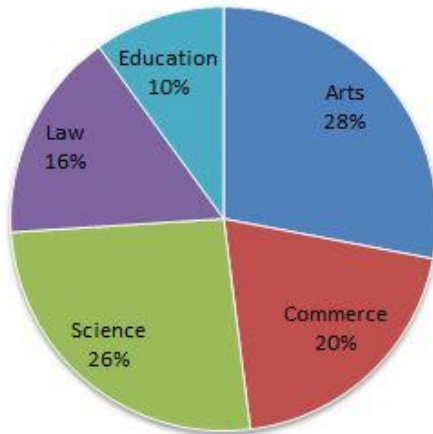
Q.4 A number when increased by 20% gives 2490. The number is:

- Ans**
- ☐ 1. 1038
 - ☒ 2. 2075
 - ☐ 3. 4150
 - ☐ 4. 6225

Q.5 The average of first 93 natural numbers is:

- Ans
- ☒ 1. 47
 - ☐ 2. 46.5
 - ☐ 3. 48
 - ☐ 4. 47.5

Q.6 The piechart shows the percentage of students admitted in different faculties of a college. If the total students admitted in college is 2800, what is the number of students in commerce?



- Ans
- ☐ 1. 550
 - ☒ 2. 560
 - ☐ 3. 540
 - ☐ 4. 570

Q.7 The total amount after 18 months would be ₹1,33,100. If the rate of interest is 20% per annum and compounding is performed half yearly, determine the present value (in ₹).

- Ans
- ☐ 1. 1,00,500
 - ☐ 2. 1,11,000
 - ☒ 3. 1,00,000
 - ☐ 4. 1,10,000

Q.8 A manufacturer sells a product to a wholesaler at a profit of 25%. The wholesaler, in turn, sells it to a retailer at a profit of 25%, and the retailer sells it to a customer at a profit of 31%. If the customer pays ₹131, find the cost price (in ₹) for the manufacturer.

- Ans
- ☐ 1. 66
 - ☐ 2. 67
 - ☒ 3. 64
 - ☐ 4. 63

Q.9 Ms. Parul deposits an amount of ₹31,400 to obtain a compound interest, compounded annually at the rate of 10 per cent per annum for 3 years. What total amount will Ms. Parul get at the end of 3 years?

- Ans
- ☐ 1. ₹42,088.8
 - ☐ 2. ₹42,345.6
 - ☒ 3. ₹41,793.4
 - ☐ 4. ₹41,077.5

Q.10 Simplify: $98 \div [24 - \{14 + 4 - (10 \text{ of } 2 - 2 \times 3)\}]$.

Ans ☒ 1. 4.9

☐ 2. 6

☐ 3. 3.9

☐ 4. 5.9

Q.11 Find the simple interest (in ₹) on ₹1,500 at 5% per month for 11 months.

Ans ☐ 1. 68.75

☐ 2. 88.75

☒ 3. 825

☐ 4. 137.50

Q.12 Evaluate the given expression.

$$11 - 2 + 8 \div 4 \times 3$$

Ans ☐ 1. 11

☒ 2. 15

☐ 3. 18

☐ 4. 16

Q.13 The average of the first 92 natural numbers is:

Ans ☐ 1. 46

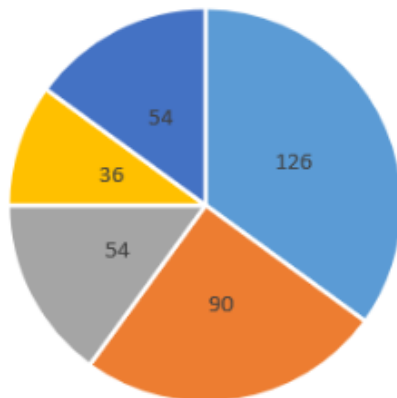
☒ 2. 46.5

☐ 3. 47.5

☐ 4. 47

Q.14 The following pie chart shows a family's monthly expenditure out of a total of ₹40,000. How much does the family spend on Transportation?

Family's Monthly Expenses (Pie Chart in Degrees)



■ Rent ■ Food ■ Transportation ■ Entertainment ■ Savings

Ans ☒ 1. ₹6,000

☐ 2. ₹4,000

☐ 3. ₹3,000

☐ 4. ₹5,000

Q.15 A company buys a piece of equipment for ₹50,000. The equipment depreciates by 15% in the first year, 10% in the second year, and 2% in the third year. What will be the value (in ₹) of the equipment at the end of 3 years?

- Ans**
- ☒ 1. 37,485
 - ☐ 2. 37,255
 - ☐ 3. 37,015
 - ☐ 4. 37,125

Q.16 Keshav's salary was first reduced by 40% and subsequently raised by 48%. How much percentage was his final salary lower compared to his initial salary?

- Ans**
- ☐ 1. 48%
 - ☐ 2. 40%
 - ☒ 3. 11.2%
 - ☐ 4. 19.2%

Q.17 A manufacturer sells a product to a wholesaler at a profit of 28%. The wholesaler, in turn, sells it to a retailer at a profit of 25%, and the retailer sells it to a customer at a profit of 25%. If the customer pays ₹430, find the cost price (in ₹) for the manufacturer.

- Ans**
- ☒ 1. 215
 - ☐ 2. 213
 - ☐ 3. 214
 - ☐ 4. 217

Q.18 In the year 2022, monthly income of Ankur decreases by 25% than his monthly income in the year 2021. What is the ratio of his monthly expenditures of the year 2021 to 2022, if his monthly savings in 2022 increases by 20% than his monthly savings in year 2021 and the expenditure in year 2021 is equal to 3 times savings in the same year?

- Ans**
- ☒ 1. 5:3
 - ☐ 2. 5:4
 - ☐ 3. 4:3
 - ☐ 4. 3:4

Q.19 The length of the shadow of a 116 cm tall person at a particular time of day is 290 cm. What will be the length of the shadow of a 190 cm tall person at the same time of the day?

- Ans**
- ☐ 1. 455 cm
 - ☐ 2. 425 cm
 - ☒ 3. 475 cm
 - ☐ 4. 435 cm

Q.20 In what ratio should a grocer mix two varieties of rice worth ₹40 per kg and ₹60 per kg so that the mixture is worth ₹50 per kg?

- Ans**
- ☐ 1. 1 : 3
 - ☒ 2. 1 : 2
 - ☐ 3. 3 : 2
 - ☐ 4. 3 : 5

Q.1 Arman sells an item at a 30% profit to Aman. Aman sells the same at 18% profit to Raman and received ₹49,088. Had Raman purchased the same item from Arman, he would have spent 8% less than what he paid to Aman. What profit would Arman have made?

- Ans
- ☐ 1. ₹10,560.70
 - ☐ 2. ₹11,640.56
 - ☐ 3. ₹12,320.70
 - ☒ 4. ₹13,160.96

Q.2 Divide ₹4,410 into three parts in such a way that half of the first part, one-fourth of the second part and one-eighth of the third part are equal. What is the value of first part (in ₹)?

- Ans
- ☐ 1. 930
 - ☐ 2. 830
 - ☒ 3. 630
 - ☐ 4. 330

Q.3 During a sale, 50% of the goods are sold at 43% profit, 18% of the remaining goods are sold at 20% profit and the still remaining goods are sold at a loss of 30%. If there is an overall profit of $x\%$, then what is the value of x ?

- Ans
- ☐ 1. 11.5%
 - ☒ 2. 11%
 - ☐ 3. 12%
 - ☐ 4. 10.5%

Q.4 Dhoni walked a certain distance at a speed of 6 km/hr. He was in a hurry, so on the return journey, he travelled at a speed of 30 km/hr. Find his average speed (in km/hr) for the entire journey.

- Ans
- ☐ 1. 12
 - ☐ 2. 16
 - ☒ 3. 10
 - ☐ 4. 14

Q.5 A solid sphere of radius 15 cm is melted and recast into a hollow cylindrical shell with inner radius 7 cm and height 12 cm. Find the outer radius of the cylindrical shell. (Round off your answer to one decimal place.)

- Ans
- ☐ 1. 21.6 cm
 - ☒ 2. 20.6 cm
 - ☐ 3. 23.1 cm
 - ☐ 4. 20.8 cm

Q.6 After applying two successive discounts of 10% and 25% on the marked price of a wallet, it was sold for ₹4,185. Find the marked price (in ₹) of the wallet.

- Ans
- ☐ 1. 6,100
 - ☐ 2. 6,000
 - ☐ 3. 6,300
 - ☒ 4. 6,200

Q.7 The mean proportional between $(6 + 3\sqrt{2})$ and $(8 - 4\sqrt{2})$ is:

- Ans
- ☐ 1. $3\sqrt{5}$
 - ☐ 2. $3\sqrt{6}$
 - ☐ 3. $2\sqrt{5}$
 - ☒ 4. $2\sqrt{6}$

Q.8 ₹32,000 is divided among L, M, and N. L receives ₹5,500 more than M, and N receives ₹7,000 more than M. Find the ratio of the amounts received by L, M, and N.

- Ans
- ☒ 1. 1 : 2 : 3
 - ☒ 2. 24 : 13 : 27
 - ☒ 3. 24 : 15 : 28
 - ☒ 4. 21 : 15 : 28

Q.9 Two pipes A and B can fill a tank in 18 hours and 39 hours, respectively. If both the pipes are opened simultaneously, in how many hours will the tank be full (rounded off to two decimal places)?

- Ans
- ☒ 1. 12.32 hours
 - ☒ 2. 12.09 hours
 - ☒ 3. 12.86 hours
 - ☒ 4. 12.72 hours

Q.10 If 390 bananas were distributed among three monkeys in the ratio $\frac{1}{2} : \frac{1}{3} : \frac{1}{4}$

- Ans
- ☒ 1. 160
 - ☒ 2. 180
 - ☒ 3. 170
 - ☒ 4. 190

Q.11 The base radius of a cone is increased by 50% while the height remains unchanged. By what per cent does the volume of the cone increase?

- Ans
- ☒ 1. 50%
 - ☒ 2. 125%
 - ☒ 3. 100%
 - ☒ 4. 75%

Q.12 There are three inlet pipes M, N and P connected to a tank. M and N together can fill a tank in 10 hours, N and P together can fill the same tank in 15 hours and P and M together can fill the same tank in 7.5 hours. Find the time taken by pipe N alone to fill it.

- Ans
- ☒ 1. 52 hours
 - ☒ 2. 60 hours
 - ☒ 3. 45 hours
 - ☒ 4. 30 hours

Q.13 If the radius of the base of a right circular cone is 7 cm and its slant height is 25 cm, find its volume.
(Take $\pi = \frac{22}{7}$)

- Ans
- ☒ 1. 550
 - ☒ 2. 660
 - ☒ 3. 440
 - ☒ 4. 330

Q.14 Find the area of a triangle, whose sides are 8 cm, 13 cm and 0.07 m. (Round off your answer to two decimal places)

- Ans
- ✓ 1. 24.25 cm²
 - ✗ 2. 22.15 cm²
 - ✗ 3. 20.05 cm²
 - ✗ 4. 26.25 cm²

Q.15 A train 150 m long is running at a speed of 54 km/h. Find the time (in seconds) taken by it to pass a man standing near the railway line.

- Ans
- ✗ 1. 12
 - ✓ 2. 10
 - ✗ 3. 8
 - ✗ 4. 14

Q.16 A cyclist rides to a nearby town at one-third of the speed at which he returns. If the average speed for the entire journey is 18 km/h, what is the cyclist's speed (in km/h) while riding to the town?

- Ans
- ✗ 1. 15
 - ✓ 2. 12
 - ✗ 3. 14
 - ✗ 4. 13

Q.17 The printed price of a book is ₹360. A retailer pays ₹307.80 for it. He gets successive discounts of 10% and another discount. Find the other discount.

- Ans
- ✗ 1. 8%
 - ✗ 2. 3%
 - ✓ 3. 5%
 - ✗ 4. 10%

Q.18 Two pipes, A and B, can fill a tank in 14 hours and 24 hours, respectively. If both the pipes are opened simultaneously, in how many hours will the tank be full (rounded off to two decimal places)?

- Ans
- ✓ 1. 8.84 hours
 - ✗ 2. 8.48 hours
 - ✗ 3. 8.56 hours
 - ✗ 4. 8.24 hours

Q.19 Two pipes A and B can fill a tank in 18 minutes and 14 minutes, respectively. Both the pipes are opened together but after 3 minutes, pipe A is turned off. What is the total time (in minutes) required to fill the tank?

- Ans
- ✗ 1. $\frac{26}{3}$
 - ✓ 2. $\frac{35}{3}$
 - ✗ 3. $\frac{34}{3}$
 - ✗ 4. $\frac{28}{3}$

Q.20 At the Konark Sun Temple, what is the functional significance of the carved stone wheel motifs?

- Ans**
- ☒ 1. They act as precise sundials used to measure time during the day
 - ☐ 2. They serve as structural supports to bear the weight of the temple
 - ☐ 3. They function as water storage units for ritual purification needs
 - ☐ 4. They represent musical instruments used in temple performances

Section : Arithmetical and Numerical Ability

Q.1 The number 1023496 is divisible by:

- Ans**
- ☒ 1. 62
 - ☐ 2. 43
 - ☐ 3. 78
 - ☐ 4. 63

Q.2 The average age of a certain number of people in a club was 52 years. A 30 new group of people, whose average age is 70 years, joined the club at the same time. As a result, the average age of all the members increased by 15 years. Now the number of members in the club is:1531

- Ans**
- ☐ 1. 44
 - ☐ 2. 34
 - ☒ 3. 36
 - ☐ 4. 41

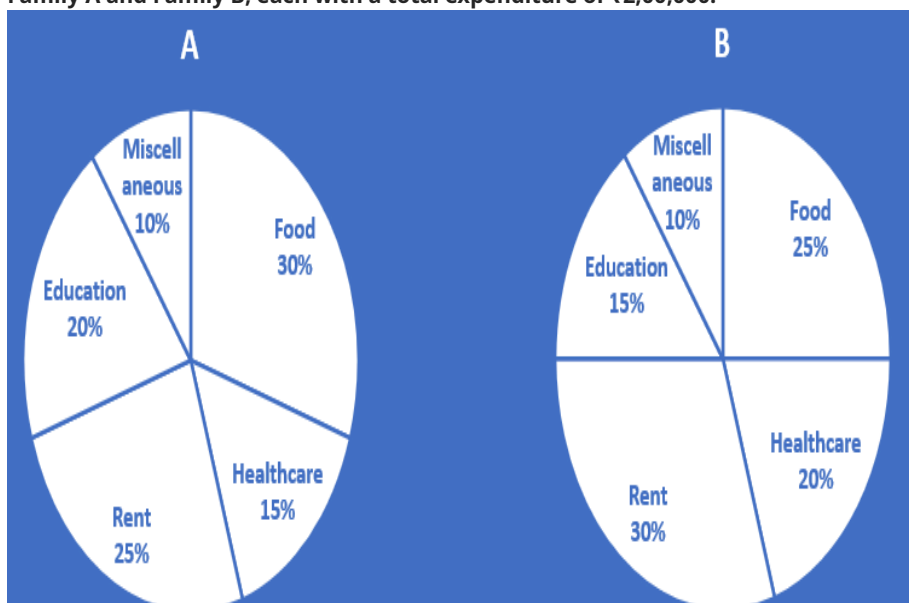
Q.3 A grocer wants to mix two types of sugar, one costing ₹30 per kg and another costing ₹50 per kg, to get 20 kg of mixture costing ₹40 per kg. How much of each type should he use?

- Ans**
- ☐ 1. 5 kg of ₹30 sugar and 15 kg of ₹50 sugar
 - ☒ 2. 10 kg of each
 - ☐ 3. 15 kg of ₹30 sugar and 5 kg of ₹50 sugar
 - ☐ 4. 12 kg of ₹30 sugar and 8 kg of ₹50 sugar

Q.4 There are 49 members in group A, 17 members in group B, and 47 members in group C. All the members of these groups went to a restaurant. The average amount spent per member in groups A, B, and C is ₹180, ₹153, and ₹435 respectively. Find the overall average amount (in ₹) spent per member.

- Ans**
- ☐ 1. 277
 - ☒ 2. 282
 - ☐ 3. 281
 - ☐ 4. 283

Q.5 Study the following pie charts showing the annual expenditure distribution (in %) of Family A and Family B, each with a total expenditure of ₹2,00,000.



What is the difference in the amount spent on education between Family A and Family B?

- Ans**
- ☒ 1. ₹5,000
 - ☒ 2. ₹15,000
 - ☒ 3. ₹20,000
 - ☒ 4. ₹10,000

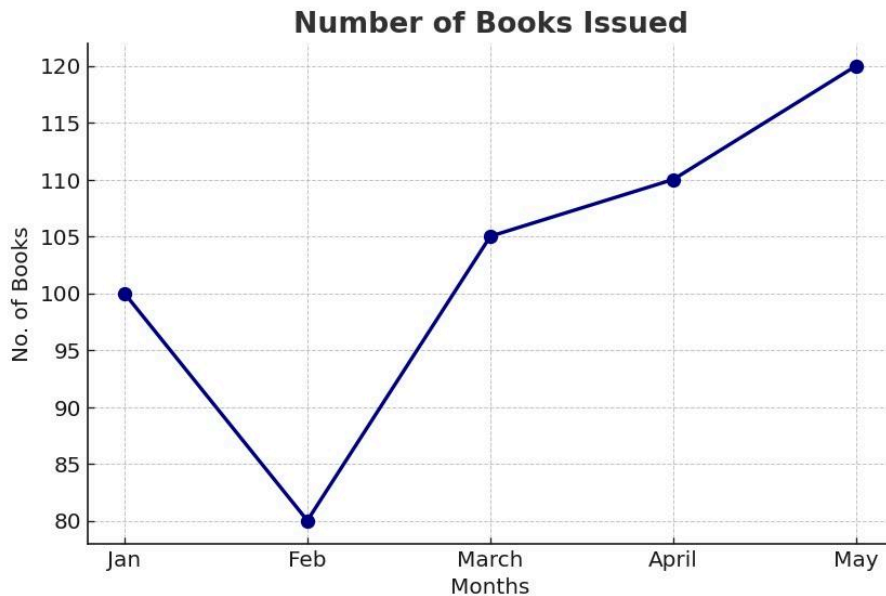
Q.6 The H.C.F. and the L.C.M. of two numbers are 22 and 264, respectively. If one of the numbers is 66, find the other one.³⁵¹²

- Ans**
- ☒ 1. 88
 - ☒ 2. 110
 - ☒ 3. 22
 - ☒ 4. 44

Q.7 A cricketer's average score over 11 matches is 62. If his score in the twelfth match is 86, what is his new average score?

- Ans**
- ☒ 1. 70
 - ☒ 2. 75
 - ☒ 3. 64
 - ☒ 4. 68

- Q.8 The following line graph shows the number of books issued by a library for 5 consecutive months.



Find the total number of books issued by the library for the months of March and May.

Ans

- ☒ 1. 195
- ☒ 2. 225
- ☒ 3. 300
- ☒ 4. 205

- Q.9 The population of a colony increases 17% annually in a compounded manner (yearly compounding). The present population of this colony is 13,689. The population of this colony 2 years ago was:

Ans

- ☒ 1. 11,231
- ☒ 2. 10,000
- ☒ 3. 12,990
- ☒ 4. 12,378

- Q.10 Find the simple interest (in ₹) on ₹1,500 at 6% per month for 5 months.

Ans

- ☒ 1. 450
- ☒ 2. 37.50
- ☒ 3. 75
- ☒ 4. 57.50

- Q.11 A manufacturer sells a product to a wholesaler at a profit of 30%. The wholesaler, in turn, sells it to a retailer at a profit of 20%, and the retailer sells it to a customer at a profit of 25%. If the customer pays ₹351, find the cost price (in ₹) for the manufacturer.

Ans

- ☒ 1. 183
- ☒ 2. 179
- ☒ 3. 180
- ☒ 4. 181

Q.12 Mohit bought a house for ₹1,64,000 promising to pay after 1.5 years with an interest at the rate of 10% per annum compounded half yearly. Find the approximate interest paid after one and a half years.

- Ans
- ☐ 1. ₹26,660.5
 - ☐ 2. ₹21,340.5
 - ☒ 3. ₹25,850.5
 - ☐ 4. ₹24,560.5

Q.13 The present cost of a shopping complex is ₹1,07,798. After a year, its cost increased to ₹1,41,063. The percentage increase in the cost of the shopping complex is: (rounded off to the nearest integer)

- Ans
- ☐ 1. 25
 - ☒ 2. 31
 - ☐ 3. 38
 - ☐ 4. 40

Q.14 A man spends 60% of his income on household expenses and 20% on education. If he has \$800 left after these expenditures, what is his total income?

- Ans
- ☐ 1. \$5,000
 - ☐ 2. \$3,800
 - ☒ 3. \$4,000
 - ☐ 4. \$4,400

Q.15 Find the compound interest on ₹10,000 at the rate of 6% per annum in 2 years compounded half-yearly.

(Nearest to its integer)

- Ans
- ☐ 1. ₹1,225
 - ☐ 2. ₹1,155
 - ☐ 3. ₹1,115
 - ☒ 4. ₹1,255

Q.16 20% of a number is more than 20% of 570 by 180. The number is:

- Ans
- ☐ 1. 1570
 - ☐ 2. 1520
 - ☒ 3. 1470
 - ☐ 4. 1320

Q.17 The six-digit number 30A26B is divisible by 9. Find the maximum possible values of (A+B).

- Ans
- ☐ 1. 15
 - ☒ 2. 16
 - ☐ 3. 17
 - ☐ 4. 18

Q.18 The population of a city is increased from 73,000 to 99,500 in a year. Calculate the percentage increase in the population (rounded off to two decimal places).

- Ans
- ☒ 1. 36.30%
 - ☐ 2. 36.04%
 - ☐ 3. 36.96%
 - ☐ 4. 37.18%

Q.19 A manufacturer sells a product to a wholesaler at a profit of 20%. The wholesaler, in turn, sells it to a retailer at a profit of 60%, and the retailer sells it to a customer at a profit of 25%. If the customer pays ₹180, find the cost price (in ₹) for the manufacturer.

Ans ☒ 1. 75

☐ 2. 76

☐ 3. 72

☐ 4. 74

Q.20 If $3^x = 81$, then the value of x is:

Ans ☒ 1. 4

☐ 2. 3

☐ 3. 9

☐ 4. 6

Section : **Arithmetical and Numerical Ability1**

Q.1 A right circular cylinder has a base radius of 3 cm and a height of 7 cm. Find the volume of the cylinder. (Use $\pi = 22/7$)

Ans ☐ 1. 178 cm^3

☐ 2. 158 cm^3

☒ 3. 198 cm^3

☐ 4. 148 cm^3

Q.2 4 men and 9 women can complete a piece of work in 16 days, and 13 men and 19 women can complete the same work in 5 days. The work of how many women is equivalent to that of one man?

Ans ☐ 1. 48

☒ 2. 49

☐ 3. 52

☐ 4. 45

Q.3 Three numbers are in the ratio 5 : 7 : 9. If the difference between the largest and the smallest numbers is 32, find the smallest number.

Ans ☒ 1. 40

☐ 2. 32

☐ 3. 45

☐ 4. 72

Q.4 If X, Y, Z and W are in proportion, and $X = 14$, $Y = 17$ and $W = 102$, then find the value of Z.

Ans ☒ 1. 84

☐ 2. 72

☐ 3. 78

☐ 4. 90

Q.5 11 men and 7 women can complete a piece of work in 15 days, and 12 men and 3 women can complete the same work in 18 days. The work of how many women is equivalent to that of one man?

Ans ☐ 1. 3

☒ 2. 1

☐ 3. 4

☐ 4. 5

Q.6 The mean proportional between: $(5 + \sqrt{3})$ and $(5 - \sqrt{3})$ is

- Ans
- ☐ 1. $\sqrt{21}$
 - ☐ 2. $\sqrt{11}$
 - ☒ 3. $\sqrt{22}$
 - ☐ 4. $\sqrt{44}$

Q.7 The marked price of an article is ₹11,000. After offering a discount of 20% on the marked price, a profit of 10% is made. What is the cost price of the article?

- Ans
- ☐ 1. ₹9000
 - ☐ 2. ₹10000
 - ☒ 3. ₹8000
 - ☐ 4. ₹7000

Q.8 A rectangular garden is 25 meters long and 12 meters wide. If a walkway of uniform width 2 meters is built inside the garden along all sides, what is the perimeter of the walkway's inner rectangle?

- Ans
- ☐ 1. 70 meters
 - ☐ 2. 62 meters
 - ☒ 3. 58 meters
 - ☐ 4. 66 meters

Q.9 Ajeet bought an article for ₹5,400. He spent ₹8,600 on it. He marked the price 20% above his total cost price. Then he allows two successive discounts of 10% on it. Find the selling price (in ₹) of the article.

- Ans
- ☐ 1. 13,611
 - ☐ 2. 13,607
 - ☒ 3. 13,608
 - ☐ 4. 13,609

Q.10 Rani is able to finish a task in 13 days and Karan can complete the same task in 15 days. If they decide to work together on the task, how long will it take them to finish it?

- Ans
- ☐ 1. $3\frac{27}{31}$ days
 - ☒ 2. $6\frac{27}{28}$ days
 - ☐ 3. $5\frac{27}{28}$ days
 - ☐ 4. $6\frac{27}{29}$ days

Q.11 A car covers a distance of 1,080 km in 9 hours. Speed of a train is double the speed of the car. One-third the speed of the train is equal to the speed of a bike. How much distance will the bike cover in 6 hours?

- Ans
- ☐ 1. 440 km
 - ☐ 2. 450 km
 - ☒ 3. 480 km
 - ☐ 4. 465 km

Q.12 A 761 m long train passes a tunnel 199 m long in 48 seconds. Find the speed of the train.

- Ans
- ☐ 1. 90 km/h
 - ☐ 2. 63 km/h
 - ☐ 3. 81 km/h
 - ☒ 4. 72 km/h

Q.13 A car covers the first 192 km at a speed of 40 km/hr and the next 135 km at a speed of 50 km/hr. What is its average speed (in km/hr) for the entire journey?

- Ans
- ☐ 1. 39.6
 - ☒ 2. 43.6
 - ☐ 3. 48.4
 - ☐ 4. 46.8

Q.14 Two pipes A and B can fill a tank in 40 hours and 19 hours, respectively. If both the pipes are opened simultaneously, then the time taken to fill the tank is:

- Ans
- ☐ 1. $11\frac{52}{59}$ hours
 - ☐ 2. $19\frac{52}{59}$ hours
 - ☐ 3. $17\frac{52}{59}$ hours
 - ☒ 4. $12\frac{52}{59}$ hours

Q.15 A passenger sitting in a train of length 140 m, which is running with speed of 80 km/h passing through two bridges, notices that he crosses the first bridge and the second bridge in time intervals which are in the ratio of 7:4 respectively. If the length of first bridge be 350 m, then the length of second bridge is:

- Ans
- ☐ 1. 150 m
 - ☐ 2. 180 m
 - ☐ 3. 170 m
 - ☒ 4. 200 m

Q.16 The marked price of a mobile phone is ₹75,000 and 15% discount is given by the shopkeeper. During big billion days, an additional discount of ₹15,300 is given. What is the selling price (in ₹) of the mobile phone during big billion days sale?

- Ans
- ☐ 1. 49,350
 - ☒ 2. 48,450
 - ☐ 3. 46,550
 - ☐ 4. 47,650

Q.17 If $8 : y :: y : 64$, and $y > 0$, what is the value of y ?

- Ans
- ☐ 1. $12\sqrt{2}$
 - ☒ 2. $16\sqrt{2}$
 - ☐ 3. $18\sqrt{2}$
 - ☐ 4. $14\sqrt{2}$

Q.17 Which state was the first to introduce the Panchayati Raj system based on the Balwant Rai Mehta Committee's pattern?

- Ans**
- ☐ 1. Uttar Pradesh in 1962
 - ☒ 2. Rajasthan in 1959
 - ☐ 3. Tamil Nadu in 1961
 - ☐ 4. Bihar in 1965

Q.18 Which of the following heritage site, according to official sources, played a significant role in India's struggle for independence, being the venue for major historical events?

- Ans**
- ☐ 1. Gateway of India
 - ☒ 2. Red Fort
 - ☐ 3. Humayun's Tomb
 - ☐ 4. Qutub Minar

Q.19 Shravani Mela, which is primarily celebrated in the sacred town of Deoghar, Jharkhand is associated with which of the following deities?

- Ans**
- ☐ 1. Lord Rama
 - ☒ 2. Lord Shiva
 - ☐ 3. Goddess Lakshmi
 - ☐ 4. Goddess Durga

Q.20 Which of the following languages uses the Ol Chiki script?

- Ans**
- ☐ 1. Mundari
 - ☐ 2. Kurukh
 - ☒ 3. Santhali
 - ☐ 4. Ho

Section : Arithmetical and Numerical Ability

Q.1 Find the simple interest (in ₹) on ₹1,500 at 6% per month for 4 months.

- Ans**
- ☐ 1. 45
 - ☐ 2. 60
 - ☒ 3. 360
 - ☐ 4. 30

Q.2 Tushar's sales increased by 12% in the first year and by 25% in the second year. If his current sales are ₹1,40,000, what were his sales (in ₹) two years ago?

- Ans**
- ☐ 1. 90,000
 - ☐ 2. 1,12,000
 - ☒ 3. 1,00,000
 - ☐ 4. 80,000

Q.3 Simplify $\left[\left(\frac{5^3}{25^2} \times 40 \right)^{\frac{1}{3}} + \left(\frac{4^2 \times 3^7}{3^3 \times 4^6} \right)^{\frac{1}{2}} \times 3 \right]^{\frac{1}{2} 172}$

- Ans
- ☐ 1. $\frac{59}{4}$
 - ☐ 2. $\frac{\sqrt{59}}{16}$
 - ☒ 3. $\frac{\sqrt{59}}{4}$
 - ☐ 4. $\frac{59}{16}$

Q.4 The number 13392 is NOT divisible by which of the following numbers?

- Ans
- ☒ 1. 27
 - ☐ 2. 35
 - ☐ 3. 24
 - ☐ 4. 36

Q.5 A bank offers 5.4% compound interest per annum calculated on a half-yearly basis. A customer deposits ₹4097 each on 1 January and 1 July of a year. At the end of the year, the amount he would have gained by way of interest is _____. [Round off your answer to 2 decimal places.]

- Ans
- ☐ 1. ₹354.93
 - ☐ 2. ₹337.21
 - ☒ 3. ₹334.84
 - ☐ 4. ₹338.05

Q.6 The average of 5 consecutive numbers is n. If the next two numbers are also included, the average will:

- Ans
- ☐ 1. increase by 1.4
 - ☐ 2. increase by 1.2
 - ☒ 3. increase by 1
 - ☐ 4. increase by 0.8

Q.7 In what ratio should milk containing 80% pure milk be mixed with water to get a mixture containing 60% pure milk?

- Ans
- ☐ 1. 4 : 1
 - ☒ 2. 3 : 1
 - ☐ 3. 3 : 2
 - ☐ 4. 2 : 1

Q.8 A student's marks were incorrectly entered as 42 instead of 60. Due to

What is the number of students in the class?

- Ans
- ☐ 1. 9
 - ☐ 2. 16
 - ☐ 3. 14
 - ☒ 4. 8

Q.9 The LCM of 18, 22 and 33 is: 7350

Ans ☒ 1. 198

☐ 2. 189

☐ 3. 216

☐ 4. 204

Q.10 Study the following table and answer the question based on it.
The given table shows the number of nuts (in 1000) manufactured by XYZ company in 6 months.

Months	No. of nuts (in 1000)
January	210
February	225
March	240
April	250
May	275
June	300

The number of nuts manufactured by company XYZ in January is what percentage of the number of nuts manufactured in April?

Ans ☐ 1. 90%

☐ 2. 80%

☒ 3. 84%

☐ 4. 76%

Q.11 Arav invested an amount of ₹50,000 in a mutual fund for 3 years at compound interest, compounded annually at the rate of interest 12% per annum. How much amount (rounded to the nearest rupee) will Arav get on maturity of the mutual fund?

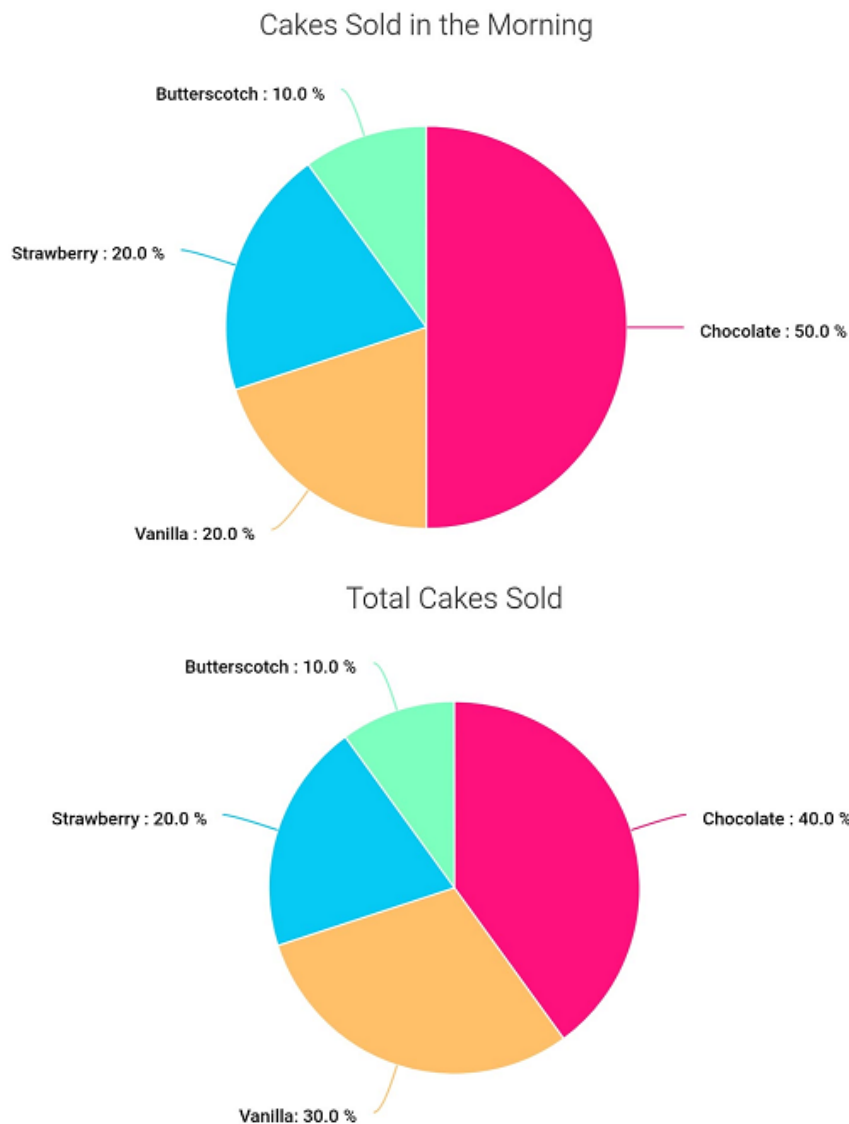
Ans ☐ 1. ₹70,868

☐ 2. ₹71,256

☐ 3. ₹71,984

☒ 4. ₹70,246

- Q.12 On a particular day, a bakery sells a total of 100 cakes in 4 different flavours. The pie charts given below show the distribution of the total number of cakes sold during the entire day, and the number of cakes sold in the morning. [Note: Assume that the bakery sells cakes only in the morning and in the evening.]



If the number of cakes sold in the morning is 60, how many strawberry cakes were sold in the evening?

- Ans ☒ 1. 8
☒ 2. 15
☒ 3. 12
☒ 4. 10

- Q.13 The number 1332660 is divisible by:

- Ans ☒ 1. 75
☒ 2. 111
☒ 3. 95
☒ 4. 103

Q.14 Aman's income is ₹40,000. If he spends 60% and saves the rest, how much does he save?

- Ans
- ☐ 1. ₹18,000
 - ☐ 2. ₹18,800
 - ☐ 3. ₹16,800
 - ☒ 4. ₹16,000

Q.15 By selling an article for ₹120, a man loses 25%. At what price (in ₹) should he sell it to gain 5%?

- Ans
- ☐ 1. 188
 - ☒ 2. 168
 - ☐ 3. 158
 - ☐ 4. 178

Q.16 A school receives a grant of ₹15,000, which grows at 7% interest per year, compounded annually. What will be the value of the grant after 2 years?

- Ans
- ☐ 1. ₹17,273.50
 - ☐ 2. ₹16,163.50
 - ☐ 3. ₹16,153.50
 - ☒ 4. ₹17,173.50

Q.17 The ratio of milk and water in a 72 litre mixture is 5 : 3. Find the quantity of water (in litre) to be added to the mixture in order to make this ratio 1 : 1.

- Ans
- ☐ 1. 10
 - ☐ 2. 11
 - ☐ 3. 20
 - ☒ 4. 18

Q.18 The present cost of a shopping complex is ₹1,74,234. After a year, its cost increased to ₹1,84,089. The percentage increase (rounded off to the nearest integer) in the cost of the shopping complex is:

- Ans
- ☒ 1. 6%
 - ☐ 2. 16%
 - ☐ 3. 3%
 - ☐ 4. 12%

Q.19 Parmeet spends 50% of his income on transport and food, 15% on books and entertainment while 20% of the remaining in EMI of bank. If Parmeet's savings are ₹27,188, then Parmeet's income is:

- Ans
- ☐ 1. ₹89,000
 - ☒ 2. ₹97,100
 - ☐ 3. ₹92,640
 - ☐ 4. ₹1,00,000

Q.20 By selling an article for ₹120, a man loses 25%. At what price (in ₹) should he sell it to gain 20%?

- Ans
- ☒ 1. 192
 - ☐ 2. 182
 - ☐ 3. 202
 - ☐ 4. 212

Q.1 A person crosses a 1600-metre long street in 8 minutes. What is his speed (in km/hr)?

- Ans ☒ 1. 12
☐ 2. 10
☐ 3. 8
☐ 4. 11

Q.2 Anjali and Minal together invested ₹37,800 in a business. At the end of the year, out of a total profit of ₹9,000, Anjali's share was ₹2,100. What was the investment of Minal?

- Ans ☒ 1. ₹28,980
☐ 2. ₹29,170
☐ 3. ₹27,810
☐ 4. ₹27,180

Q.3 A conical tent has a base radius of 7 meter and slant height 25 meter. A cylindrical extension of height 3 meter and the same radius is attached below it. Find the cost (in ₹) of painting the total external surface area of the entire structure, excluding the base, at the rate of ₹2.5 per square meter.
(Use $\pi = \frac{22}{7}$)

- Ans ☒ 1. 1705
☐ 2. 1715
☐ 3. 1710
☐ 4. 1700

Q.4 A square-shaped park has a walking track constructed along its boundary. The length of each side of the park is 22.25 m. What is the total length of the walking track around the park?

- Ans ☒ 1. 89 m
☐ 2. 120 m
☐ 3. 109 m
☐ 4. 80 m

Q.5 A bag has a marked price of ₹1,280 and is sold for ₹1,088. Find the percentage discount given.

- Ans ☐ 1. 13%
☐ 2. 14%
☒ 3. 15%
☐ 4. 16%

Q.6 Three pipes A, B, and C can fill a tank in 6 hours, 8 hours, and 12 hours, respectively. Another pipe D can empty the tank in 9 hours. All four pipes are opened together. After 2 hours, pipe B is closed. After 3 more hours, pipe C is also closed. How long (in hours) will it take to fill the tank completely?

- Ans ☐ 1. 5.25
☒ 2. 6
☐ 3. 5.75
☐ 4. 5.5

Q.7 The cost of raw materials and the manufacturing cost of a product increase by 25% and 20%, respectively, while the selling price of the product increases by 50%. The raw material and manufacturing costs before the increase were 40% and 60% of the total cost, respectively. If the original profit percentage was one-fifth of the original manufacturing cost, find the approximate new profit percentage.

- Ans
- ☐ 1. 35.50%
 - ☐ 2. 30.7%
 - ☐ 3. 32.75%
 - ☒ 4. 37.70%

Q.8 Akhil and Sujeet start a business by investing ₹40,000 and ₹60,000, respectively. At the end of the year, they earn a total profit of ₹25,500. What is Sujit's share (in ₹) in the profit?

- Ans
- ☐ 1. 14,300
 - ☐ 2. 13,500
 - ☒ 3. 15,300
 - ☐ 4. 15,450

Q.9 A can complete a piece of work in 12 days and B can complete it in 18 days. If they work together for 3 days, what fraction of the work will still be remaining?

- Ans
- ☐ 1. $\frac{1}{2}$
 - ☐ 2. $\frac{2}{3}$
 - ☐ 3. $\frac{5}{12}$
 - ☒ 4. $\frac{7}{12}$

Q.10 ₹3,360 is divided into three parts in such a way that half of the first part, one-fourth of the second part and one-eighth of the third part are equal. What is the value of first part (in ₹)?

- Ans
- ☐ 1. 580
 - ☐ 2. 780
 - ☐ 3. 280
 - ☒ 4. 480

Q.11 Two taps can fill a cistern in 18 hours and 11 hours, respectively. A third tap can empty it in 15 hours. How long will it take to fill the empty cistern, if all of them are opened together?

- Ans
- ☐ 1. $15\frac{42}{79}$ hours
 - ☐ 2. $18\frac{42}{79}$ hours
 - ☐ 3. $14\frac{42}{79}$ hours
 - ☒ 4. $12\frac{42}{79}$ hours

Q.12 What is the curved surface area (in cm^2) of a solid cylinder of height 5

- Ans ☒ 1. 1276
☐ 2. 1350
☐ 3. 1424
☐ 4. 1627

Q.13 A shopkeeper bought pens at the rate of 9 for ₹15 and sold them at a profit of 20%. How many pens would a customer get for ₹74?

- Ans ☒ 1. 37
☐ 2. 35
☐ 3. 38
☐ 4. 36

Q.14 A conical tank has a height of 24 m and a base radius of 7 m. Water flows into the tank at a rate of 154 m^3 per minute. How many minutes will it take to completely fill the tank? (Take $\pi = 22/7$)

- Ans ☐ 1. 10 minutes
☐ 2. 12 minutes
☐ 3. 6 minutes
☒ 4. 8 minutes

Q.15 Two trains are moving in opposite directions at speeds of 80 km/hour and 70 km/hour. Their lengths are 1.3 km and 0.7 km, respectively. The time taken by the slower train to cross the faster train is:

- Ans ☐ 1. 62 seconds
☒ 2. 48 seconds
☐ 3. 58 seconds
☐ 4. 52 seconds

Q.16 A car travels 60 km at 30 km/h and then another 40 km at 40 km/h. What is the average speed of the car for the entire journey? (Give the answer in km/h, and round your answer to the nearest integer.)

- Ans ☐ 1. 37 km/h
☐ 2. 35 km/h
☒ 3. 33 km/h
☐ 4. 36 km/h

Q.17 If 40% of a number is equal to three-seventh of another number, what is the ratio of the first number to the second number?

- Ans ☒ 1. 15:14
☐ 2. 13:14
☐ 3. 14:15
☐ 4. 13:11

Q.18 Anoop, Himanshu and Deepak can complete a work in 20 days, 30 days and 40 days, respectively. Himanshu and Deepak started the work and left after 3 days. How many days will Anoop take to complete the remaining work?

- Ans ☒ 1. 16.5 days
☐ 2. 15 days
☐ 3. 22 days
☐ 4. 20.5 days

Q.18 The first successful textile mill in India was established in 1854 at:

- Ans**
- ☒ 1. Mumbai
 - ☐ 2. Surat
 - ☐ 3. Kolkata
 - ☐ 4. Chennai

Q.19 Which of the following groups of states together host the largest population of the One-Horned Rhinoceros in India?

- Ans**
- ☒ 1. Assam and West Bengal
 - ☐ 2. Bihar and Jharkhand
 - ☐ 3. Gujarat and Rajasthan
 - ☐ 4. Kerala and Tamil Nadu

Q.20 Which among the following represents one of the main functions of enzymes in biological systems?

- Ans**
- ☒ 1. Catalyzing biochemical reactions
 - ☐ 2. Structural support
 - ☐ 3. Energy storage
 - ☐ 4. Genetic information

Section : **Arithmetical and Numerical Ability**

Q.1 Which of the following statements is not true?

- a) Two even numbers cannot be co-prime as they always contain 2 as their common factor.
- b) Two numbers with unit digits as 0 and 5 cannot be co-prime because they always contain 5 as their common factor.
- c) Some examples of co-prime are (45, 242) and (37, 112).
- d) 1 is neither a prime nor a composite number.

- Ans**
- ☐ 1. b
 - ☐ 2. d
 - ☐ 3. a
 - ☒ 4. c

Q.2 A manufacturer sells a product to a wholesaler at a profit of 40%. The wholesaler, in turn, sells it to a retailer at a profit of 40%, and the retailer sells it to a customer at a profit of 25%. If the customer pays ₹490, find the cost price (in ₹) for the manufacturer.

- Ans**
- ☐ 1. ₹197
 - ☐ 2. ₹201
 - ☒ 3. ₹200
 - ☐ 4. ₹203

Q.3 Find the simple interest (in ₹) on ₹1,500 at 6% per month for 2 months.

- Ans**
- ☒ 1. 180
 - ☐ 2. 15
 - ☐ 3. 30
 - ☐ 4. 45

Q.4 There are 40 members in group A, 71 members in group B, and 30 members in group C. All the members of these groups went to a restaurant. The average amount spent per member in groups A, B, and C is ₹107, ₹290, and ₹299 respectively. Find the overall average amount (in ₹) spent per member.

Ans ☐ 1. 235

☒ 2. 240

☐ 3. 237

☐ 4. 238

Q.5 Keshav finds a 12% increase in the sales in the first year and 24% in the second year. If the current sales is ₹173600, what was the sales (in ₹) two years ago?

Ans ☐ 1. 155000

☒ 2. 125000

☐ 3. 140000

☐ 4. 105000

Q.6 The profit of a company is increased from ₹10,00,000 to ₹13,60,000 in one year. Calculate the percentage increase in the profit of the company.

Ans ☐ 1. 32%

☐ 2. 38%

☐ 3. 35%

☒ 4. 36%

Q.7 A manufacturer sells a product to a wholesaler at a profit of 25%. The wholesaler, in turn, sells it to a retailer at a profit of 60%, and the retailer sells it to a customer at a profit of 25%. If the customer pays ₹685, find the cost price (in ₹) for the manufacturer.

Ans ☐ 1. 272

☒ 2. 274

☐ 3. 276

☐ 4. 273

Q.8 The value of $\frac{\left(\frac{14}{2} + \frac{12}{9} \text{ of } \frac{9}{2}\right)}{\left(12 - \frac{13}{9} \div \frac{2}{9}\right)}$ is

Ans ☐ 1. $\frac{19}{18}$

☒ 2. $\frac{26}{11}$

☐ 3. $\frac{28}{12}$

☐ 4. $\frac{29}{21}$

Q.9 A bike costs ₹80,000 when it is brand new. At the end of each year, its value is only 90% of what it was at the beginning of the year. What is the value of the bike at the end of 4 years?

Ans ☐ 1. ₹55,678

☒ 2. ₹52,488

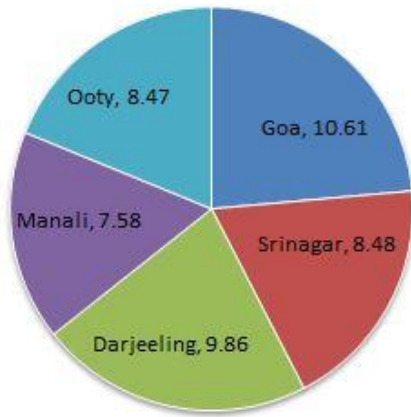
☐ 3. ₹57,678

☐ 4. ₹59,878

Q.10 The LCM of $5^3 \times 8^2 \times 14$, $5^2 \times 14^2 \times 17$, and $8^3 \times 14^2 \times 17^2$ is:

- Ans
- ☐ 1. $52 \times 83 \times 14 \times 172$
 - ☐ 2. $52 \times 82 \times 142 \times 173$
 - ☐ 3. $53 \times 82 \times 142 \times 17$
 - ☒ 4. $53 \times 83 \times 142 \times 172$

Q.11 The pie-chart below displays the number (in million) of tourist to five different places. What is the approximate central angle (in degrees) corresponding to Manali?



- Ans
- ☐ 1. 66
 - ☒ 2. 60.64
 - ☐ 3. 64.46
 - ☐ 4. 55.64

Q.12 The ratio of milk and water in a 65 litre mixture is 8 : 5. Find the quantity (in litres) of water to be added to the mixture in order to make the ratio 1:1.

- Ans
- ☐ 1. 7
 - ☐ 2. 16
 - ☐ 3. 13
 - ☒ 4. 15

Q.13 A shop mixes two types of tea: Type A costs ₹200 per kg and Type B costs ₹300 per kg. How much of each type should be mixed to get 10 kg of tea costing ₹260 per kg?

- Ans
- ☐ 1. 5 kg of type A, 5 kg of type B
 - ☐ 2. 2 kg of type A, 8 kg of type B
 - ☒ 3. 4 kg of type A, 6 kg of type B
 - ☐ 4. 6 kg of type A, 4 kg of type B

Q.14 A town has a current population of 30,000 people. The population growth rate is 3% per year. What will be the population of the town after 2 years?

- Ans
- ☒ 1. 31,827
 - ☐ 2. 31,872
 - ☐ 3. 31,728
 - ☐ 4. 31,287

Q.15 $\frac{1}{20}$ is what percentage of $\frac{1}{100}$?

- Ans
- ☐ 1. 1000%
 - ☐ 2. 510%
 - ☒ 3. 500%
 - ☐ 4. 515%

Q.16 Mohan's salary was first reduced by 40% and subsequently raised by 55%. How much percentage was his final salary lower compared to his initial salary?

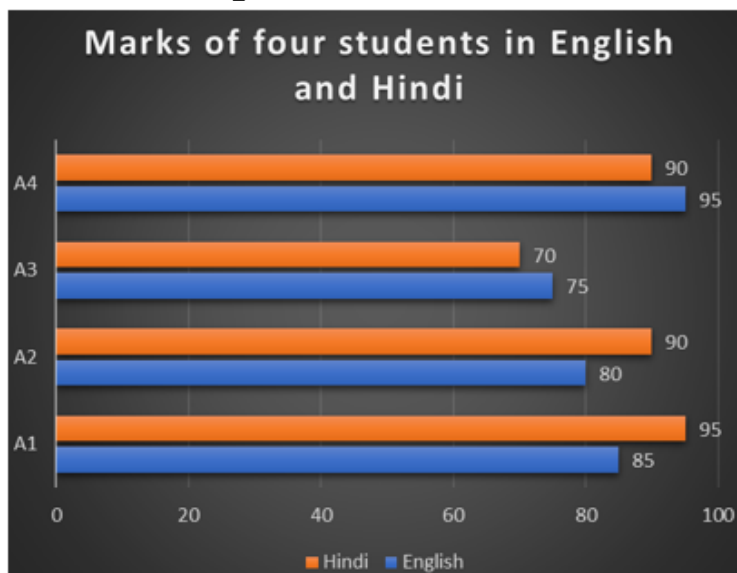
- Ans
- ☐ 1. 40%
 - ☐ 2. 22%
 - ☒ 3. 7%
 - ☐ 4. 55%

Q.17 Meera kept an amount of ₹22,500 as deposit for 2 years at the rate of 6 per cent per annum at compound interest, compounded annually. How much total interest will she get at the end of 2 years?

- Ans
- ☐ 1. ₹2828
 - ☐ 2. ₹2878
 - ☒ 3. ₹2781
 - ☐ 4. ₹2718

Q.18 Study the following bar graph and answer the question based on it.

The bar chart represents the marks of four students (A1, A2, A3 and A4) in English and Hindi.



What is the ratio of total marks in both subjects secured by A1 to that by A4?

- Ans
- ☐ 1. 34:35
 - ☐ 2. 35:36
 - ☒ 3. 36:37
 - ☐ 4. 33:34

Q.19 Find the value of $\sqrt{6\sqrt{6\sqrt{6\sqrt{6\sqrt{6}}}}}$.

- Ans
- ☐ 1. $6^{\frac{31}{34}}$
 - ☐ 2. 3
 - ☒ 3. $6^{\frac{31}{32}}$
 - ☐ 4. 6

Q.20 In 28 litres of mixture of spirit and water, the ratio of spirit to water is 5 : 2. Find the quantity of water (in litres) that needs to be added to the mixture to get a mixture having 60% water.

- Ans**
- ☒ 1. 22
 - ☐ 2. 12
 - ☐ 3. 24
 - ☐ 4. 26

Section : Arithmetical and Numerical Ability1

Q.1 A train travels from City A to City B at a speed of 110 km/hr and returns from City B to City A at a speed of 140 km/hr. What is the average speed of the train (in km/hr) for the entire journey?

- Ans**
- ☐ 1. 133.2
 - ☐ 2. 143.2
 - ☐ 3. 139.2
 - ☒ 4. 123.2

Q.2 A train travels 1200 metres in 40 seconds. What is its speed in km/h?

- Ans**
- ☐ 1. 126
 - ☐ 2. 72
 - ☒ 3. 108
 - ☐ 4. 90

Q.3 There are 2448 students in a school and the ratio of boys to girls in the school is 26:25. Find the number of boys in the school.

- Ans**
- ☒ 1. 1248
 - ☐ 2. 1144
 - ☐ 3. 1245
 - ☐ 4. 1040

Q.4 ₹3,920 is divided into three parts in such a way that half of the first part, one-fourth of the second part and one-eighth of the third part are equal. What is the value of first part (in ₹)?

- Ans**
- ☐ 1. 660
 - ☒ 2. 560
 - ☐ 3. 360
 - ☐ 4. 260

Q.5 A person plans a destination trip as follows: cover $\frac{1}{4}$ th of the journey at a speed of 30 km/h, cover $\frac{1}{3}$ rd of the remaining distance at a speed of 40 km/h, cover $\frac{1}{2}$ of the remaining distance at a speed of 50 km/h and cover the remaining distance at a speed of 60 km/h and reach the destination. Find his average speed (in km/h). (rounded off to 2 decimal places)

- Ans**
- ☐ 1. 42.14
 - ☐ 2. 41.12
 - ☐ 3. 40.14
 - ☒ 4. 42.11

Q.6 Gopal can do a piece of work in 6 hours. Akshay can do it in 30 hours. With the assistance of Atul, they completed the work in 2 hours. In how many hours can Atul alone do thrice the same work?

- Ans**
- ☐ 1. 12
 - ☐ 2. 11
 - ☒ 3. 10
 - ☐ 4. 9

Q.7 A train started from station A to station B at a speed of 66 km/hr at 7 a.m. Another train also started from station A to B at a speed of 78 km/hr at 9 a.m. At what time will they meet each other?

- Ans**
- ☐ 1. 5 p.m.
 - ☐ 2. 6 p.m.
 - ☐ 3. 11 a.m.
 - ☒ 4. 8 p.m.

Q.8 A shopkeeper sold a table at a loss of 10%. If he had bought the same table for ₹100 less and sold it at a profit of 20%, he would have received ₹180 more than the initial selling price. Find the actual cost price (in ₹) of the table.

- Ans**
- ☒ 1. 1,000
 - ☐ 2. 980
 - ☐ 3. 1,050
 - ☐ 4. 1,020

Q.9 Two pipes A and B can fill a tank in 9 hours and 5 hours, respectively. If both are opened together, how much time will they take to fill the tank? (Round off your answer to one decimal place.)

- Ans**
- ☐ 1. 3.5 hours
 - ☐ 2. 2.2 hours
 - ☒ 3. 3.2 hours
 - ☐ 4. 4.2 hours

Q.10 5 men or 7 women can do a job in 8 days. 5 men work for 5 days and leave. The number of women required to complete the remaining work in 7 days is:

- Ans**
- ☐ 1. 1
 - ☒ 2. 3
 - ☐ 3. 4
 - ☐ 4. 5

Q.11 A fruit seller makes a profit of 30%, by selling pineapples at a certain price. If he charges ₹5 more for each pineapple, he can make a profit of 45%. Find the selling price of each pineapple in the first case. (correct to two decimal places)

- Ans**
- ☐ 1. ₹58.60
 - ☒ 2. ₹43.33
 - ☐ 3. ₹75.25
 - ☐ 4. ₹69.70

Q.12 The height of a cylinder is initially twice its radius. If the radius is increased by 23.35% while the height remains unchanged, find the percentage increase in the total surface area of the cylinder (correct to two decimal places).

- Ans
- ☐ 1. 52.15%
 - ☒ 2. 32.95%
 - ☐ 3. 33.74%
 - ☐ 4. 32.14%

Q.13 A right angled triangle has hypotenuse 17 cm long and base length 15 cm long. Find its perimeter.

- Ans
- ☐ 1. 46 cm
 - ☒ 2. 40 cm
 - ☐ 3. 50 cm
 - ☐ 4. 44 cm

Q.14 Pipe X and Pipe Y, when both are opened together, can fill a tank in 10 minutes. Pipe Y alone can fill the tank in 15 minutes. Find the time in which pipe X alone will fill the tank.

- Ans
- ☐ 1. 25 minutes
 - ☐ 2. 35 minutes
 - ☐ 3. 20 minutes
 - ☒ 4. 30 minutes

Q.15 The curved surface area of a cylinder is 8800 cm^2 and the circumference of its base is 352 cm. Find the volume of the cylinder (use $\pi = 22/7$).

- Ans
- ☒ 1. 2,46,400 cm^3
 - ☐ 2. 1,89,300 cm^3
 - ☐ 3. 1,56,320 cm^3
 - ☐ 4. 2,10,450 cm^3

Q.16 If a shopkeeper gives you ten items for the price of six items, then what is the percentage of discount being offered?

- Ans
- ☐ 1. 35%
 - ☒ 2. 40%
 - ☐ 3. 45%
 - ☐ 4. 50%

Q.17 The ratio of A:B is 7:8 and B:C is 2:2.5. Find the ratio of A:C

- Ans
- ☒ 1. 7:10
 - ☐ 2. 4:10
 - ☐ 3. 8:11
 - ☐ 4. 8:13

Q.18 Zakir and Yamini started a business, investing amounts of ₹1560 and ₹2210 respectively. If Zakir's share in the profit earned by them is ₹720, what is the total profit (in ₹) earned by them together?

- Ans
- ☐ 1. 1790
 - ☐ 2. 1680
 - ☒ 3. 1740
 - ☐ 4. 1640

Q.17 In the state of Maharashtra, which of the following industries is widely recognized for being predominantly organized and operated under the cooperative sector?

- Ans**
- ☐ 1. Textile industry
 - ☐ 2. Automobile industry
 - ☐ 3. Steel industry
 - ☒ 4. Sugar industry

Q.18 According to Article 243D of the Indian Constitution, what proportion of seats reserved for Scheduled Castes and Scheduled Tribes in Panchayats is reserved for women belonging to these categories?

- Ans**
- ☐ 1. Two-thirds
 - ☐ 2. Half
 - ☐ 3. Two-fifths
 - ☒ 4. One-third

Q.19 The Ramcharitmanas, one of the most influential medieval vernacular epics in northern India, was composed in which language by Tulsidas in the 16th century?

- Ans**
- ☐ 1. Khari Boli
 - ☐ 2. Chhattisgarhi
 - ☒ 3. Awadhi
 - ☐ 4. Braj Bhasha

Q.20 Which river, flowing through a rift valley, is traditionally considered the northern boundary separating the Central Highlands from the Deccan Plateau?

- Ans**
- ☐ 1. Ganga River
 - ☐ 2. Brahmaputra River
 - ☐ 3. Godavari River
 - ☒ 4. Narmada River

Section : Arithmetical and Numerical Ability

Q.1 A number when decreased by $87\frac{1}{2}\%$, results in 388. The number is:

- Ans**
- ☐ 1. 3204
 - ☐ 2. 2804
 - ☒ 3. 3104
 - ☐ 4. 3004

Q.2 Find the compound interest on ₹3,500 at 10% per annum for 1 year 6 months, compounded half yearly (rounded off to the nearest rupee).

- Ans**
- ☐ 1. ₹558
 - ☒ 2. ₹552
 - ☐ 3. ₹564
 - ☐ 4. ₹569

Q.3 Ashish's sales increased by 12% in the first year and by 25% in the second year. If his current sales are ₹1,42,800, what were his sales (in ₹) two years ago?

- Ans**
- ☐ 1. 92,300
 - ☒ 2. 1,02,000
 - ☐ 3. 95,500
 - ☐ 4. 1,04,240

Q.4 Study the table and answer the question that follows.

The following table shows the marks scored by Rajesh in different subjects in the half-yearly and final exams.

Subject	Half-yearly Marks	Final Marks
Mathematics	55	80
Science	45	65
English	50	75
Social Science	50	60

What is the percentage increase in Rajesh's total marks from the half-yearly to the final exam?

- Ans
- ☐ 1. 30%
 - ☒ 2. 40%
 - ☐ 3. 20%
 - ☐ 4. 50%

Q.5 By selling an article for ₹120, a man loses 40%. At what price (in ₹) should he sell it to gain 13%?

- Ans
- ☐ 1. 236
 - ☐ 2. 246
 - ☐ 3. 216
 - ☒ 4. 226

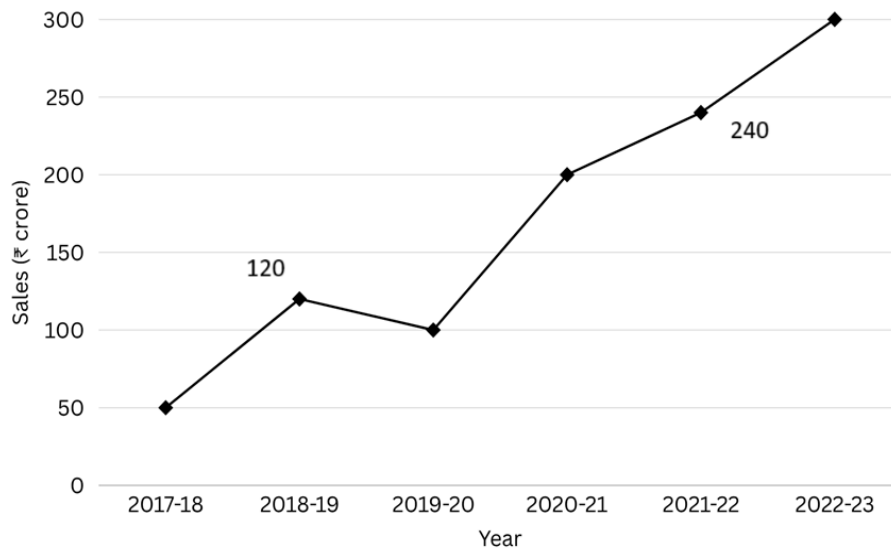
Q.6 At what rate of interest per annum will a certain sum of money become 93 times its original value in 2 years, if the interest is compounded annually? (Rounded off to one decimal place)

- Ans
- ☐ 1. 867.5%
 - ☒ 2. 864.4%
 - ☐ 3. 873.7%
 - ☐ 4. 868.3%

Q.7 At what rate (in percentage, rounded off to two places after decimal) of interest per year will a sum of money become 3 times of itself in 24 years on simple interest?

- Ans
- ☐ 1. 6.33%
 - ☐ 2. 16.66%
 - ☐ 3. 10.33%
 - ☒ 4. 8.33%

Q.8 The graph below shows the annual sales (in ₹ crore) of a company over five financial years. What was the percentage increase in sales from 2021-22 to 2022-23?



- Ans ☒ 1. 25%
☐ 2. 22%
☐ 3. 30%
☐ 4. 20%

Q.9 A number is first increased by 80% and then decreased by 30%. The result is 189. What is the original number?

- Ans ☐ 1. 160
☐ 2. 155
☐ 3. 145
☒ 4. 150

Q.10 The fraction equivalent to 2.63636... is:

- Ans ☐ 1. $\frac{19}{10}$
☒ 2. $\frac{29}{11}$
☐ 3. $\frac{31}{14}$
☐ 4. $\frac{34}{19}$

Q.11 A sum of ₹7,10,000 is invested for a year at 6% per annum, compounded half-yearly. What is the compound interest earned at the end of the year?

- Ans ☐ 1. ₹42,937
☒ 2. ₹43,239
☐ 3. ₹42,844
☐ 4. ₹44,844

Q.12 The LCM of the numbers 7.3 and 0.01 is:

- Ans ☒ 1. 7.3
☐ 2. 0.073
☐ 3. 73
☐ 4. 0.73

Q.13 By selling an article for ₹120, a man loses 40%. At what price (in ₹) should he sell it to gain 5%?¹¹⁶⁸⁵

- Ans ☐ 1. 200
☒ 2. 210
☐ 3. 230
☐ 4. 220

Q.14 The marks obtained by five students in a test are: 40, 50, 60, 70, and 80. What is the average mark?

- Ans ☒ 1. 60
☐ 2. 55
☐ 3. 65
☐ 4. 50

Q.15 Simplify $\left(\sqrt{5} - \sqrt{\frac{1}{5}}\right)^2$.¹³⁰⁸

- Ans ☐ 1. $\frac{9}{5}$
☐ 2. $\frac{24}{5}$
☐ 3. $\frac{11}{5}$
☒ 4. $\frac{16}{5}$

Q.16 Sita spends 80% of her income. If her income is ₹25,000, what are her savings?

- Ans ☐ 1. ₹5,200
☐ 2. ₹5,900
☐ 3. ₹5,600
☒ 4. ₹5,000

Q.17 Find the greatest number that will divide 106, 232, and 330, leaving the same remainder in each case.

- Ans ☐ 1. 12
☒ 2. 14
☐ 3. 16
☐ 4. 18

Q.18 Seven years ago from now, the average age of A, B and C was 39 years. After seven years from now, the average age of A and C will be 71 years. What will be the age (in years) of B, after nine years from now?

- Ans ☐ 1. 22
☐ 2. 17
☐ 3. 15
☒ 4. 19

Q.19 In a school, the ratio of boys to girls is 3:2. The average marks of boys is 60 and that of girls is 75. What is the overall average marks?

- Ans**
- ☒ 1. 66
 - ☐ 2. 65
 - ☐ 3. 67
 - ☐ 4. 68

Q.20 The average age of 4 friends is 20 years. If one more friend aged 20 years joins them, what will be the new average age?

- Ans**
- ☐ 1. 26 years
 - ☒ 2. 20 years
 - ☐ 3. 24 years
 - ☐ 4. 30 years

Section : **Arithmetical and Numerical Ability1**

Q.1 A car travels a distance of 84 km at a speed of 60 km/h and the next 84 km at a speed of 40 km/h. Find the average speed of the car for the entire journey.

- Ans**
- ☒ 1. 48 km/h
 - ☐ 2. 44 km/h
 - ☐ 3. 50 km/h
 - ☐ 4. 46 km/h

Q.2 In a culinary recipe, the quantities of milk and water are mixed in the ratio 5:3. To prepare a total volume of 800 ml of this mixture, what amount of water is required?

- Ans**
- ☐ 1. 280 ml
 - ☐ 2. 250 ml
 - ☐ 3. 360 ml
 - ☒ 4. 300 ml

Q.3 A sand heap is in the shape of a cone. The radius of the base is 3.5 m and the height is 6 m. Find the volume of sand in the heap. (Use $\pi = 22/7$)

- Ans**
- ☒ 1. 77 m³
 - ☐ 2. 68 m³
 - ☐ 3. 84 m³
 - ☐ 4. 80 m³

Q.4 A taxi travels 15 km in 20 minutes. What is its speed in km/h?

- Ans**
- ☐ 1. 55 km/h
 - ☐ 2. 40 km/h
 - ☐ 3. 50 km/h
 - ☒ 4. 45 km/h

Q.5 A shirt is marked at ₹1,500. A shopkeeper gives two successive discounts of 10% and 12% on the marked price. Find the final selling price of the shirt.

- Ans**
- ☐ 1. ₹1,348
 - ☐ 2. ₹1,228
 - ☐ 3. ₹1,078
 - ☒ 4. ₹1,188

Q.6 A cylindrical tank has radius 7 cm and height 10 cm. What is its volume? (Use $\pi = \frac{22}{7}$)

- Ans
- ☐ 1. 1500 cm³
 - ☐ 2. 1600 cm³
 - ☐ 3. 1640 cm³
 - ☒ 4. 1540 cm³

Q.7 Two pipes, A and B, can fill a tank in 12 hours and 15 hours, respectively. If both pipes are opened together, how much time will it take to fill the tank?

- Ans
- ☐ 1. 9 hours 20 minutes
 - ☐ 2. 10 hours 10 minutes
 - ☐ 3. 13 hours 30 minutes
 - ☒ 4. 6 hours 40 minutes

Q.8 A cuboidal box of dimensions 8 m × 6 m × 4 m is melted and recast into identical cubes. The side of each cube is equal to the HCF of the three dimensions of the cuboid. How many cubes can be formed?

- Ans
- ☐ 1. 20
 - ☒ 2. 24
 - ☐ 3. 22
 - ☐ 4. 26

Q.9 Pipe D can fill a tank in 8 hours, and Pipe E can empty it in 16 hours. If both pipes are opened together, how many hours will it take to fill the tank?

- Ans
- ☐ 1. 8 hours
 - ☐ 2. 24 hours
 - ☐ 3. 12 hours
 - ☒ 4. 16 hours

Q.10 What is the correct descending order of the following ratios: 13 : 38, 18 : 19, 41 : 57, 15 : 16, 33 : 40?

- Ans
- ☐ 1. 18 : 19, 15 : 16, 41 : 57, 33 : 40, 13 : 38
 - ☐ 2. 15 : 16, 18 : 19, 33 : 40, 41 : 57, 13 : 38
 - ☒ 3. 18 : 19, 15 : 16, 33 : 40, 41 : 57, 13 : 38
 - ☐ 4. 18 : 19, 15 : 16, 33 : 40, 13 : 38, 41 : 57

Q.11 A manufacturer fixes his selling price at 50% over the cost of production. If the cost of production goes up by 66%, and the manufacturer raises his selling price by 66%, find the profit percentage.

- Ans
- ☐ 1. 53%
 - ☒ 2. 50%
 - ☐ 3. 51%
 - ☐ 4. 47%

Q.12 Find the fourth proportional to $a + b$, $a^2 - b^2$, $a^2 + ab + b^2$.

- Ans
- ☐ 1. $a^2 - b^2$
 - ☒ 2. $a^3 - b^3$
 - ☐ 3. $(a - b)$
 - ☐ 4. $(a + b)$

Q.13 3 men and 4 women can complete a work in 12 days. 2 men and 4 women can complete the same work in 15 days. Find the time taken by 5 men and 2 women to complete the same work.

- Ans
- ☐ 1. 20 days
 - ☒ 2. 10 days
 - ☐ 3. 14 days
 - ☐ 4. 12 days

Q.14 A shopkeeper marks goods at a price that is 60% above the cost price and then allows a discount of 20%. If the selling price is ₹352, find the cost price (in ₹).

- Ans
- ☐ 1. 278
 - ☐ 2. 272
 - ☒ 3. 275
 - ☐ 4. 273

Q.15 A cylindrical water tank has a height of 12 m and a radius of 5 m. Water is being poured into the tank at a rate of $2 \text{ m}^3/\text{min}$. However, there is a leak at the bottom of the tank through which $0.5 \text{ m}^3/\text{min}$ of water is leaking out. How long will it take to fill the tank completely if it is initially empty? (Use $\pi = 3.14$)

- Ans
- ☐ 1. 638 minutes
 - ☐ 2. 548 minutes
 - ☐ 3. 428 minutes
 - ☒ 4. 628 minutes

Q.16 Find the single equivalent discount percentage that is equal to two successive discounts of 15% and 20%.

- Ans
- ☐ 1. 33%
 - ☐ 2. 35%
 - ☐ 3. 38%
 - ☒ 4. 32%

Q.17 Two numbers are in the ratio 4:7. If 5 is subtracted from each number, the new ratio becomes 1:2. Find the larger original number.

- Ans
- ☐ 1. 28
 - ☒ 2. 35
 - ☐ 3. 42
 - ☐ 4. 49

Q.18 Pipe A can fill a tank in 10 hours and Pipe B can empty the same full tank in 15 hours. If both pipes are opened together, how much time will it take to completely fill the empty tank?

- Ans
- ☐ 1. 36 hours
 - ☐ 2. 25 hours
 - ☐ 3. 20 hours
 - ☒ 4. 30 hours

Q.19 A man rows to a place that is 21 km away and then returns to the starting point. The total time taken for the round trip is 7 hours. If the speed of the stream is 3 km/h, what is the speed of the man in still water? (Round your answer to two decimal places)

- Ans
- ☐ 1. 5.65 km/h
 - ☐ 2. 6.54 km/h
 - ☒ 3. 7.24 km/h
 - ☐ 4. 8.45 km/h

Q.17 संस्कृत साहित्यिक परंपराओं के संदर्भ में, असंगत की पहचान कीजिए।

- Ans
- ☐ 1. स्मृति (Smṛti)
 - ☐ 2. श्रुति (Śruti)
 - ☐ 3. सुभाषित (Subhashitas)
 - ☒ 4. वचन (Vachanas)

Q.18 Which of the following initiatives by the Government of India primarily focuses on sanitation and waste management in cities?

- Ans
- ☐ 1. Smart Cities Mission
 - ☒ 2. Swachh Bharat Mission - Urban
 - ☐ 3. Atal Mission for Rejuvenation and Urban Transformation
 - ☐ 4. Pradhan Mantri Awas Yojana

Q.19 Which festival celebrates the victory of Lord Rama over Ravana?

- Ans
- ☒ 1. Dussehra
 - ☐ 2. Janmashtami
 - ☐ 3. Holi
 - ☐ 4. Diwali

Q.20 Deficiency of which of the following vitamin B causes beriberi?

- Ans
- ☒ 1. Vitamin B1 (Thiamine)
 - ☐ 2. Vitamin B2 (Riboflavin)
 - ☐ 3. Vitamin B6 (Pyridoxine)
 - ☐ 4. Vitamin B12 (Cobalamin)

Section : **Arithmetical and Numerical Ability**

Q.1 At what rate of interest per annum, compounded annually, will a sum of money become 52 times in 2 years? (Round off to one decimal place)

- Ans
- ☒ 1. 621.1%
 - ☐ 2. 625.3%
 - ☐ 3. 611.9%
 - ☐ 4. 616.5%

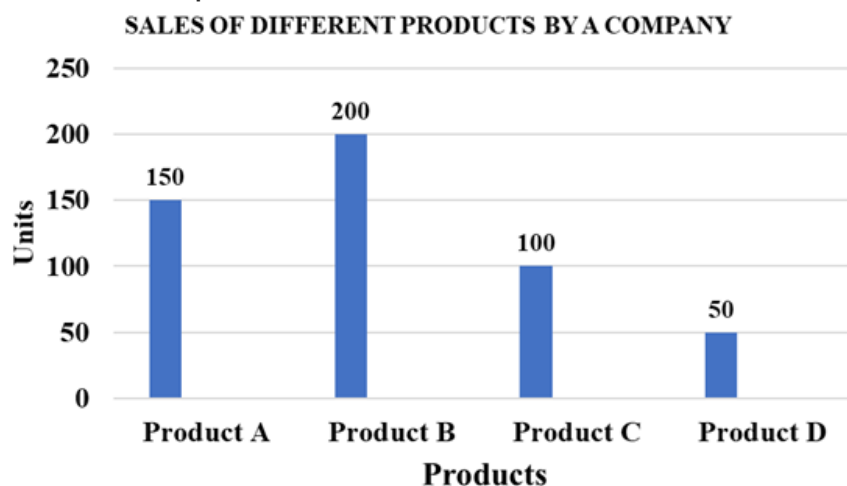
Q.2 The cost of a two-bedroom flat of 1000 sq.ft is ₹42,75,000. If it depreciates at the rate of 4% every year, then what is its cost after two years?

- Ans
- ☒ 1. ₹39,39,840
 - ☐ 2. ₹39,41,500
 - ☐ 3. ₹38,45,800
 - ☐ 4. ₹36,39,750

Q.3 Find the simple interest (in ₹) on ₹1,500 at 6% per month for 6 months.

- Ans
- ☐ 1. 90
 - ☐ 2. 45
 - ☒ 3. 540
 - ☐ 4. 120

Q.4 The bar graph below shows the sales of different products by a company. What is the total sales of product A and B?



- Ans
- ☐ 1. 400 units
 - ☐ 2. 250 units
 - ☐ 3. 300 units
 - ☒ 4. 350 units

Q.5 The sum of two numbers is 156 and the HCF and LCM of these numbers are 12 and 360, respectively. Find the sum of the reciprocals of the numbers.

- Ans
- ☐ 1. 1
 - ☐ 2. $\frac{13}{30}$
 - ☒ 3. $\frac{13}{360}$
 - ☐ 4. $\frac{1}{30}$

Q.6 The average of 5 numbers is 36. If one number is 40, find the average of the remaining 4 numbers.

- Ans
- ☒ 1. 35
 - ☐ 2. 39
 - ☐ 3. 37
 - ☐ 4. 31

Q.7 Which of the following correctly defines compound interest calculated annually?

- Ans
- ☐ 1. Interest is calculated only once at the end of the loan period.
 - ☒ 2. Interest is calculated each year on the principal plus the accumulated interest from previous years.
 - ☐ 3. Interest is calculated monthly and added to the principal each year.
 - ☐ 4. Interest is calculated on the original principal only, every year.

Q.8 From the following pairs of integers, identify the pair that consists of numbers that are relatively prime to each other.

- Ans
- ☒ 1. (24, 35)
 - ☐ 2. (68, 85)
 - ☐ 3. (65, 91)
 - ☐ 4. (102, 153)

Q.9 A number, after an increase of 35%, becomes 2,295. What is the sum of the digits of the original number?

- Ans
- ☐ 1. 7
 - ☐ 2. 9
 - ☐ 3. 6
 - ☒ 4. 8

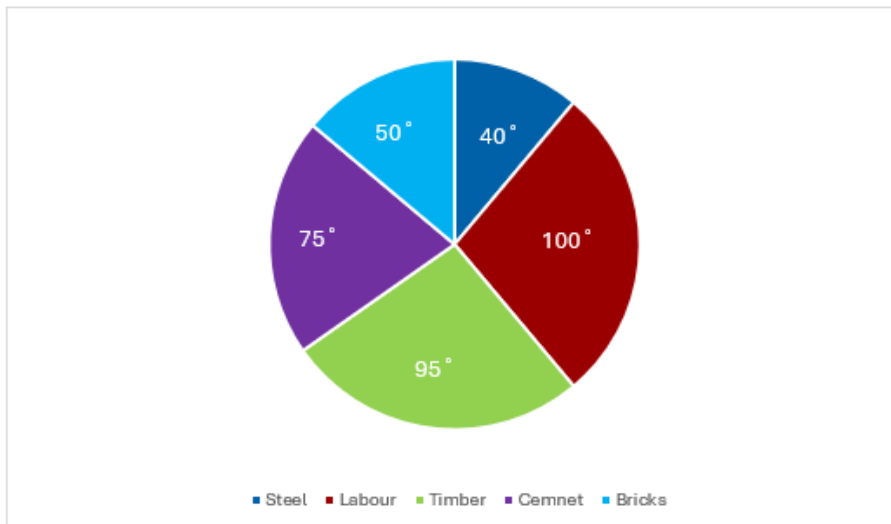
Q.10 A number is first increased by 70% and then decreased by 10%. The result is 1836. What is the original number?

- Ans
- ☐ 1. 1100
 - ☐ 2. 1250
 - ☐ 3. 1150
 - ☒ 4. 1200

Q.11 The value of $(15 - 3) \div 3 + 2 \times (5 + 1)$ is:

- Ans
- ☒ 1. 16
 - ☐ 2. 1
 - ☐ 3. 36
 - ☐ 4. 0

Q.12 Study the pie chart and answer the question that follows.
The following pie chart represents a total expenditure of ₹8,10,000 on different items in constructing a flat in a town.
The percentage of the total expenditure spent on labour and bricks is



- Ans
- ☐ 1. $43\frac{2}{3}\%$
 - ☐ 2. $42\frac{2}{3}\%$
 - ☐ 3. $44\frac{2}{3}\%$
 - ☒ 4. $41\frac{2}{3}\%$

Q.13 A sum becomes 8 times of itself in 4 years at compound interest, compounded annually. In how many years will the sum becomes 512 times of itself?

- Ans
- ☒ 1. 12
 - ☐ 2. 11
 - ☐ 3. 15
 - ☐ 4. 16

Q.14 By selling an article for ₹120, a man loses 25%. At what price (in ₹) should he sell it to gain 30%?

- Ans
- ☐ 1. 218
 - ☐ 2. 198
 - ☒ 3. 208
 - ☐ 4. 228

Q.15 By selling an article for ₹120, a man loses 40%. At what price (in ₹) should he sell it to gain 10%?

Ans ☒ 1. 220

☐ 2. 210

☐ 3. 230

☐ 4. 240

Q.16 The equivalent fraction of 8.666... is:

Ans ☐ 1. $\frac{17}{6}$

☐ 2. $\frac{33}{4}$

☒ 3. $\frac{26}{3}$

☐ 4. $\frac{21}{10}$

Q.17 The average monthly savings of a professional over the first 11 months of the year was ₹45,000. In the 12th month (December), he received a bonus and saved ₹1,05,000. What is his new average monthly savings for the entire year?

Ans ☐ 1. ₹51,500

☐ 2. ₹47,500

☒ 3. ₹50,000

☐ 4. ₹45,000

Q.18 A class initially consists of 25 students with an average weight of 40 kg. Later, 15 more students join, each having an average weight of 50 kg. What will be the new average weight of the entire class?

Ans ☐ 1. 42.75 kg

☐ 2. 43.25 kg

☒ 3. 43.75 kg

☐ 4. 42.25 kg

Q.19 Seven years ago from now, the average age of A, B and C was 42 years. After seven years from now, the average age of A and C will be 75 years. What will be the age (in years) of B, after five years from now?

Ans ☒ 1. 16

☐ 2. 12

☐ 3. 19

☐ 4. 18

Q.20 The current population of a town is 17,500. It increases by 20% in the first year and by 31% in the second year, then decreases by 60% in the third year. What will be the population of the town at the end of the third year?

Ans ☒ 1. 11,004

☐ 2. 10,996

☐ 3. 11,013

☐ 4. 11,007

Q.1 A cyclist travels from Town A to Town B at 20 km/h, then from Town B to Town C at 30 km/h. The distance from A to B is twice the distance from B to C. If the total time taken for the journey is 5 hours, what is the distance from A to B?

- Ans**
- ☒ 1. 75 km
 - ☐ 2. 55 km
 - ☐ 3. 70 km
 - ☐ 4. 80 km

Q.2 What is the fourth proportional of the numbers: 3.6, 7.8, and 12?

- Ans**
- ☐ 1. 25
 - ☐ 2. 27
 - ☒ 3. 26
 - ☐ 4. 28

Q.3 Three numbers are in proportion. If the sum of the first and second numbers is 50, and the sum of the second and the third is 75, what is the second number?

- Ans**
- ☐ 1. 20
 - ☐ 2. 80
 - ☒ 3. 30
 - ☐ 4. 75

Q.4 The sides of a triangle are in the ratio 8:15:17, and its perimeter is 200 cm. Find the area of the triangle.

- Ans**
- ☐ 1. 1,300 cm²
 - ☐ 2. 1,400 cm²
 - ☐ 3. 1,600 cm²
 - ☒ 4. 1,500 cm²

Q.5 A train travels 650 m in T seconds and another 940 m in 10 seconds. If the average speed of the train is 106 m/s, then the value of T is:

- Ans**
- ☐ 1. 7
 - ☐ 2. 6
 - ☒ 3. 5
 - ☐ 4. 4

Q.6 A train, 240 metres long, passes a person (treated as a point) in another train in 10 seconds when the trains are moving in opposite directions. When the trains move in the same direction, the first train takes 30 seconds to pass the same person. What is the speed of the first train (in m/s)?

- Ans**
- ☐ 1. 15
 - ☐ 2. 18
 - ☒ 3. 16
 - ☐ 4. 14

Q.7 A person travels from town A to town B at 40 km/h and returns from town B to town A at 60 km/h. What is his average speed for the whole journey?

- Ans**
- ☐ 1. 50 km/h
 - ☐ 2. 46 km/h
 - ☒ 3. 48 km/h
 - ☐ 4. 45 km/h

Q.8 A shopkeeper claims that he sells rock salt at ₹12 per kg, though the cost price is ₹15 per kg. But he gives 533 g instead of 1599 g. What is his percentage profit?

- Ans
- ☐ 1. 137%
 - ☒ 2. 140%
 - ☐ 3. 138%
 - ☐ 4. 141%

Q.9 The circumference of the base of a conical vessel is 44 cm. If its slant height is 25 cm, find the cost of polishing its outer surface at ₹10 per cm².

(Use $\pi = \frac{22}{7}$)

- Ans
- ☐ 1. ₹5,200
 - ☐ 2. ₹5,400
 - ☐ 3. ₹5,000
 - ☒ 4. ₹5,500

Q.10 A shopkeeper offers a 20% discount on the marked price of a watch, and he still manages to make a profit of 12%. By what percentage is the marked price higher than the cost price?

- Ans
- ☐ 1. 45%
 - ☒ 2. 40%
 - ☐ 3. 30%
 - ☐ 4. 35%

Q.11 Two pipes, A and B, can fill a tank in 18 minutes and 13 minutes respectively. Both the pipes are opened together, but after 2 minutes, pipe A is turned off. How much additional time will pipe B alone take to fill the remaining portion of the tank?

- Ans
- ☐ 1. $\frac{90}{9}$ minutes
 - ☐ 2. $\frac{95}{9}$ minutes
 - ☐ 3. $\frac{81}{9}$ minutes
 - ☒ 4. $\frac{86}{9}$ minutes

Q.12 A firm needs to assemble 1,200 gadgets. Team 1 can complete the work in 24 hours, and Team 2 can complete it in 18 hours. Both teams work together for 6 hours, after which Team 1 stops. How many more hours will Team 2 take to finish the remaining work?

- Ans
- ☐ 1. 8 hours 30 minutes
 - ☐ 2. 5 hours 30 minutes
 - ☐ 3. 4 hours 30 minutes
 - ☒ 4. 7 hours 30 minutes

Q.13 If the mean proportional between two numbers a and b is 36, and the ratio of a to b is 4:9, then what is the value of a+b?

- Ans
- ☐ 1. 68
 - ☐ 2. 88
 - ☐ 3. 58
 - ☒ 4. 78

Q.14 An ice-cream cone is placed inside a cylindrical holder with the same base radius of 5 cm and height 12 cm. How much empty space remains between the cone and the cylinder?

- Ans**
- ☒ 1. $200\pi \text{ cm}^3$
 - ☐ 2. $300\pi \text{ cm}^3$
 - ☐ 3. $150\pi \text{ cm}^3$
 - ☐ 4. $100\pi \text{ cm}^3$

Q.15 Two pipes, F and G, together can fill a tank in 5 hours. If pipe F alone can fill the tank in 10 hours, how many hours will pipe G alone take to fill the tank?

- Ans**
- ☒ 1. 10 hours
 - ☐ 2. 15 hours
 - ☐ 3. 20 hours
 - ☐ 4. 5 hours

Q.16 A solar panel installation site on a rooftop is triangular in shape. The three sides of the triangular frame measure 12.4 m, 16.8 m, and 19.5 m. Find the area of the solar panel (in square meters and give your answer nearest to an integer).

- Ans**
- ☒ 1. 103
 - ☐ 2. 95
 - ☐ 3. 110
 - ☐ 4. 120

Q.17 A shop offers "Buy 3, get 2 free". What is the effective discount percentage?

- Ans**
- ☒ 1. 40%
 - ☐ 2. 50%
 - ☐ 3. 45%
 - ☐ 4. 30%

Q.18 Rakesh bought a second – hand bike for a certain amount of money. I

sold it at a gain of $7\frac{1}{7}\%$ for ₹ 60,000. Find the amount (in ₹) spent



- Ans**
- ☒ 1. 8,000
 - ☐ 2. 5,000
 - ☐ 3. 4,000
 - ☐ 4. 6,000

Q.19 Three machines, P, Q, and R, can each produce 480 units in 10, 15, and 20 hours, respectively. All three start working together. After 2 hours, Machine R stops. After 2 more hours, Machine Q also stops, and Machine P continues alone. In the last 1 hour, Machine Q joins Machine P to finish the remaining work. How long does Machine P work alone?

- Ans**
- ☒ 1. 40 minutes
 - ☐ 2. 44 minutes
 - ☐ 3. 48 minutes
 - ☐ 4. 45 minutes

Q.19 According to the Constitution of India, as interpreted by the Supreme Court of India in *Common Cause v. Union of India* (2018), the right to die with dignity (including passive euthanasia and living will) is recognized under which specific Article guaranteeing right to life and personal liberty?

- Ans**
- ☒ 1. Article 21
 - ☐ 2. Article 14
 - ☐ 3. Article 25
 - ☐ 4. Article 19(1)(a)

Q.20 Which process in plants involves the loss of excess water from the aerial parts in the form of water vapour?

- Ans**
- ☐ 1. Respiration
 - ☒ 2. Transpiration
 - ☐ 3. Pollination
 - ☐ 4. Photosynthesis

Section : **Arithmetical and Numerical Ability**

Q.1 Six years ago from now, the average age of A, B and C was 24 years. After six years from now, the average age of A and C will be 37 years. What will be the age (in years) of B, after eight years from now?

- Ans**
- ☒ 1. 36
 - ☐ 2. 37
 - ☐ 3. 34
 - ☐ 4. 38

Q.2 By selling an article for ₹120, a man loses 40%. At what price (in ₹) should he sell it to gain 6%?

- Ans**
- ☒ 1. 212
 - ☐ 2. 232
 - ☐ 3. 202
 - ☐ 4. 222

Q.3 The current market value of a specialized industrial machine is ₹1,50,000. It is expected to depreciate at an annual rate of 10%. What will be the future valuation of the machine after a period of 3 years?

- Ans**
- ☐ 1. ₹1,18,000
 - ☐ 2. ₹1,15,000
 - ☒ 3. ₹1,09,350
 - ☐ 4. ₹1,07,320

Q.4 The value of $\sqrt{41 - \sqrt{21 + \sqrt{19 - \sqrt{9}}}}$ is: 2971

- Ans**
- ☐ 1. 5
 - ☒ 2. 6
 - ☐ 3. 7
 - ☐ 4. 8

Q.5 The average score of a batsman after 15 innings was 52 runs per innings. After the 16th inning, his average increased by 2 runs. Find the score he made in the 16th inning.

- Ans
- ☐ 1. 83 runs
 - ☒ 2. 84 runs
 - ☐ 3. 82 runs
 - ☐ 4. 80 runs

Q.6 The given table shows the production of four different products in five different months by a company. Based on the table, answer the following question.

Product	January	February	March	April	May
Laptop	80	95	100	110	120
Smartphone	150	160	170	180	190
Tablet	60	70	75	80	85
Smartwatch	40	50	55	60	65

If the company wants to increase smartphone production by 10% in June compared to May, how many smartphones should be produced in June?

- Ans
- ☐ 1. 206
 - ☒ 2. 209
 - ☐ 3. 212
 - ☐ 4. 203

Q.7 The average marks obtained by a candidate in three sections Quantitative Aptitude, Reasoning, and English, respectively, are in the ratio of time spent on them as 2 : 3 : 5. The candidate scores 60% marks in Quantitative Aptitude, 80% marks in Reasoning, and 70% marks in English. Find the overall percentage of marks obtained by the candidate.

- Ans
- ☐ 1. 70%
 - ☐ 2. 72%
 - ☒ 3. 71%
 - ☐ 4. 68%

Q.8 The LCM of the numbers 4 and 0.96 is:

- Ans
- ☐ 1. 240
 - ☐ 2. 2.4
 - ☒ 3. 24
 - ☐ 4. 0.24

Q.9 The compound interest on a certain sum in $2\frac{1}{2}$ years at 20% per ann



- Ans
- ☐ 1. 10,980
 - ☒ 2. 13,250
 - ☐ 3. 15,640
 - ☐ 4. 12,765

Q.10 The LCM of the numbers 13.2 and 0.88 is:

- Ans
- ☒ 1. 13.2
 - ☐ 2. 0.132
 - ☐ 3. 132
 - ☐ 4. 1.32

Q.11 The value of $\left(\frac{4}{7} \text{ of } 2\frac{4}{5} \times 1\frac{2}{3} - \left(3\frac{1}{2} - 2\frac{1}{6}\right)\right)$ is: 6520

- Ans
- ☐ 1. $\frac{2}{3}$
 - ☐ 2. $\frac{3}{5}$
 - ☒ 3. $\frac{4}{3}$
 - ☐ 4. $\frac{3}{4}$

Q.12 Find the simple interest (in ₹) on ₹1,500 at 6% per month for 8 months.

- Ans
- ☐ 1. 60
 - ☐ 2. 120
 - ☒ 3. 720
 - ☐ 4. 80

Q.13 A sum of ₹5,50,000 is invested for 1 year at 10% per annum, compounded half-yearly. What is the compound interest earned at the end of the year?

- Ans
- ☒ 1. ₹56,375
 - ☐ 2. ₹55,684
 - ☐ 3. ₹55,881
 - ☐ 4. ₹56,923

Q.14 The current population of a town is 1,73,300. It increases by 25% in the first year and 60% in the second year, but decreases by 70% in the third year. What will be the population of the town at the end of the third year?

- Ans
- ☐ 1. 1,04,070
 - ☒ 2. 1,03,980
 - ☐ 3. 1,04,060
 - ☐ 4. 1,04,020

Q.15 A number when decreased by $87\frac{1}{2}\%$, results in 583. The number is:

- Ans
- ☐ 1. 5124
 - ☐ 2. 4644
 - ☐ 3. 4568
 - ☒ 4. 4664

Q.16 Six years ago from now, the average age of A, B and C was 44 years. After six years from now, the average age of A and C will be 51 years. What will be the age (in years) of B, after eight years from now?

- Ans
- ☒ 1. 68
 - ☐ 2. 66
 - ☐ 3. 73
 - ☐ 4. 70

- Q.17 Study the following table and answer the questions based on it.
The table below show the sales (in 100) of five companies in three years.

	Years		
Companie s	2020	2021	2022
P	120	125	135
Q	140	115	145
R	130	130	130
S	125	120	140
T	135	135	150

What is the average sale (in 100) of P, Q, R, and S in year 2021?

- Ans ☒ 1. 122.5
☐ 2. 127.5
☐ 3. 132.5
☐ 4. 112.5
- Q.18 The initial cost of a piece of land is ₹48,00,000. If its value appreciates at a compound rate of 5% per annum, then what will be its cost after 2 years?
- Ans ☐ 1. ₹58,90,000
☐ 2. ₹65,00,000
☐ 3. ₹52,64,000
☒ 4. ₹52,92,000
- Q.19 The current population of a town is 11,200. It increases by 9% in the first year and by 25% in the second year, then decreases by 15% in the third year. What is the population of the town at the end of the third year?
- Ans ☐ 1. 12,970
☐ 2. 12,962
☐ 3. 12,969
☒ 4. 12,971
- Q.20 A sells a Laptop to B at a loss of 20% and B sells the laptop to C at a profit of 28%. If C purchased the laptop for ₹7,040, then what was the cost (in ₹) of the laptop for A?
- 2625
- Ans ☐ 1. 6,899
☐ 2. 7,073
☐ 3. 6,812
☒ 4. 6,875

Section : **Arithmetical and Numerical Ability1**

- Q.1 An online electronics store lists a pair of wireless earbuds at a marked price of ₹3,200. During a festive sale, the store offers a discount of 15% on the marked price. What is the final selling price of the earbuds (in ₹)?
- Ans ☐ 1. 2,650
☐ 2. 2,800
☐ 3. 2,900
☒ 4. 2,720

Q.2 A shopkeeper lists the price of a fan at 44% above its cost price and offers a 25% discount on its list price. If he earns a profit of ₹196, then what is the list price (in ₹) of the fan?

- Ans**
- ☐ 1. 3,539
 - ☐ 2. 3,378
 - ☐ 3. 3,807
 - ☒ 4. 3,528

Q.3 A boy rides his bicycle from his home to school at a speed of 12 km/hr and returns along the same route at a speed of 8 km/hr. Find his average speed for the entire trip.

- Ans**
- ☒ 1. 9.6 km/hr
 - ☐ 2. 10.2 km/hr
 - ☐ 3. 11.2 km/hr
 - ☐ 4. 10.4 km/hr

Q.4 If the fourth proportional to $(x+1)$, $(2x+3)$ and $(3x+5)$ is $(4x+7)$, find the fourth proportional to $(-4x)$, -12 and -72 .

- Ans**
- ☒ 1. 108
 - ☐ 2. 126
 - ☐ 3. 186
 - ☐ 4. 158

Q.5 A shopkeeper claims that he sells rock salt at ₹18 per kg, though the cost price is ₹24 per kg. But he gives 518 g instead of 1554 g. What is his percentage profit?

- Ans**
- ☐ 1. 128%
 - ☒ 2. 125%
 - ☐ 3. 126%
 - ☐ 4. 122%

Q.6 The daily wage of a worker is directly proportional to the number of hours worked and inversely proportional to the number of errors made. A worker who works for 8 hours and makes 4 errors earns ₹1,200. Find the total daily wage of another worker who works for 10 hours, makes 5 errors, and receives an additional 15% performance bonus on his calculated base wage.

- Ans**
- ☐ 1. ₹1,620
 - ☐ 2. ₹1,440
 - ☐ 3. ₹1,500
 - ☒ 4. ₹1,380

Q.7 A person travels equal distances at speeds of 60 km/hr and 40 km/hr. What is the average speed for the entire journey?

- Ans**
- ☒ 1. 48 km/hr
 - ☐ 2. 45 km/hr
 - ☐ 3. 50 km/hr
 - ☐ 4. 42 km/hr

Q.8 A swimming pool is in the shape of a cuboid measuring $25\text{ m} \times 12\text{ m} \times 2\text{ m}$. It is to be lined with square tiles of side 0.5 m on its four walls and floor only (the top is open). How many tiles are required?

- Ans**
- ☒ 1. 1792
 - ☐ 2. 1729
 - ☐ 3. 1790
 - ☐ 4. 1720

Q.9 A solid cylindrical rod of radius 7 cm and height 20 cm is melted and recast into 5 identical cylinders of equal height. If the radius of each new cylinder is 3.5 cm, what is the curved surface area of each new cylinder? (Use $\pi = 22/7$)

- Ans** ☒ 1. 352 cm²
☐ 2. 308 cm²
☐ 3. 440 cm²
☐ 4. 396 cm²

Q.10 Two trains, each 250 m long, are travelling on parallel tracks toward each other. A passenger sitting in one train (moving at 90 km/h) observes that it takes exactly 5 seconds for the other train to completely pass him. What is the speed of the other train?

- Ans** ☒ 1. 90 km/h
☐ 2. 72 km/h
☐ 3. 84 km/h
☐ 4. 86 km/h

Q.11 What is the mean proportion between 5 and 45?

- Ans** ☐ 1. 20
☐ 2. 18
☐ 3. 12
☒ 4. 15

Q.12 In a school, the ratio of boys to girls is 7:5. After 60 boys leave and 60 girls are admitted, the ratio changes to 8:7. What is the difference between the initial number of boys and girls in the school?

- Ans** ☐ 1. 180
☒ 2. 200
☐ 3. 140
☐ 4. 100

Q.13 Two pipes A and B can fill a tank in 10 hours and 15 hours, respectively. Pipe C can empty the full tank in 30 hours. All three pipes are opened together. After 5 hours, pipe A is closed. What is the total time taken to fill the tank completely?

- Ans** ☐ 1. 18 hours
☐ 2. 10 hours
☐ 3. 12 hours
☒ 4. 15 hours

Q.14 Find the curved surface area of a cylinder of radius 7 cm and height 10 cm. (Use $\pi = 22/7$)

- Ans** ☐ 1. 420 cm²
☐ 2. 400 cm²
☐ 3. 450 cm²
☒ 4. 440 cm²

Q.15 A cylindrical tank has a radius of 5 m and a height of 7 m. Find the volume (in m³) of the tank.

- Ans** ☐ 1. 166π
☐ 2. 177π
☒ 3. 175π
☐ 4. 165π

Q.19 Which language did Buddha use to preach?

- Ans
- ☒ 1. Pali
 - ☐ 2. Hindi
 - ☐ 3. Tamil
 - ☐ 4. Sanskrit

Q.20 India's only active volcano is found in:

- Ans
- ☒ 1. Andaman and Nicobar Islands
 - ☐ 2. Sagar Island
 - ☐ 3. Lakshadweep Islands
 - ☐ 4. Diu Island

Section : **Arithmetical and Numerical Ability**

Q.1 The population of a city is increased from 75,000 to 97,500 in a year. Calculate the percentage increase in the population.

- Ans
- ☐ 1. 25%
 - ☐ 2. 32%
 - ☒ 3. 30%
 - ☐ 4. 28%

Q.2 The average of 6 numbers is 18. One number is removed and the average of the remaining 5 numbers becomes 16. What is the removed number?

- Ans
- ☒ 1. 28
 - ☐ 2. 22
 - ☐ 3. 24
 - ☐ 4. 26

Q.3 What is the average of the numbers: 5, 6.5, 0, 5.6, 7.4, 8.5, 15, 10, 23?

- Ans
- ☐ 1. 10.125
 - ☐ 2. 9.125
 - ☐ 3. 10
 - ☒ 4. 9

Q.4 A sum of ₹10,000 is invested at 10% per annum for 2 years. What is the difference between the compound interest (compounded annually) and the simple interest earned on this sum?

- Ans
- ☐ 1. ₹110
 - ☒ 2. ₹100
 - ☐ 3. ₹150
 - ☐ 4. ₹200

Q.5 A certain sum becomes 1.331 times in three years at compound interest, compounded annually, then what will be the rate of interest per annum?

- Ans
- ☐ 1. 9%
 - ☒ 2. 10%
 - ☐ 3. 8%
 - ☐ 4. 11%

Q.6 There are 41 members in group A, 62 members in group B, and 76 members in group C. All the members of these groups went to a restaurant. The average amount spent per member in groups A, B, and C is ₹360, ₹335, and ₹159 respectively. Find the overall average amount spent per member (in ₹).

- Ans
- ☐ 1. 261
 - ☐ 2. 271
 - ☒ 3. 266
 - ☐ 4. 265

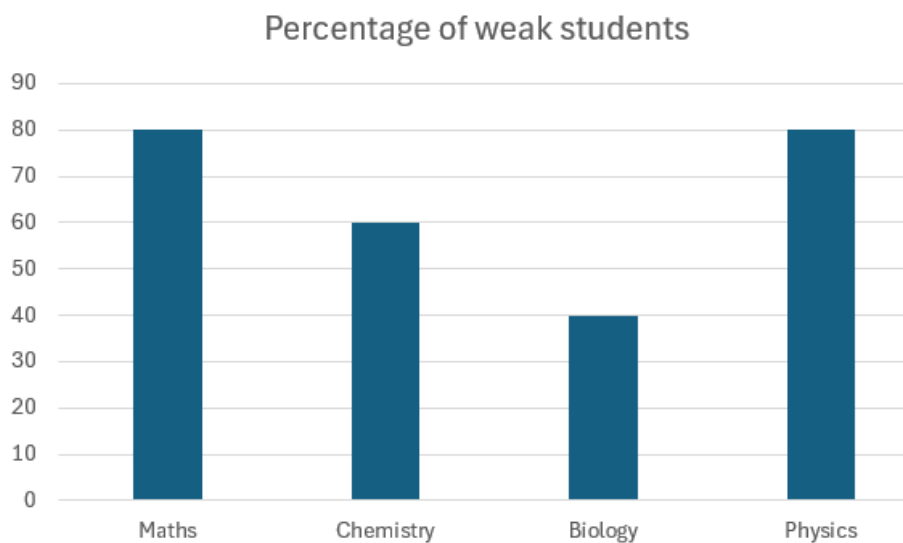
Q.7 By selling an article for ₹120, a man loses 25%. At what price (in ₹) should he sell it to gain 15%?

- Ans
- ☐ 1. 204
 - ☐ 2. 194
 - ☒ 3. 184
 - ☐ 4. 174

Q.8 A number is first increased by 80% and then decreased by 60%. The result is 108. What is the original number?

- Ans
- ☐ 1. 160
 - ☒ 2. 150
 - ☐ 3. 155
 - ☐ 4. 145

Q.9 The bar graph below shows the percentage of students who are weak in different subjects, as revealed in an examination. On the basis of the information provided in the graph, answer the question given below.



Find the number of students who are weak in Chemistry, if the examination was conducted for 1,500 students.

- Ans
- ☐ 1. 1,000
 - ☐ 2. 700
 - ☐ 3. 800
 - ☒ 4. 900

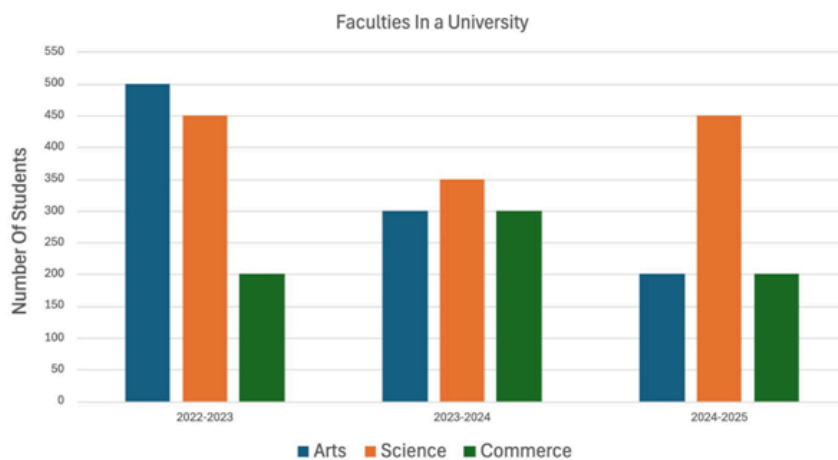
Q.10 In a company, 10 employees earn an average of ₹30,000 per month, and 40 employees earn an average of ₹50,000 per month. What is the weighted average salary of all employees?

- Ans
- ☐ 1. ₹46,500
 - ☒ 2. ₹46,000
 - ☐ 3. ₹45,500
 - ☐ 4. ₹45,000

Q.11 20% of a number is more than 20% of 570 by 210. The number is:4505

- Ans
- ☐ 1. 1720
 - ☒ 2. 1620
 - ☐ 3. 1470
 - ☐ 4. 1670

Q.12 Below is a multiple bar graph showing the number of admissions in different faculties in a university in different years.



What is the total number of students admitted in science and commerce faculties during the years 2023 – 24 and 2024 – 25 taken together?

- Ans
- ☐ 1. 1350
 - ☐ 2. 1450
 - ☐ 3. 1400
 - ☒ 4. 1300

Q.13 The number 809596 is divisible by:

- Ans
- ☒ 1. 31
 - ☐ 2. 39
 - ☐ 3. 33
 - ☐ 4. 38

Q.14 At what rate of interest per annum, compounded annually, will a sum of money become 27 times in 2 years? (Round off to one decimal place)

- Ans
- ☐ 1. 415.4%
 - ☒ 2. 419.6%
 - ☐ 3. 423.3%
 - ☐ 4. 427.6%

Q.15 The price of a TV set decreases from ₹18,000 to ₹15,300. Find the percentage decrease.

- Ans
- ☐ 1. 12%
 - ☐ 2. 20%
 - ☐ 3. 10%
 - ☒ 4. 15%

Q.16 At what rate (in percentage, rounded off to two places after decimal) of interest per year will a sum of money become 3 times of itself in 22 years on simple interest?

- Ans
- ☒ 1. 9.09
 - ☐ 2. 18.18
 - ☐ 3. 11.09
 - ☐ 4. 7.09

Q.17 The value of $\frac{112}{\sqrt{196}} \times \frac{\sqrt{576}}{12} \times \frac{\sqrt{256}}{8}$ is:

- Ans
- ☐ 1. 24
 - ☒ 2. 32
 - ☐ 3. 48
 - ☐ 4. 64

Q.18 By selling an article for ₹120, a man loses 25%. At what price (in ₹) should he sell it to gain 50%?

- Ans
- ☒ 1. 240
 - ☐ 2. 260
 - ☐ 3. 250
 - ☐ 4. 230

Q.19 Solve the equation for x.

$$\sqrt{x+5} + \sqrt{x-7} = 4$$

- Ans
- ☒ 1. $\frac{29}{4}$
 - ☐ 2. $\frac{37}{4}$
 - ☐ 3. $\frac{31}{4}$
 - ☐ 4. $\frac{27}{4}$

Q.20 The number 2702614 is divisible by:

- Ans
- ☒ 1. 97
 - ☐ 2. 93
 - ☐ 3. 89
 - ☐ 4. 99

Q.1 A rectangular park has its length 16 m more than its width. If the perimeter of the park is 104 m, find the width of the park.

- Ans
- ☐ 1. 12 m
 - ☐ 2. 14 m
 - ☐ 3. 16 m
 - ☒ 4. 18 m

Q.2 An article is marked at ₹1,000. Two successive discounts of 10% and 20% are given. What is the final selling price?

- Ans
- ☐ 1. ₹750
 - ☐ 2. ₹680
 - ☒ 3. ₹720
 - ☐ 4. ₹700

Q.3 The height of an equilateral triangle is $6\sqrt{3}$ cm. The perimeter of the triangle is:

- Ans
- ☐ 1. 30 cm
 - ☒ 2. 36 cm
 - ☐ 3. 33 cm
 - ☐ 4. 39 cm

Q.4 If $a : b = 3 : 5$ and $b : c = 10 : 7$, what is the ratio $a : c$?

- Ans
- ☐ 1. 5 : 7
 - ☐ 2. 6 : 5
 - ☒ 3. 6 : 7
 - ☐ 4. 5 : 6

Q.5 A square of side $\frac{1}{4}(A + 3)$ cm has the diagonal length of $\sqrt{2}\left(1.5 - \frac{A}{2}\right)$ cm. The area (in cm^2) of this square is:

- Ans
- ☐ 1. 0.75
 - ☐ 2. 2
 - ☐ 3. 0.5
 - ☒ 4. 1

Q.6 A sector of a circle of radius 21 cm has angle 120 degree. It is rolled up to form a cone by joining the two bounding radii. Find the curved surface area of the cone formed. $\left(\text{Use } \pi = \frac{22}{7}\right)$

- Ans
- ☒ 1. 462 cm^2
 - ☐ 2. 616 cm^2
 - ☐ 3. 693 cm^2
 - ☐ 4. 539 cm^2

Q.7 Two trains of lengths X m and 750 m are running parallel to each other in opposite directions at speeds of 68 km/h and 40 km/h, respectively. Find the value of X, if they cross each other in 40 seconds.

- Ans
- ☐ 1. 480
 - ☒ 2. 450
 - ☐ 3. 400
 - ☐ 4. 420

Q.8 What is the mean proportional between 49 and 196?

- Ans ☒ 1. 98
☐ 2. 70
☐ 3. 49
☐ 4. 140

Q.9 Two trains, each 200 m long, are moving in the same direction. The ratio of their speeds is 3 : 2. If the speed of the faster train is increased by 20%, it becomes 72 km/h. How much time (in seconds) will the faster train take to come from behind and completely pass the slower train?

- Ans ☐ 1. 80 seconds
☒ 2. 72 seconds
☐ 3. 64 seconds
☐ 4. 60 seconds

Q.10 A bus travels from City A to City B, a distance of 120 km, at a speed of 40 km/h. It then travels from City B to City C, a distance of 180 km, at a speed of 60 km/h. What is the bus's average speed for the entire journey from A to C?

- Ans ☐ 1. 70 km/h
☐ 2. 60 km/h
☒ 3. 50 km/h
☐ 4. 55 km/h

Q.11 Two pipes can fill a cistern, individually, in 24 min and 30 min, respectively. There is a pipe located at the bottom of the cistern to empty it. If all the three pipes are opened simultaneously, then the empty cistern gets filled in 15 min. How long will the pipe at the bottom of the tank take to empty the completely filled cistern if no other pipe is then open?

- Ans ☐ 1. 139 min
☐ 2. 126 min
☐ 3. 110 min
☒ 4. 120 min

Q.12 Reena buys two books for ₹640 and sells one at a loss of 24% and the other book at a profit of 30%. If both the books are sold at the same price, then find the difference between the cost price of the two books (nearest, in ₹).

- Ans ☐ 1. ₹174
☐ 2. ₹156
☒ 3. ₹168
☐ 4. ₹148

Q.13 A boat travels upstream at 28 km/h and downstream at 10 m/s. What is the speed of the boat in still water?

- Ans ☒ 1. 32 km/h
☐ 2. 30 km/h
☐ 3. 34 km/h
☐ 4. 36 km/h

Q.14 Two taps can fill a cistern in 10 hours and 14 hours, respectively. A third tap can empty it in 13 hours. How long will it take to fill the empty cistern, if all of them are opened together?

Ans

✓ 1. $10\frac{25}{43}$ hours

✗ 2. $18\frac{25}{43}$ hours

✗ 3. $13\frac{25}{43}$ hours

✗ 4. $19\frac{25}{43}$ hours

Q.15 Three friends decide to paint a perimeter fence together. Working independently, A can complete the task in 10 hours, B in 20 hours, and C in 30 hours. If all three friends work together, how many hours will it take to finish the job?

Ans

✗ 1. $7\frac{7}{11}$ hours

✗ 2. $4\frac{5}{12}$ hours

✓ 3. $5\frac{5}{11}$ hours

✗ 4. $6\frac{11}{12}$ hours

Q.16 Pipe A can fill a cistern in 8 hours, Pipe B in 12 hours, and Pipe C can empty it in 24 hours. If all three pipes are opened together, how long will it take to fill the cistern completely?

Ans

✗ 1. 5 hours

✓ 2. 6 hours

✗ 3. 8 hours

✗ 4. 4 hours

Q.17 A sports shop marks a cricket bat at ₹750 and offers a 12% discount. How much does a customer save on buying the bat?

Ans

✗ 1. ₹75

✗ 2. ₹100

✗ 3. ₹80

✓ 4. ₹90

Q.18 Three numbers are in the ratio 2:5:7. If the sum of the second and the third numbers is 48, what is the first number?

Ans

✗ 1. 12

✓ 2. 8

✗ 3. 16

✗ 4. 20

Q.19 A invests ₹6,000 for 8 months, B invests ₹8,000 for 6 months, and C invests ₹5,000 for 12 months. The total profit is ₹9,100. What is the share of C?

Ans

✗ 1. ₹3,200

✗ 2. ₹3,800

✗ 3. ₹3,000

✓ 4. ₹3,500

Q.19 Which Indian language belongs to the Dravidian language family?

- Ans**
- ☒ 1. Tamil
 - ☐ 2. Marathi
 - ☐ 3. Hindi
 - ☐ 4. Bengali

Q.20 Which fort was built by Raja Man Singh and is a UNESCO World Heritage site in Jaipur?

- Ans**
- ☐ 1. Jaisalmer Fort
 - ☐ 2. Red Fort
 - ☒ 3. Amer Fort
 - ☐ 4. Chittorgarh Fort

Section : Arithmetical and Numerical Ability

Q.1 Four years ago from now, the average age of A, B and C was 58 years. After four years from now, the average age of A and C will be 73 years. What will be the age (in years) of B, after six years from now?

- Ans**
- ☐ 1. 58
 - ☒ 2. 54
 - ☐ 3. 57
 - ☐ 4. 55

Q.2 A number is first increased by 20% and then decreased by 20%. What is the net percentage change in the number?

- Ans**
- ☐ 1. No change
 - ☐ 2. 3% increase
 - ☒ 3. 4% decrease
 - ☐ 4. 5% decrease

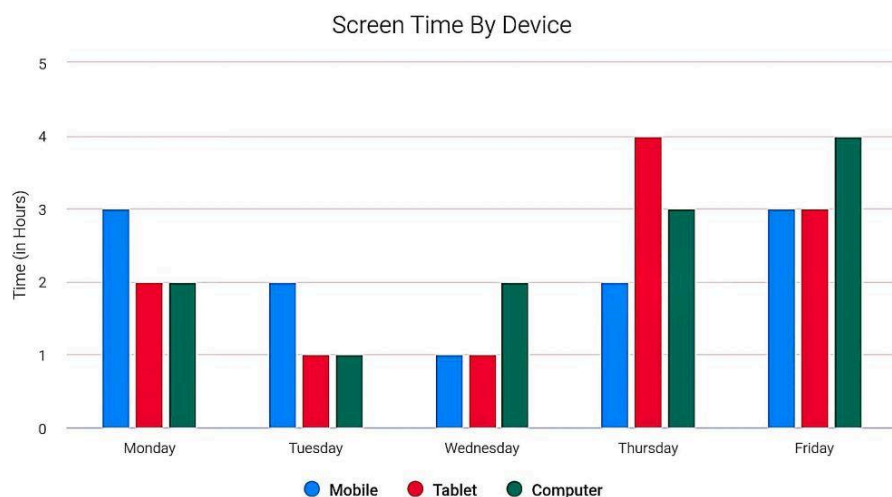
Q.3 A class has 15 boys with average marks 60 and 25 girls with average marks 72. What is the average mark of the whole class?

- Ans**
- ☐ 1. 68
 - ☐ 2. 65.5
 - ☒ 3. 67.5
 - ☐ 4. 66

Q.4 A bank offers 6.5% compound interest per annum calculated on a half-yearly basis. A customer deposits ₹9,552 each on 1 January and 1 July of a year. At the end of the year, the amount he would have gained by way of interest is _____. [Round off your answer to 2 decimal places.]

- Ans**
- ☐ 1. ₹952.46
 - ☒ 2. ₹941.41
 - ☐ 3. ₹930.58
 - ☐ 4. ₹958.28

Q.5 The following bar graph shows screen time hours of a group of students for different devices for five days of a week.



For how many hours in all is the mobile being watched during the 5 days of the week?

- Ans**
- ☒ 1. 10 hours
 - ☒ 2. 13 hours
 - ☒ 3. 8 hours
 - ☒ 4. 11 hours

Q.6 A student scores 90 marks in Mathematics (weightage 50%), 70 marks in Science (weightage 30%), and 60 marks in English (weightage 20%). What is the student's overall weighted average score?

- Ans**
- ☒ 1. 82
 - ☒ 2. 80
 - ☒ 3. 75
 - ☒ 4. 78

Q.7 Find the product of the HCF and LCM of 24 and 99.

- Ans**
- ☒ 1. 2386
 - ☒ 2. 2376
 - ☒ 3. 2396
 - ☒ 4. 2366

Q.8 A sum of money is deposited in a bank that offers 10% interest per annum. The absolute difference in the interest earned over two years, when compounded annually and semi-annually respectively, is ₹1376.50. Find the sum deposited. (Give your answer round to the nearest hundred rupees.)

- Ans**
- ☒ 1. 2,50,000
 - ☒ 2. 2,00,000
 - ☒ 3. 2,25,000
 - ☒ 4. 2,75,000

Q.9 A number is first increased by 20% and then decreased by 10%. The result is 108. What is the original number?

- Ans**
- ☒ 1. 100
 - ☒ 2. 110
 - ☒ 3. 90
 - ☒ 4. 95

Q.10 By selling an article for ₹120, a man loses 40%. At what price (in ₹) should he sell it to gain 15%?

- Ans
- ☐ 1. 240
 - ☐ 2. 250
 - ☐ 3. 220
 - ☒ 4. 230

Q.11 By selling an article for ₹120, a man loses 40%. At what price (in ₹) should he sell it to gain 26%?11675

- Ans
- ☒ 1. 252
 - ☐ 2. 272
 - ☐ 3. 262
 - ☐ 4. 242

Q.12 The average of 7 numbers is 59. If each number is decreased by 5, what will the new average be?

- Ans
- ☐ 1. 7
 - ☐ 2. 49
 - ☒ 3. 54
 - ☐ 4. 59

Q.13 Simplify: $\frac{(2^3 \times 3^4 \times 3^3)}{(2^1 \times 3^1 \times 3^2)}$

- Ans
- ☐ 1. 332
 - ☒ 2. 324
 - ☐ 3. 323
 - ☐ 4. 364

Q.14 Which of the following numbers is exactly divisible by 8?

- Ans
- ☐ 1. 82532
 - ☐ 2. 85332
 - ☐ 3. 58332
 - ☒ 4. 52832

Q.15 The fraction equivalent to 9.90909... is:

- Ans
- ☒ 1. $\frac{109}{11}$
 - ☐ 2. $\frac{99}{8}$
 - ☐ 3. $\frac{117}{5}$
 - ☐ 4. $\frac{100}{9}$

Q.16 The price of a shirt is first increased by 35% and then decreased by 20%. What is the overall percentage change in its price?

- Ans
- ☐ 1. 12% decrease
 - ☒ 2. 8% increase
 - ☐ 3. 8% decrease
 - ☐ 4. 12% increase

Q.17 A person invests ₹40,000 in a finTech savings plan that offers a compound interest rate of 5% per annum, compounded annually. If the total amount received at the end of 3 years is ₹46,305, what is the total interest earned on the investment (in ₹)?

- Ans
- ☐ 1. 6,100
 - ☐ 2. 6,400
 - ☒ 3. 6,305
 - ☐ 4. 6,500

Q.18 The table given below shows the sales of four different products P, Q, R and S in four different regions

Region	P	Q	R	S
East	240	180	150	200
West	120	180	200	160
North	180	160	150	200
South	140	200	190	180

What are the total sales of product R in all regions?

- Ans
- ☐ 1. 705
 - ☐ 2. 640
 - ☒ 3. 690
 - ☐ 4. 675

Q.19 Find the duration (in years) in which ₹1,300 will amount to ₹2,340 at a rate of 20% per annum simple interest.

- Ans
- ☐ 1. 5
 - ☐ 2. 3
 - ☒ 3. 4
 - ☐ 4. 6

Q.20 A number when decreased by $87\frac{1}{2}\%$, results in 697. The number is:

- Ans
- ☒ 1. 5576
 - ☐ 2. 6076
 - ☐ 3. 5432
 - ☐ 4. 5836

Section : Arithmetical and Numerical Ability1

Q.1 A bookshop owner marks up the price of a book by 40% and then offers a discount of 25% on the marked price. If the shopkeeper still makes a profit of ₹100 on each book, find the cost price of the book.

- Ans
- ☐ 1. ₹2,200
 - ☐ 2. ₹2,500
 - ☒ 3. ₹2,000
 - ☐ 4. ₹1,800

Q.2 The cost of 15 identical books is ₹4,500. Find the cost of 24 such books.

- Ans
- ☐ 1. ₹8,400
 - ☒ 2. ₹7,200
 - ☐ 3. ₹6,000
 - ☐ 4. ₹6,800

Q.3 Ravi drives 100 km from City A to City B at 40 km/h, followed by 140 km from City B to City C at a speed 1.5 times the initial speed. On the return trip, he covers the 140 km leg at 40 km/h and the final 100 km leg at half of this speed. What is his average speed for the entire round trip?

- Ans**
- ☐ 1. 60 km/h
 - ☐ 2. 48 km/h
 - ☐ 3. 56 km/h
 - ☒ 4. 36 km/h

Q.4 The volume of a wall is $31,104 \text{ cm}^3$. Its height is six times its width and its length is half the height. What is the width of the wall?

- Ans**
- ☐ 1. 14 cm
 - ☒ 2. 12 cm
 - ☐ 3. 11 cm
 - ☐ 4. 7 cm

Q.5 A bus travels the first half of a 120 km journey at a speed of 30 km/h. If its overall average speed for the entire journey is 45 km/h, what speed must it maintain during the second half of the trip?

- Ans**
- ☐ 1. 40 km/h
 - ☐ 2. 60 km/h
 - ☒ 3. 90 km/h
 - ☐ 4. 50 km/h

Q.6 Three numbers are in the ratio 2 : 3 : 4. If the sum of their squares is 116, what is the sum of the numbers?

- Ans**
- ☐ 1. 9
 - ☐ 2. 15
 - ☒ 3. 18
 - ☐ 4. 20

Q.7 A man travels a certain distance at a uniform speed. If his speed were 8 km/h more, he would take 2 hours less. If his speed were 6 km/h less, he would take 3 hours more. Find his original speed.

- Ans**
- ☐ 1. 25 km/h
 - ☐ 2. 18 Km/h
 - ☒ 3. 20 km/h
 - ☐ 4. 23 km/h

Q.8 A car covers a distance of 150 km in 3 hours. If the car increases its speed by 10 km/h, how much time will it take to cover the same distance?

- Ans**
- ☐ 1. 3.5 hours
 - ☒ 2. 2.5 hours
 - ☐ 3. 2.0 hours
 - ☐ 4. 3.0 hours

Q.9 A solid copper cylinder of radius 14 cm and length 32 cm is melted and drawn into a uniform cylindrical wire of radius 4 mm. If a machine pulls this wire at a rate of 50 meters per minute, find the total time taken to draw the entire wire.

- Ans**
- ☐ 1. 7.20 minutes
 - ☐ 2. 8.16 minutes
 - ☒ 3. 7.84 minutes
 - ☐ 4. 6.42 minutes

Q.10 If on a marked price, the difference of selling price with a discount of 35% and two successive discounts of 20% and 15% is ₹90, find the marked price (in ₹).

- Ans
- ☐ 1. ₹2,800
 - ☐ 2. ₹2,400
 - ☐ 3. ₹2,000
 - ☒ 4. ₹3,000

Q.11 A team of 4 workers can complete a task in 6 days. If only 2 workers are available, how many days will they take to finish the same task?

- Ans
- ☐ 1. 8 days
 - ☐ 2. 6 days
 - ☒ 3. 12 days
 - ☐ 4. 10 days

Q.12 Ravi can complete a job in 20 days and Shyam can complete the same job in 30 days. If they work together, in how many days will the job be completed?

- Ans
- ☐ 1. 18 days
 - ☐ 2. 20 days
 - ☒ 3. 12 days
 - ☐ 4. 15 days

Q.13 Find the mean proportional between 16 and 144.

- Ans
- ☒ 1. 48
 - ☐ 2. 42
 - ☐ 3. 56
 - ☐ 4. 64

Q.14 A cone has a radius of 7 cm and a height of 21 cm. What is its volume? (Use $\pi = \frac{22}{7}$.)

- Ans
- ☐ 1. 1088 cm³
 - ☒ 2. 1078 cm³
 - ☐ 3. 1178 cm³
 - ☐ 4. 1708 cm³

Q.15 Pipe A can fill a tank in 8 hours, and Pipe B can fill it in 12 hours. Both pipes are opened together, but after 2 hours, Pipe A is closed while Pipe B continues to work. After 1 more hour, Pipe C is opened, whose efficiency is $33\frac{1}{3}\%$ less than that of Pipe A. How long will Pipe B and Pipe C, working together, take to fill the remaining tank?

- Ans
- ☐ 1. 2.8 hours
 - ☐ 2. 2 hours
 - ☐ 3. 3.6 hours
 - ☒ 4. 3 hours

Q.16 A cone has a radius of 3.5 cm and a slant height of 15 cm. Find its curved surface area.
(Use $\pi = 3.14$)

- Ans
- ☐ 1. 186.27 cm²
 - ☒ 2. 164.85 cm²
 - ☐ 3. 154.75 cm²
 - ☐ 4. 144.23 cm²

Q.18 What is the primary reason a High Court may withdraw a case from a subordinate court?

- Ans**
- ☐ 1. Land acquisition disagreement
 - ☐ 2. Patent rights infringement
 - ☐ 3. Election dispute between candidates
 - ☒ 4. Substantial question of constitutional law

Q.19 Tarapur Nuclear Power Plant is located in which of the following Indian states?

- Ans**
- ☒ 1. Maharashtra
 - ☐ 2. Rajasthan
 - ☐ 3. Kerala
 - ☐ 4. Jharkhand

Q.20 In which of the following regions of India is the Losar festival, known for its masked dances, celebrated?

- Ans**
- ☐ 1. Tripura
 - ☐ 2. Gujarat
 - ☒ 3. Ladakh
 - ☐ 4. Kerala

Section : **Arithmetical and Numerical Ability**

Q.1 I bought two toy guns for ₹1,200. I sold the first one at a loss of 13% and the second at a gain of 27%. If, on the whole I made neither a loss nor a gain, find the cost price (in ₹) of the first toy gun.

- Ans**
- ☐ 1. 794
 - ☐ 2. 830
 - ☒ 3. 810
 - ☐ 4. 834

Q.2 At what rate of interest per annum, compounded annually, will a sum of money become 10 times in 2 years? (Round off to one decimal place.)

- Ans**
- ☐ 1. 223.7%
 - ☐ 2. 219.9%
 - ☐ 3. 217.5%
 - ☒ 4. 216.2%

- Q.3 In a district, there are four electoral constituencies. Four political parties put up their candidates. The number of votes polled by each party, in thousands, is given below.

Constituency	Party-A	Party-B	Party-C	Party-D
I	182	76	58	36
II	10	70	110	212
III	74	277	46	227
IV	21	25	103	193

By how many more votes, did party-D win the II-constituency than the next highest party?

- Ans
- ☐ 1. 1.03 lakh
 - ☐ 2. 1.01 lakh
 - ☐ 3. 1.04 lakh
 - ☒ 4. 1.02 lakh

- Q.4 The value of $[25 - \{6 + 2 \times (8 \div 4)\}] + 3^2$ is:

- Ans
- ☐ 1. 1
 - ☐ 2. 0
 - ☒ 3. 24
 - ☐ 4. 18

- Q.5 On compound interest, a sum of ₹100 amounts to ₹120 in two years, when interest is compounded annually. The amount would be ₹_____ in four years.

- Ans
- ☒ 1. 144
 - ☐ 2. 140
 - ☐ 3. 150
 - ☐ 4. 148

- Q.6 The average of 7 results is 55 and that of the first 6 results is 54. The 7th result is:

- Ans
- ☐ 1. 60
 - ☒ 2. 61
 - ☐ 3. 54
 - ☐ 4. 55

- Q.7 Seven years ago from now, the average age of A, B and C was 41 years. After seven years from now, the average age of A and C will be 53 years. What will be the age (in years) of B, after three years from now?

- Ans
- ☐ 1. 51
 - ☐ 2. 60
 - ☒ 3. 55
 - ☐ 4. 58

- Q.8 The average marks of 24 boys is 86 and the average marks of 36 girls is 94. Find the average marks of all the students.

- Ans
- ☒ 1. 90.8
 - ☐ 2. 92.5
 - ☐ 3. 93.7
 - ☐ 4. 88.3

Q.9 The LCM of $2^3 \times 7^2 \times 13$, $2^2 \times 13^2 \times 16$, and $7^3 \times 13^2 \times 16^2$ is:

- Ans
- ☐ 1. $29 \times 73 \times 132$
 - ☐ 2. $28 \times 74 \times 132$
 - ☒ 3. $28 \times 73 \times 132$
 - ☐ 4. $28 \times 73 \times 133$

Q.10 At what rate (in percentage, rounded off to two places after decimal) of interest per year will a sum of money become 3 times of itself in 18 years on simple interest?

- Ans
- ☐ 1. 9.11
 - ☐ 2. 13.11
 - ☒ 3. 11.11
 - ☐ 4. 22.22

Q.11 The cost of 100 mangoes is ₹2,300. If the cost is successively increased by 3% and then by 5%, find the latest price of 100 mangoes. (Round off your answer to the nearest rupee.)

- Ans
- ☐ 1. ₹2,567
 - ☒ 2. ₹2,487
 - ☐ 3. ₹2,387
 - ☐ 4. ₹2,467

Q.12 A sum of ₹9,30,000 is invested for a year at 4% per annum, compounded half-yearly. What is the compound interest earned at the end of the year?

- Ans
- ☒ 1. ₹37,572
 - ☐ 2. ₹39,170
 - ☐ 3. ₹37,914
 - ☐ 4. ₹35,918

Q.13 A number when decreased by $81\frac{1}{2}\%$, results in 740. The number is:

- Ans
- ☒ 1. 4000
 - ☐ 2. 4200
 - ☐ 3. 4100
 - ☐ 4. 4600

Q.14 Vipul gets a 12% increase in his sales in the first year and a 25% increase in the second year. If his present sales are ₹1,56,800, what were his sales (in ₹) two years ago?

- Ans
- ☒ 1. 1,12,000
 - ☐ 2. 1,15,000
 - ☐ 3. 1,18,000
 - ☐ 4. 1,14,000

Q.15 A shopkeeper buys 40 kg of sugar at ₹45 per kg and 60 kg of sugar at ₹55 per kg. He mixes them together. Find the cost price per kg of the mixed sugar.

- Ans
- ☐ 1. ₹52
 - ☐ 2. ₹48
 - ☐ 3. ₹50
 - ☒ 4. ₹51

Q.16 Evaluate the following expression:

$$2 + 84 \div (22 + 6) \times 2.5449$$

- Ans
- ☐ 1. 6.5
 - ☐ 2. 3.5
 - ☒ 3. 8
 - ☐ 4. 5

Q.17 The fraction equivalent to 7.90909... is:

- Ans
- ☐ 1. $\frac{77}{5}$
 - ☐ 2. $\frac{82}{3}$
 - ☒ 3. $\frac{87}{11}$
 - ☐ 4. $\frac{91}{15}$

Q.18 Study the following table and answer the question based on it.

The given table shows the number of nuts (in 1000) manufactured by XYZ company in 6 months.

Months	No. of nuts (in 1000)
January	210
February	225
March	240
April	250
May	275
June	300

What is the ratio of the number of nuts manufactured in June to the number of nuts manufactured in February?

- Ans
- ☒ 1. 4:3
 - ☐ 2. 3:4
 - ☐ 3. 3:5
 - ☐ 4. 4:5

Q.19 Initially, Rohan's ratio of expenditure to income was 3 : 7. His income then increased by 24% and expenditure decreased by 2%. If the initial expenditure was ₹45,000, find his final savings.

- Ans
- ☐ 1. ₹88,804
 - ☐ 2. ₹87,822
 - ☐ 3. ₹87,804
 - ☒ 4. ₹86,100

Q.20 By selling an article for ₹120, a man loses 40%. At what price (in ₹) should he sell it to gain 23%?11677

- Ans
- ☒ 1. 246
 - ☐ 2. 266
 - ☐ 3. 256
 - ☐ 4. 236

Section : Arithmetical and Numerical Ability1

Q.1 A company offers a discount of 30% followed by another discount of $x\%$. If the final price after both the discounts is ₹756 and the original price is ₹1,200. What is the value of x ?

- Ans
- ☐ 1. 25
 - ☐ 2. 20
 - ☒ 3. 10
 - ☐ 4. 15

Q.2 Two trains of lengths 950 meters and 805 meters are moving in opposite directions at speeds of 48.6 km/h and 68.4 km/h, respectively. How much time (in seconds) will they take to completely cross each other?

- Ans
- ☐ 1. 53
 - ☐ 2. 55
 - ☒ 3. 54
 - ☐ 4. 56

Q.3 Two trains of lengths 120 m and 150 m are moving in opposite directions at speeds of 48 km/h and 60 km/h, respectively. Find the time taken by the trains to completely cross each other.

- Ans
- ☐ 1. 8 seconds
 - ☒ 2. 9 seconds
 - ☐ 3. 12 seconds
 - ☐ 4. 11 seconds

Q.4 Two trains, A and B, of lengths 224 m and 176 m respectively, are moving in the same direction. Train A crosses a pole in 14 seconds, and Train B crosses a platform of length 208 m in 16 seconds. Find the time taken by Train B to completely overtake Train A.

- Ans
- ☐ 1. 30 seconds
 - ☐ 2. 45 seconds
 - ☒ 3. 50 seconds
 - ☐ 4. 35 seconds

Q.5 A train travels 120 km in 2 hours. At the same speed, how long will it take to travel 300 km?

- Ans
- ☐ 1. 6 hours
 - ☐ 2. 4 hours
 - ☒ 3. 5 hours
 - ☐ 4. 3 hours

Q.6 Two pipes X and Y can fill a tank in 24 min and 32 min, respectively. Both pipes are opened together. After how much time should Y be closed so that the tank is full in 18 min?

- Ans
- ☐ 1. 10 min
 - ☒ 2. 8 min
 - ☐ 3. 12 min
 - ☐ 4. 6 min

Q.7 A pipe fills one-fourth of a tank in 2 hours. At the same rate, what is the time taken to fill the entire tank?

- Ans**
- ☐ 1. 10 hours
 - ☒ 2. 8 hours
 - ☐ 3. 9 hours
 - ☐ 4. 12 hours

Q.8 The perimeter of a rectangle is five-fourths of the perimeter of a square. The side of the square is 20 cm and the breadth of the rectangle is 20% less than the side of the square. Find the difference between the area of the rectangle and the area of the square.

- Ans**
- ☐ 1. 134 cm²
 - ☒ 2. 144 cm²
 - ☐ 3. 164 cm²
 - ☐ 4. 104 cm²

Q.9 A water cistern is equipped with two inlet pipes, P and Q, and one outlet pipe, R. Pipe P can fill the cistern in 10 hours, Pipe Q in 15 hours, and Pipe R can drain the full cistern in 12 hours. Initially, pipes P and R are opened together for 3 hours, after which R is closed and Q is opened along with pipe P. From that point onward, how many additional hours will it take to fill the cistern completely?

- Ans**
- ☐ 1. $5\frac{3}{10}$ hours
 - ☐ 2. $4\frac{3}{10}$ hours
 - ☐ 3. $4\frac{9}{10}$ hours
 - ☒ 4. $5\frac{7}{10}$ hours

Q.10 The marked price of a shirt is ₹1,000. If the shopkeeper offers a discount of 10%, what is the selling price of the shirt?

- Ans**
- ☒ 1. ₹900
 - ☐ 2. ₹800
 - ☐ 3. ₹600
 - ☐ 4. ₹950

Q.11 The profit after selling an ornament for ₹1,873 is the same as the loss after selling it for ₹1,783. The cost price of the ornament is:

- Ans**
- ☐ 1. ₹1,843
 - ☐ 2. ₹1,836
 - ☒ 3. ₹1,828
 - ☐ 4. ₹1,858

Q.12 A person travels a total distance of 150 km. He travels the first 60 km at 30 km/hr and the remaining distance at 60 km/hr. What is the total time taken to complete the journey?

- Ans**
- ☐ 1. 4 hours
 - ☐ 2. 3 hours
 - ☒ 3. 3.5 hours
 - ☐ 4. 4.5 hours

Q.13 A mixture contains milk and water in the ratio 3:2. If 4 litres of water is added, the ratio becomes 1:1. What is the quantity of milk?

- Ans
- ☐ 1. 6 litres
 - ☐ 2. 8 litres
 - ☐ 3. 10 litres
 - ☒ 4. 12 litres

Q.14 A solid right circular cylinder has a radius of 15 cm and a height of 108 cm. It is completely melted and recast into identical solid spheres. The ratio of the radius of each sphere to the radius of the cylinder is 3 : 5. How many spheres can be formed?

- Ans
- ☐ 1. 30
 - ☐ 2. 20
 - ☒ 3. 25
 - ☐ 4. 15

Q.15 What is the volume of a sphere with radius 1.5 cm? (Use $\pi = 3.14$)

- Ans
- ☐ 1. 16.13 cm³
 - ☒ 2. 14.13 cm³
 - ☐ 3. 17.13 cm³
 - ☐ 4. 15.13 cm³

Q.16 The mean proportional between two numbers, a and b, is 12. If the first number is increased by 4 and the second number is increased by 9, the new mean proportional becomes 15. Then what is the value of $9a + 4b$?

- Ans
- ☐ 1. 30
 - ☒ 2. 45
 - ☐ 3. 20
 - ☐ 4. 60

Q.17 Two numbers are in the ratio 5:9. If 11 is subtracted from each, the ratio becomes 1:2. Find the sum of the two original numbers.

- Ans
- ☐ 1. 166
 - ☒ 2. 154
 - ☐ 3. 158
 - ☐ 4. 162

Q.18 Anand purchased an item and incurred ₹180 on repair expenses. He then sold it to Bharath at a profit of 50%. Bharath later sold the item for ₹7,539, incurring a loss of 50%. What was the original cost (in ₹) of the item for Anand?

- Ans
- ☐ 1. 10,051
 - ☐ 2. 9,892
 - ☐ 3. 10,055
 - ☒ 4. 9,872

Q.19 The area of an equilateral triangle is $48\sqrt{3}$ cm². Find its height.

- Ans
- ☐ 1. 20 cm
 - ☒ 2. 12 cm
 - ☐ 3. 16 cm
 - ☐ 4. 18 cm

Q.19 In which of the following cities of India, Diesel Locomotive Works (DLW) was established in 1961?

- Ans**
- ☒ 1. Varanasi
 - ☐ 2. Allahabad
 - ☐ 3. Lucknow
 - ☐ 4. Kanpur

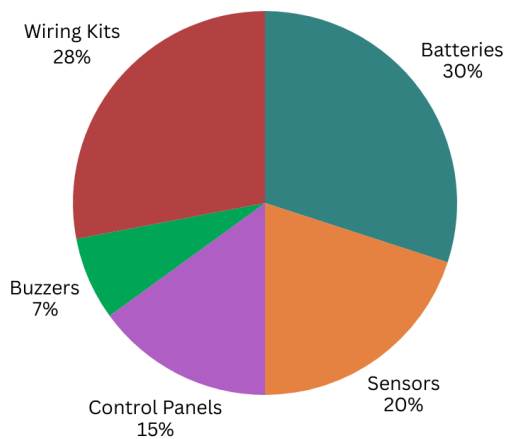
Q.20 Which of the following architectural elements is most characteristically associated with major Mughal monuments such as the Taj Mahal, Red Fort, and Humayun's Tomb?

- Ans**
- ☐ 1. Extensive use of pietra dura inlay work with floral designs
 - ☒ 2. Prominent bulbous domes with a double-dome structural form
 - ☐ 3. Multiple interior stone pillars supporting flat roofing systems
 - ☐ 4. Tall decorative corner minarets framing the main structure

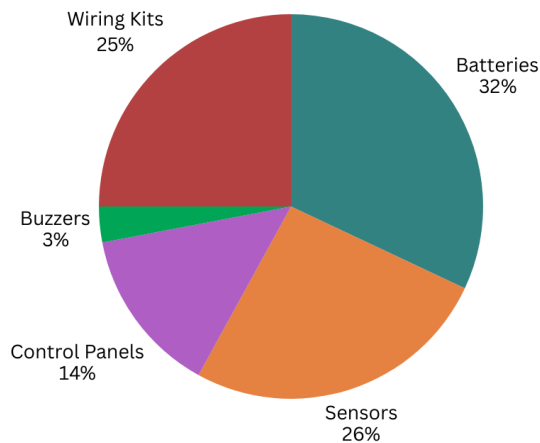
Section : **Arithmetical and Numerical Ability**

- Q.1** The pie charts below show the percentage distribution of electronic components manufactured by a company at its Bengaluru and Hyderabad units in 2023. Assume that the total number of components manufactured at both units are the same.

Bengaluru Unit



Hyderabad Unit



Based on the above data, what is the ratio of the number of buzzers manufactured at the Hyderabad unit to that manufactured at the Bengaluru unit?

- Ans**
- ☐ 1. 3:14
 - ☐ 2. 7:3
 - ☐ 3. 14:3
 - ☒ 4. 3:7

- Q.2** By selling an article for ₹120, a man incurs a loss of 35%. At what price (in ₹) should he sell it to gain 30%?

- Ans**
- ☒ 1. 240
 - ☐ 2. 230
 - ☐ 3. 250
 - ☐ 4. 260

- Q.3** A shopkeeper buys 44 kg of rice at ₹80 per kg and 56 kg of rice at ₹60 per kg. Find the average cost per kg of mixed rice.

- Ans**
- ☐ 1. ₹65.30
 - ☒ 2. ₹68.80
 - ☐ 3. ₹76.70
 - ☐ 4. ₹74.40

Q.4 A shopkeeper mixes two types of sugar: one costing ₹40 per kg and the other costing ₹60 per kg. If the mixture is sold at ₹50 per kg, what is the ratio of the cheaper sugar to the costlier sugar in the mixture?

- Ans
- ☐ 1. 2 : 1
 - ☐ 2. 1 : 2
 - ☐ 3. 1 : 3
 - ☒ 4. 1 : 1

Q.5 Two years ago from now, the average age of A, B and C was 40 years. After two years from now, the average age of A and C will be 54 years. What will be the age (in years) of B, after five years from now?

- Ans
- ☐ 1. 30
 - ☐ 2. 26
 - ☐ 3. 24
 - ☒ 4. 27

Q.6 A bank offers 3.5% compound interest per annum calculated on a half-yearly basis. A customer deposits ₹6,451 each on 1 January and 1 July of a year. At the end of the year, the amount he would have gained by way of interest is _____. [Round off your answer to 2 decimal places.]

- Ans
- ☐ 1. ₹337.07
 - ☒ 2. ₹340.65
 - ☐ 3. ₹353.86
 - ☐ 4. ₹324.54

Q.7 Find the HCF of 0.14 and 0.36.6908

- Ans
- ☒ 1. 0.02
 - ☐ 2. 2
 - ☐ 3. 20
 - ☐ 4. 0.2

Q.8 The current population of a town is 13,150. It increases by 60% in the first year and by 25% in the second year, then decreases by 13% in the third year. What is the population of the town at the end of the third year?

- Ans
- ☒ 1. 22,881
 - ☐ 2. 22,885
 - ☐ 3. 22,888
 - ☐ 4. 22,871

Q.9 A number when decreased by $69\frac{1}{2}\%$, results in 671. The number is:

- Ans
- ☒ 1. 2200
 - ☐ 2. 2100
 - ☐ 3. 2500
 - ☐ 4. 2400

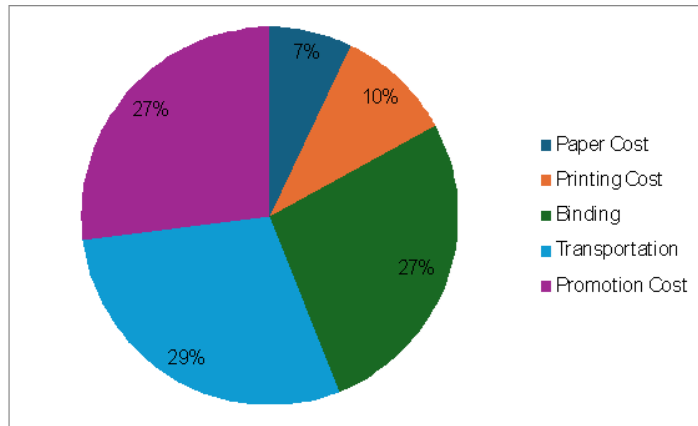
Q.10 The population of a wildlife sanctuary increases by 4% every year. If the current animal population is 5,000, what will be the population after 3 years? (Give the answer correct to the nearest integer value.)

- Ans
- ☐ 1. 5,800
 - ☐ 2. 5,400
 - ☐ 3. 5,200
 - ☒ 4. 5,624

Q.11 Simplify: $\frac{16 \div 4 \text{ of } 4 \times (5 + 3.5 - 10 \div 4)}{4 - 3 \text{ of } 3 \div 3 \times 3 + 6}$ 3077

- Ans
- ☒ 1. 5
 - ☒ 2. 3
 - ☒ 3. 9
 - ☒ 4. 6

Q.12 The expenses related to books are presented in the form of a pie chart. Study the pie chart carefully and answer the question that follows.



Based on the above pie graph, match the following items

Column A	Column B
X) Least Expenditure	1) Transportation
Y) Maximum Expenditure	2) Binding & Promotion
Z) Equal Expenditure	3) Paper Cost

- Ans
- ☒ 1. X-2; Y-3; Z-2
 - ☒ 2. X-1; Y-2; Z-3
 - ☒ 3. X-3; Y-1; Z-2
 - ☒ 4. X-2; Y-1; Z-2

Q.13 Find the simple interest (in ₹) on ₹1,500 at 6% per month for 9 months.

- Ans
- ☒ 1. 135
 - ☒ 2. 67.50
 - ☒ 3. 810
 - ☒ 4. 87.50

Q.14 The LCM of the numbers 14.3 and 0.002 is:

- Ans
- ☒ 1. 143
 - ☒ 2. 14.3
 - ☒ 3. 0.143
 - ☒ 4. 1.43

Q.15 By selling an article for ₹120, a man loses 40%. At what price (in ₹) should he sell it to gain 16%?

- Ans
- ☐ 1. 222
 - ☐ 2. 242
 - ☒ 3. 232
 - ☐ 4. 252

Q.16 Vijay gets a 12% increase in his sales in the first year and a 25% increase in the second year. If his present sales are ₹1,59,600, what were his sales (in ₹) two years ago?

- Ans
- ☒ 1. 1,14,000
 - ☐ 2. 1,17,680
 - ☐ 3. 1,19,320
 - ☐ 4. 1,12,900

Q.17 A number when decreased by $64\frac{1}{2}\%$, results in 852. The number is:

- Ans
- ☒ 1. 2400
 - ☐ 2. 2900
 - ☐ 3. 3000
 - ☐ 4. 2600

Q.18 At what rate of interest per annum will a certain sum of money become 37 times its original value in 2 years, if the interest is compounded annually? (Round off to one decimal place.)

- Ans
- ☐ 1. 509.2%
 - ☒ 2. 508.3%
 - ☐ 3. 511.3%
 - ☐ 4. 498.2%

Q.19 The LCM of $4^3 \times 9^2 \times 12$, $4^2 \times 12^2 \times 18$ and $9^3 \times 12^2 \times 18^2$ is:

- Ans
- ☐ 1. 29×314
 - ☐ 2. 211×312
 - ☒ 3. 29×312
 - ☐ 4. 29×310

Q.20 Four years ago from now, the average age of A, B and C was 19 years. After four years from now, the average age of A and C will be 31 years. What will be the age (in years) of B, after seven years from now?

- Ans
- ☐ 1. 18
 - ☐ 2. 20
 - ☐ 3. 25
 - ☒ 4. 22

Q.1 Machine A produces 20 widgets per hour, while Machine B works at three-fourths of that rate but runs 15% slower due to downtime. Both machines start together on a batch of 859 widgets, but Machine A stops after 20 hours. How many additional hours will Machine B need to complete the remaining work?

- Ans**
- ☐ 1. 12 hours
 - ☐ 2. 25 hours
 - ☒ 3. 16 hours
 - ☐ 4. 20 hours

Q.2 A sum of ₹1,840 is divided among A, B and C in the ratio 2:3:5. If ₹32 is added to each share, find the new ratio.

- Ans**
- ☐ 1. 37:49:92
 - ☒ 2. 50:73:119
 - ☐ 3. 12:20:15
 - ☐ 4. 23:38:71

Q.3 A boat takes 3 hours to travel a certain distance downstream and 5 hours to travel the same distance upstream. What is the ratio of the speed of the boat in still water to the speed of the stream?

- Ans**
- ☐ 1. 2 : 1
 - ☒ 2. 4 : 1
 - ☐ 3. 5 : 2
 - ☐ 4. 3 : 1

Q.4 If 45 lemons are sold for ₹40 at a loss of 10%, approximately how many lemons should be sold for ₹33 to gain 10%?

- Ans**
- ☒ 1. 30
 - ☐ 2. 20
 - ☐ 3. 24
 - ☐ 4. 16

Q.5 A car travels a total distance of 246 km in three parts: the first 76 km at a speed of 40 km/h, the next 80 km at a speed of 50 km/h, and the last 90 km at a speed of 60 km/h. Find the average speed of the car for the entire journey.

- Ans**
- ☒ 1. 49.2 km/h
 - ☐ 2. 48.5 km/h
 - ☐ 3. 53.8 km/h
 - ☐ 4. 43.6 km/h

Q.6 If the total length of all the space diagonals of a cube is $16\sqrt{3}$ cm, then what is the total length of the edges of the cube?

- Ans**
- ☐ 1. 44 cm
 - ☐ 2. 38 cm
 - ☒ 3. 48 cm
 - ☐ 4. 54 cm

Q.7 A shopkeeper marks the price of a washing machine at ₹20,000. He offers a trade discount of 10% and an additional scheme discount of 5% on the reduced price. What is the final selling price of the washing machine?

- Ans**
- ☐ 1. ₹17,500
 - ☒ 2. ₹17,100
 - ☐ 3. ₹17,200
 - ☐ 4. ₹17,000

Q.8 If the height of a right circular cone is increased by 150% and the radius of the base is reduced by 40%, then the volume of the cone is:

- Ans**
- ☐ 1. increased by 10%
 - ☒ 2. decreased by 10%
 - ☐ 3. decreased by 8%
 - ☐ 4. decreased by 12%

Q.9 A cistern can be filled by a pipe in 8 hours, but due to a leak at the bottom, it takes 10 hours to fill. How long will the leak alone take to empty the full cistern?

- Ans**
- ☐ 1. 20 hours
 - ☐ 2. 32 hours
 - ☒ 3. 40 hours
 - ☐ 4. 16 hours

Q.10 The fourth proportion of 8, 15, and 24 is:

- Ans**
- ☒ 1. 45
 - ☐ 2. 42
 - ☐ 3. 49
 - ☐ 4. 46

Q.11 The ratio of boys to girls in a class is 6:5. If there are 42 boys, find the number of girls.

- Ans**
- ☐ 1. 30
 - ☐ 2. 25
 - ☒ 3. 35
 - ☐ 4. 40

Q.12 Three numbers a, b, and c are such that $a:b = 2:7$, $b:c = 3:5$ and $a + b + c = 248$. What is the fourth proportional of these three numbers?

- Ans**
- ☐ 1. 485
 - ☒ 2. 490
 - ☐ 3. 495
 - ☐ 4. 480

Q.13 A, B, and C can complete a piece of work in 24, 30, and 40 days, respectively. They begin working together, but A leaves 4 days before the work is completed and B leaves 1 day before the work is completed. Find the total number of days taken to finish the work.

- Ans**
- ☐ 1. 14 days
 - ☒ 2. 12 days
 - ☐ 3. 10 days
 - ☐ 4. 15 days

Q.14 A solid cube with side length 6 cm is melted and recast into 8 smaller solid cubes of equal volume. What will be the length of the side of each smaller cube?

- Ans**
- ☐ 1. 4 cm
 - ☐ 2. 6 cm
 - ☐ 3. 2 cm
 - ☒ 4. 3 cm

Q.19 Which of the following is a type of carbohydrate?

- Ans ☒ 1. Starch
☐ 2. Albumin
☐ 3. Keratin
☐ 4. Collagen

Q.20 Why is it important to include dietary fiber in meals, even though it is not digested or absorbed by the body?

- Ans ☒ 1. It helps maintain regular bowel movement and prevents constipation.
☐ 2. It helps increase overall energy available for daily activities.
☐ 3. It helps build and repair muscle tissues during body growth.
☐ 4. It helps provide essential minerals such as iodine for body functions.

Section : Arithmetical and Numerical Ability

Q.1 Simplify: $\frac{5 \text{ of } 4 \div 20 + [(20 \div 2 \text{ of } 4 - 2.5) - 15 + 30 \text{ of } 3 \div 6]}{4 \text{ of } 4 \times 3 \div 48}$ ₃₀₇₃

- Ans ☒ 1. 1
☐ 2. 4.9
☐ 3. 6
☐ 4. 2.7

Q.2 Eight years ago from now, the average age of A, B and C was 10 years. After eight years from now, the average age of A and C will be 28 years. What will be the age (in years) of B, after nine years from now?

- Ans ☒ 1. 23
☐ 2. 19
☐ 3. 25
☐ 4. 21

Q.3 In how many years will ₹80,000 amount to ₹92,610 at 10% per annum compounded half yearly?

- Ans ☐ 1. 3 years
☒ 2. 1.5 years
☐ 3. 2.5 years
☐ 4. 2 years

Q.4 Find the simple interest (in ₹) on ₹1,500 at 6% per month for 11 months.

- Ans ☐ 1. 102.50
☐ 2. 82.50
☐ 3. 165
☒ 4. 990

- Q.5 The following table shows the percentage of marks obtained by five students in five different subjects in an examination. The numbers in brackets indicate the maximum marks in each subject.

Student	Mathematics (150)	Chemistry (130)	Physics (120)	Geography (120)	History (100)
Rahul	82	60	104	80	52
Sabita	68	55	93	82	45
Taran	70	65	74	75	48
Ganesh	52	90	84	60	40
Manav	82	64	86	71	56

What is the average of the actual marks obtained by the five students in Mathematics?

- Ans
- ☐ 1. 107.2
 - ☒ 2. 106.2
 - ☐ 3. 105.2
 - ☐ 4. 104.2

- Q.6 The LCM of $5^3 \times 8^2 \times 11$, $5^2 \times 11^2 \times 17$, and $8^3 \times 11^2 \times 17^2$ is:

- Ans
- ☐ 1. $29 \times 54 \times 112 \times 172$
 - ☒ 2. $29 \times 53 \times 112 \times 172$
 - ☐ 3. $29 \times 53 \times 113 \times 172$
 - ☐ 4. $29 \times 53 \times 112 \times 173$

- Q.7 By selling an article for ₹120, a man loses 30%. At what price (in ₹) should he sell it to gain 5%?

- Ans
- ☐ 1. 170
 - ☒ 2. 180
 - ☐ 3. 190
 - ☐ 4. 200

- Q.8 By selling an article for ₹120, a man loses 25%. At what price (in ₹) should he sell it to gain 45%?

- Ans
- ☒ 1. 232
 - ☐ 2. 222
 - ☐ 3. 242
 - ☐ 4. 252

- Q.9 A Class 10 student, Harshita, scored 64% in Mathematics in the first term examination. Her marks increased by 25% in the second term and then decreased by 5% in the third term. What was her percentage of marks in the third term?

- Ans
- ☐ 1. 81%
 - ☒ 2. 76%
 - ☐ 3. 72.5%
 - ☐ 4. 70.4%

- Q.10 A sum of ₹1,90,000 is invested for 1 year at 4% per annum, compounded half-yearly. What is the compound interest earned at the end of the year?

- Ans
- ☐ 1. ₹8,050
 - ☐ 2. ₹7,144
 - ☐ 3. ₹9,655
 - ☒ 4. ₹7,676

Q.11 The average of a batsman after 14 innings was K runs per innings. After the 15th inning, his average increased by 1 run. If the score in 15th inning is 65, then the value of K is:

- Ans
- ☐ 1. 48
 - ☐ 2. 49
 - ☒ 3. 50
 - ☐ 4. 51

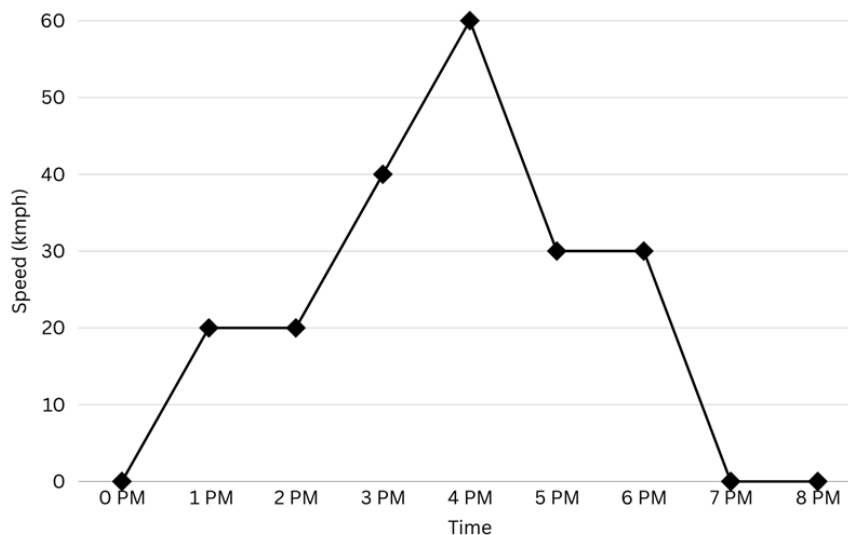
Q.12 The LCM of the numbers 2.1 and 0.33 is:

- Ans
- ☒ 1. 23.1
 - ☐ 2. 231
 - ☐ 3. 0.231
 - ☐ 4. 2.31

Q.13 A number when decreased by $62\frac{1}{2}\%$, results in 591. The number is:

- Ans
- ☒ 1. 1576
 - ☐ 2. 1476
 - ☐ 3. 2196
 - ☐ 4. 1896

Q.14 The line graph below shows the speed (in km/h) of a self-driving car over time. Assume the speed changes uniformly between each hour. What is the distance traveled by the car between 1 PM and 2 PM?



- Ans
- ☐ 1. 25 km
 - ☐ 2. 5 km
 - ☒ 3. 20 km
 - ☐ 4. 15 km

Q.15 A number is first increased by 5% and then decreased by 40%. The result is 945. What is the original number?

- Ans**
- ☒ 1. 1500
 - ☐ 2. 1450
 - ☐ 3. 1550
 - ☐ 4. 1400

Q.16 A sum of ₹6,50,000 is invested for 1 year at 2% per annum, compounded half yearly. What is the compound interest earned at the end of the year?

- Ans**
- ☐ 1. ₹11,636
 - ☐ 2. ₹14,219
 - ☐ 3. ₹12,266
 - ☒ 4. ₹13,065

Q.17 What is the largest three-digit number that is exactly divisible by the HCF of 42 and 56? 7136

- Ans**
- ☐ 1. 998
 - ☒ 2. 994
 - ☐ 3. 984
 - ☐ 4. 985

Q.18 A class has 30 students with an average weight of 40 kg. 20 new students with an average weight of 50 kg join the class. What is the new average weight?

- Ans**
- ☒ 1. 44 kg
 - ☐ 2. 43.5 kg
 - ☐ 3. 43 kg
 - ☐ 4. 44.5 kg

Q.19 The average weight (in kg) of a family of five members whose weights are 40 kg, 49 kg, 57 kg, 70 kg and 37 kg is:

- Ans**
- ☐ 1. 52.6
 - ☒ 2. 50.6
 - ☐ 3. 49.6
 - ☐ 4. 51.6

Q.20 A number is first increased by 10% and then decreased by 20%. What is the net percentage change?

- Ans**
- ☐ 1. No change
 - ☒ 2. 12% decrease
 - ☐ 3. 5% decrease
 - ☐ 4. 10% decrease

Section : **Arithmetical and Numerical Ability1**

Q.1 The speed of a motorboat in still water is 15 km/h. It travels 30 km downstream and then 30 km upstream, returning to the starting point. If the total time taken for the journey is 270 minutes, then the speed of the stream is:

- Ans**
- ☐ 1. 5.5 km/h
 - ☒ 2. 5 km/h
 - ☐ 3. 6 km/h
 - ☐ 4. 6.5 km/h

Q.2 A cone has a diameter of 7 cm. Its curved surface area is 154 cm^2 . Calculate its slant height.

$\left(\text{Use } \pi = \frac{22}{7} \right)$

- Ans
- ☒ 1. 11 cm
 - ☒ 2. 14 cm
 - ☒ 3. 12 cm
 - ☒ 4. 10 cm

Q.3 The time taken by Chaman to cover a distance of 360 km on a motorcycle moving at a speed of 25 m/s is:

- Ans
- ☒ 1. 4 hours
 - ☒ 2. 4.5 hours
 - ☒ 3. 5 hours
 - ☒ 4. 5.5 hours

Q.4 If the mean proportional between $(x+12)$ and $(x+2)$ is $(x+6)$, find the mean proportional between $(8x)$ and 147.

- Ans
- ☒ 1. 56
 - ☒ 2. 64
 - ☒ 3. 84
 - ☒ 4. 76

Q.5 At a cloud services company, three engineers J, K, and L can individually complete a server deployment task in 12 days, 18 days, and 36 days, respectively. If they work together, how long will they take to complete the task?

- Ans
- ☒ 1. 5 days
 - ☒ 2. 6 days
 - ☒ 3. 8 days
 - ☒ 4. 4 days

Q.6 An article is marked at 1.2 times its cost price. After allowing a certain discount, the profit is reduced to 10%. What is the percentage discount allowed?

- Ans
- ☒ 1. $8\frac{1}{3}\%$
 - ☒ 2. $6\frac{1}{3}\%$
 - ☒ 3. 9%
 - ☒ 4. $8\frac{2}{3}\%$

Q.7 Two friends, Swaran and Davinder, can complete a task in 28 hours and 30 hours, respectively. If they work together, how long (in hours) will they take to finish the task?

- Ans
- ☒ 1. $13\frac{13}{29}$
 - ☒ 2. $13\frac{14}{29}$
 - ☒ 3. $14\frac{14}{29}$
 - ☒ 4. $14\frac{13}{29}$

Q.8 The circumference of the base of a cylindrical vessel is 330 cm and its height is 80 cm. How many litres of water can it hold?⁷³⁷

- Ans ☒ 1. 693
☐ 2. 731
☐ 3. 712
☐ 4. 674

Q.9 A shopkeeper marks goods at a price that is 70% above the cost price and then allows a discount of 20%. If the selling price is ₹476, find the cost price (in ₹).

- Ans ☒ 1. 350
☐ 2. 351
☐ 3. 353
☐ 4. 352

Q.10 A swimming pool can be filled by Pipe X in 18 hours, while Pipe Y can empty one-third of the pool in 9 hours. If both pipes are opened simultaneously for 9 hours and then Pipe Y is closed, what is the total number of hours required to fill the pool completely?

- Ans ☐ 1. 26
☒ 2. 24
☐ 3. 28
☐ 4. 22

Q.11 If A is the mean proportional between 1.28 and 6.48 while 26 is the mean proportional between 20 and B, the value of A+B is:

- Ans ☐ 1. 36.44
☐ 2. 36.56
☒ 3. 36.68
☐ 4. 36.96

Q.12 A cube and a cuboid each have a volume of 512 cm^3 . The cuboid measures $8 \text{ cm} \times 8 \text{ cm} \times 8 \text{ cm}$. Calculate the sum of the total surface areas of both solids.

- Ans ☐ 1. 687 cm^2
☐ 2. 678 cm^2
☐ 3. 792 cm^2
☒ 4. 768 cm^2

Q.13 A shopkeeper allows a 20% discount on the marked price and gains 25%. Find the marked price if his gain is ₹220.

- Ans ☐ 1. ₹1,150
☐ 2. ₹1,275
☐ 3. ₹1,250
☒ 4. ₹1,375

Q.14 If each side of a rectangle is halved, what is the percentage decrease in its area?

- Ans ☐ 1. 50%
☐ 2. 85%
☐ 3. 25%
☒ 4. 75%

Q.19 Which site in Andhra Pradesh is known for mahachaitya and important Buddhist sculptures?

- Ans**
- ☐ 1. Goli
 - ☐ 2. Khapra Kodiya
 - ☒ 3. Amaravati
 - ☐ 4. Sanchi

Q.20 Biochemically, the antigens of the Rh blood group system are composed of which type of macromolecule?

- Ans**
- ☒ 1. Protein
 - ☐ 2. Fat
 - ☐ 3. Carbohydrate
 - ☐ 4. Ribonucleic acid

Section : **Arithmetical and Numerical Ability**

Q.1 A number when decreased by $33\frac{1}{2}\%$, results in 399. The number is:

- Ans**
- ☒ 1. 600
 - ☐ 2. 1200
 - ☐ 3. 500
 - ☐ 4. 1000

Q.2 The current population of a town is 10,000. It increases by 36% in the first year and 70% in the second year, but decreases by 5% in the third year. What will be the population of the town at the end of the third year?

- Ans**
- ☐ 1. 21,959
 - ☐ 2. 21,957
 - ☒ 3. 21,964
 - ☐ 4. 21,968

Q.3 Two years ago from now, the average age of A, B and C was 69 years. After two years from now, the average age of A and C will be 80 years. What will be the age (in years) of B, after five years from now?

- Ans**
- ☐ 1. 58
 - ☒ 2. 62
 - ☐ 3. 65
 - ☐ 4. 57

Q.4 By selling an article for ₹120, a man incurs a loss of 35%. At what price (in ₹) should he sell it to gain 43%?

- Ans**
- ☐ 1. 254
 - ☒ 2. 264
 - ☐ 3. 274
 - ☐ 4. 284

Q.5 Six years ago from now, the average age of A, B and C was 29 years. After six years from now, the average age of A and C will be 29 years. What will be the age (in years) of B, after five years from now?

- Ans**
- ☐ 1. 67
 - ☐ 2. 60
 - ☐ 3. 59
 - ☒ 4. 64

Q.6 Simplify $3 \times (8 \times (4^2)) \div 16 + 79 - 70$

- Ans
- ☐ 1. 36
 - ☐ 2. 31
 - ☐ 3. 42
 - ☒ 4. 33

Q.7 The average weight (in kg) of a family of five members whose weights are 40 kg, 49 kg, 57 kg, 70 kg and 39 kg is:

- Ans
- ☐ 1. 50
 - ☒ 2. 51
 - ☐ 3. 52
 - ☐ 4. 53

Q.8 Find the simple interest (in ₹) on ₹1,500 at 6% per month for 7 months.

- Ans
- ☐ 1. 90
 - ☐ 2. 45
 - ☐ 3. 52.50
 - ☒ 4. 630

Q.9 A store manager at a distribution center mixes two varieties of flour to create a premium blend. Variety A costs ₹40/kg and Variety B costs ₹70/kg. If the two varieties are mixed in an equal ratio by weight, what is the mean price of the resulting mixture per kg (in ₹)?

- Ans
- ☐ 1. 65
 - ☒ 2. 55
 - ☐ 3. 60
 - ☐ 4. 70

Q.10 At what rate of interest per annum, compounded annually, will a sum of money become 43 times in 2 years? (Round off to one decimal place.)

- Ans
- ☐ 1. 546.5%
 - ☐ 2. 560.8%
 - ☒ 3. 555.7%
 - ☐ 4. 562.4%

Q.11 A number when decreased by $87\frac{1}{2}\%$, results in 726. The number is:

- Ans
- ☒ 1. 5808
 - ☐ 2. 6280
 - ☐ 3. 6480
 - ☐ 4. 5908

Q.12 The table given below shows the sales of four different products P, Q, R and S in four different regions

Region	P	Q	R	S
East	240	180	150	200
West	120	180	200	160
North	180	160	150	200
South	140	200	190	180

Find the average sales of all products in west region.

- Ans ☐ 1. 178
☒ 2. 165
☐ 3. 148
☐ 4. 155

Q.13 Study the table and answer the question that follows.

The table below shows how a person's total monthly income is distributed across different expense categories.

Category	Amount (in ₹)
Grocery	12,000
Transportation	7,000
Rent	21,000
Investment	25,000
Travel	5,000

What percentage of the total income is spent on rent?

- Ans ☐ 1. 25%
☒ 2. 30%
☐ 3. 35%
☐ 4. 20%

Q.14 What will be the difference in population 3 years ago and 2 years ago of a town whose current population of 1,00,000 is increasing at a rate of 25% every year?

- Ans ☐ 1. 12,050
☒ 2. 12,800
☐ 3. 13,150
☐ 4. 12,250

Q.15 Ajay's sales increased by 12% in the first year and by 25% in the second year. If his current sales are ₹1,48,400, what were his sales (in ₹) two years ago?

- Ans ☐ 1. 1,08,720
☒ 2. 1,06,000
☐ 3. 1,02,500
☐ 4. 1,03,200

Q.16 A manufacturer sells a product to a wholesaler at a profit of 36%. The wholesaler, in turn, sells it to a retailer at a profit of 25%, and the retailer sells it to a customer at a profit of 40%. If the customer pays ₹833, find the cost price (in ₹) for the manufacturer.

- Ans ☒ 1. ₹350
☐ 2. ₹347
☐ 3. ₹352
☐ 4. ₹351

Q.17 Find the HCF of $\frac{1}{7}, \frac{2}{3}, \frac{4}{5}$. 6907

- Ans
- ☒ 1. $\frac{1}{105}$
 - ☐ 2. $\frac{1}{49}$
 - ☐ 3. $\frac{1}{71}$
 - ☐ 4. $\frac{1}{31}$

Q.18 The difference between compound interest (compounded annually) and simple interest on a sum of ₹P for 2 years at 10% per annum is ₹12. The value of P is:

- Ans
- ☐ 1. ₹1,100
 - ☒ 2. ₹1,200
 - ☐ 3. ₹1,000
 - ☐ 4. ₹1,400

Q.19 The value of $\left(3\frac{3}{4}\left(3\frac{4}{5} \div 9\frac{1}{2}\right)\right)$ is: 6519

- Ans
- ☒ 1. $\frac{3}{2}$
 - ☐ 2. $\frac{2}{3}$
 - ☐ 3. $\frac{5}{2}$
 - ☐ 4. $\frac{2}{5}$

Q.20 The LCM of the numbers 13.3 and 0.03 is:

- Ans
- ☐ 1. 0.399
 - ☐ 2. 399
 - ☐ 3. 3.99
 - ☒ 4. 39.9

Section : Arithmetical and Numerical Ability1

Q.1 A manufacturer fixes his selling price at 50% over the cost of production. If the cost of production goes up by 5%, and the manufacturer raises his selling price by 40%, find the new profit percentage.

- Ans
- ☐ 1. 98%
 - ☐ 2. 99%
 - ☐ 3. 101%
 - ☒ 4. 100%

Q.2 The sum of the radius of the base and height of a cylinder is 56 m. If the area of the cylinder is 3696 m^2 , then find the cost of painting its curved surface at a rate of ₹45 per square meter (use $\pi = \frac{22}{7}$).

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Ans ☒ 1. ₹1,39,680

☒ 2. ₹1,35,135

☒ 3. ₹1,29,236

☒ 4. ₹1,24,570

Q.3 Two trains of equal lengths cross a pole in 10 seconds and 15 seconds, respectively. How long will it take for the faster train to cross the slower train completely when running in the same direction?

Ans ☒ 1. 60 seconds

☒ 2. 15 seconds

☒ 3. 24 seconds

☒ 4. 36 seconds

Q.4 Arrange the following ratios in descending order

A) 91:92

B) 82:83

C) 101:103

D) 95:96

Ans ☒ 1. B-D-A-C

☒ 2. D-A-B-C

☒ 3. C-A-B-D

☒ 4. A-B-C-D

Q.5 A mixture contains alcohol and water in the ratio 3:5. If 40 liters of water are added, the ratio becomes 3:7. What was the original quantity of alcohol?

Ans ☒ 1. 65 liters

☒ 2. 60 liters

☒ 3. 70 liters

☒ 4. 75 liters

Q.6 If p is the mean proportional between 12 and 27, what is the value of p?

Ans ☒ 1. 16

☒ 2. 15

☒ 3. 20

☒ 4. 18

Q.7 A car travels at a speed of 64 km/h. How long will it take to cover 384 km?

Ans ☒ 1. 6 hours

☒ 2. 7 hours

☒ 3. 3 hours

☒ 4. 5 hours

Q.8 Pipe A fills a tank in 12 hours and Pipe B fills it in 16 hours. Both pipes are opened together. After how many hours should Pipe B be closed so that the entire tank is completely filled in exactly 9 hours?

- Ans
- ☐ 1. 5 hours
 - ☐ 2. 3 hours
 - ☒ 3. 4 hours
 - ☐ 4. 6 hours

Q.9 A cuboid has dimensions 16 cm, 8 cm and 6 cm. It is melted and recast into cubes of side 4 cm. How many such cubes are formed?

- Ans
- ☐ 1. 10
 - ☐ 2. 8
 - ☐ 3. 15
 - ☒ 4. 12

Q.10 A shopkeeper offers a K% discount on the marked price of a watch, yet he still manages to make a profit of 12%. If he marked the price 40% higher than the cost price, then the value of K is:

- Ans
- ☐ 1. 25
 - ☒ 2. 20
 - ☐ 3. 18
 - ☐ 4. 23

Q.11 If the radius of the base of a right circular cone is 10.5 cm and its slant height is 17.5 cm, find its curved surface area.
(Take $\pi = \frac{22}{7}$)

- Ans
- ☒ 1. 3646.5
 - ☐ 2. 3466.6
 - ☐ 3. 3456.4
 - ☐ 4. 3664.7

Q.12 A company assigns a project to 8 workers with a planned completion time of 16 days. After working for 8 days, only half of the work has been completed due to technical issues. If 4 additional workers are added to the team, how many more days will be needed to complete the remaining work?

- Ans
- ☐ 1. 8 days
 - ☒ 2. $5\frac{1}{3}$ days
 - ☐ 3. 4 days
 - ☐ 4. $5\frac{2}{3}$ days

Q.13 Find the fourth proportional to 27, 63 and 87.

- Ans
- ☐ 1. 189
 - ☒ 2. 203
 - ☐ 3. 118
 - ☐ 4. 243

Q.16 The Right to Freedom under the Constitution of India is guaranteed through which set of Articles?

- Ans**
- ✓ 1. Articles 19, 20, 21 and 22
 - ✗ 2. Articles 23, 24, 25 and 26
 - ✗ 3. Articles 14, 15, 16 and 17
 - ✗ 4. Articles 32, 33, 34 and 35

Q.17 Under which Article does the Supreme Court of India exercise original jurisdiction for enforcement of Fundamental Rights?

- Ans**
- ✓ 1. Article 131
 - ✗ 2. Article 136
 - ✗ 3. Article 43
 - ✗ 4. Article 32

Q.18 Which of the following rivers originates from western slopes of the Aravalli Range and empties into the Rann of Kachchh?

- Ans**
- ✗ 1. Sabarmati River
 - ✓ 2. Luni River
 - ✗ 3. Indus River
 - ✗ 4. Ganga River

Q.19 What is a cross between two parents differing only in a single pair of contrasting characters called?

- Ans**
- ✓ 1. Monohybrid cross
 - ✗ 2. Incomplete dominance
 - ✗ 3. Dihybrid cross
 - ✗ 4. Reciprocal cross

Q.20 Which of the following classical languages, a rich tapestry woven from various dialects, was adopted by Buddhists in ancient India as their sacred language?

- Ans**
- ✗ 1. Apabhramsha
 - ✓ 2. Pali
 - ✗ 3. Sanskrit
 - ✗ 4. Tamil

Section : Arithmetical and Numerical Ability

Q.1 The exports of garments from two different states of India during the years 2020 to 2024 are given in the following table.-

Year	2020	2021	2022	2023	2024
Kerala (in ₹ crores)	8	10	12	14	10
Karnataka (in ₹ crores)	10	12	8	9	13

What is the total earning of the two states from garment exports in 2023 and 2024 taken together?

- Ans**
- ✗ 1. ₹44 crores
 - ✓ 2. ₹46 crores
 - ✗ 3. ₹42 crores
 - ✗ 4. ₹43 crores

Q.2 At what rate of interest per annum, compounded annually, will a sum of money become 65 times in 2 years? (Round off to one decimal place.)

- Ans
- ☐ 1. 702.7%
 - ☐ 2. 710.8%
 - ☒ 3. 706.2%
 - ☐ 4. 716.6%

Q.3 Simplify the following expression.

$$11 + 2 \times 32 \div 4 + 2 - 42 \div 6 \times 85432$$

- Ans
- ☐ 1. 68
 - ☒ 2. -27
 - ☐ 3. 63
 - ☐ 4. -14

Q.4 The current population of a town is 1,44,75,000. It increases by 70% in the first year and 25% in the second year, but decreases by 36% in the third year. What will be the population of the town at the end of the third year?

- Ans
- ☐ 1. 1,96,91,000
 - ☒ 2. 1,96,86,000
 - ☐ 3. 1,96,89,000
 - ☐ 4. 1,96,78,000

Q.5 The LCM of $4^3 \times 8^2 \times 13$, $4^2 \times 13^2 \times 18$ and $8^3 \times 13^2 \times 18^2$ is:

- Ans
- ☐ 1. $2^{13} \times 3^4 \times 13^2$
 - ☒ 2. $2^{12} \times 3^4 \times 13^2$
 - ☐ 3. $2^{12} \times 3^5 \times 13^2$
 - ☐ 4. $2^{12} \times 3^4 \times 13^3$

Q.6 Find the simple interest (in ₹) on ₹1,800 at 3% per month for 5 months.

- Ans
- ☐ 1. 42.50
 - ☒ 2. 270
 - ☐ 3. 45
 - ☐ 4. 22.50

Q.7 A shopkeeper prepares a mixture by combining three varieties of rice priced at ₹40, ₹50, and ₹60 per kg in the ratio 2:3:5. Find the average cost per kg of the resulting mixture.

- Ans
- ☐ 1. ₹54
 - ☐ 2. ₹52
 - ☐ 3. ₹50
 - ☒ 4. ₹53

Q.8 Find the difference between the compound interest (compounded annually) and simple interest on ₹6,000 at 10% per annum for 2 years.

- Ans
- ☐ 1. ₹56
 - ☐ 2. ₹68
 - ☒ 3. ₹60
 - ☐ 4. ₹50

Q.9 The HCF and the LCM of two numbers are 10 and 300, respectively. If one of the numbers is 50, find the other one.

- Ans
- ☒ 1. 50
 - ☒ 2. 90
 - ☒ 3. 60
 - ☒ 4. 120

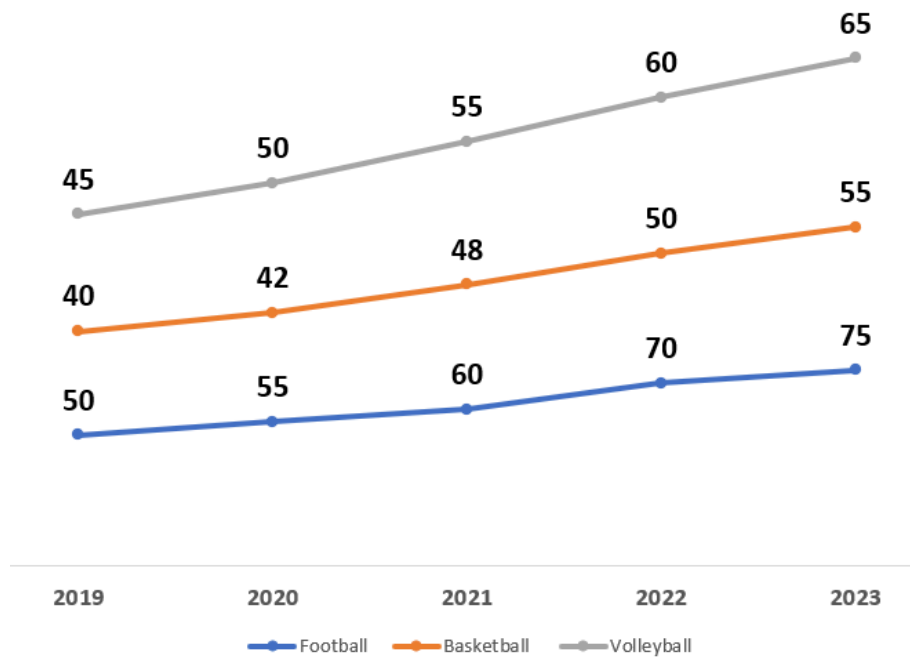
Q.10 If the average salary of 5 employees is ₹32,500, and one employee earns ₹40,000, what is the average salary of the other four (in ₹)?

- Ans
- ☒ 1. 31,250
 - ☒ 2. 30,625
 - ☒ 3. 29,750
 - ☒ 4. 32,000

Q.11 By selling an article for ₹120, a man loses 30%. At what price (in ₹) should he sell it to gain 26%?

- Ans
- ☒ 1. 236
 - ☒ 2. 216
 - ☒ 3. 206
 - ☒ 4. 226

Q.12 The given line graph shows the number of students who participated in three different school sports (football, basketball, and volleyball) over five years from 2019 to 2023. Study the graph carefully and answer the question that follows.



Which sport had the most consistent increase in participation over the years?

- Ans
- ☒ 1. Volleyball
 - ☒ 2. Football and volleyball both have same consistency
 - ☒ 3. Basketball
 - ☒ 4. Football

Q.13 The LCM of $5^3 \times 9^2 \times 12$, $5^2 \times 12^2 \times 17$ and $9^3 \times 12^2 \times 17^2$ is:

- Ans
- ☐ 1. $2^4 \times 3^9 \times 5^3 \times 17^2$
 - ☐ 2. $2^4 \times 3^8 \times 5^4 \times 17^2$
 - ☐ 3. $2^5 \times 3^8 \times 5^3 \times 17^2$
 - ☒ 4. $2^4 \times 3^8 \times 5^3 \times 17^2$

Q.14 A sum of ₹1,00,000 is invested at 10% compound interest per annum, compounded annually. If the final amount is ₹1,33,100, find the time period.

- Ans
- ☒ 1. 3 years
 - ☐ 2. 2.5 years
 - ☐ 3. 3.5 years
 - ☐ 4. 2 years

Q.15 The average of first 118 odd natural numbers is:

- Ans
- ☒ 1. 118
 - ☐ 2. 117.5
 - ☐ 3. 118.5
 - ☐ 4. 119

Q.16 Two successive increases of 40% each are by what percent more than two successive decreases of 40% each?

- Ans
- ☐ 1. 40%
 - ☒ 2. 50%
 - ☐ 3. 35%
 - ☐ 4. 45%

Q.17 A trader lost 10% by selling a shirt for ₹900. If he gains x% by selling it for ₹1400, the value of x is: 11669

- Ans
- ☐ 1. 55
 - ☐ 2. 50
 - ☒ 3. 40
 - ☐ 4. 30

Q.18 The current population of a town is 1,72,500. It increases by 45% in the first year and 44% in the second year, but decreases by 50% in the third year. What will be the population of the town at the end of the third year?

- Ans
- ☐ 1. 1,80,100
 - ☐ 2. 1,80,080
 - ☒ 3. 1,80,090
 - ☐ 4. 1,80,120

Q.19 Six years ago from now, the average age of A, B and C was 17 years. After six years from now, the average age of A and C will be 10 years. What will be the age (in years) of B, after four years from now?

- Ans
- ☐ 1. 70
 - ☐ 2. 60
 - ☒ 3. 65
 - ☐ 4. 68

Q.20 Riya earns ₹68,300 per month. She saves 25% of her salary, spends 17% on rent, and the rest on other expenses. How much does she spend on other expenses?

- Ans**
- ✓ 1. ₹39,614
 - ✗ 2. ₹38,425
 - ✗ 3. ₹35,248
 - ✗ 4. ₹39,214

Section : Arithmetical and Numerical Ability1

Q.1 A train covers a certain distance at 40 km/h and returns the same distance at 60 km/h. What is the average speed of the train for the entire trip?

- Ans**
- ✓ 1. 48 km/h
 - ✗ 2. 52 km/h
 - ✗ 3. 50 km/h
 - ✗ 4. 55 km/h

Q.2 A cylindrical vessel having an inner radius of 2 m and a height of 10 m is completely filled with water. After 20% of the water is drained out, the inner curved surface of the empty portion of the vessel (above the water level) is painted at a rate of ₹5 per m². What is the cost of painting? [Use $\pi = 22/7$, and give your answer in ₹, correct to two places after decimal.]

- Ans**
- ✓ 1. ₹125.71
 - ✗ 2. ₹123.71
 - ✗ 3. ₹124.61
 - ✗ 4. ₹126.61

Q.3 A, B, and C can complete a piece of work in 21 days, 28 days, and 35 days, respectively. They all start working together. After 4 days, A leaves the work, while B and C continue working. After another 4 days, B also leaves the work, and C continues working alone until the work is completed. In how many total days will the work be completed?

- Ans**
- ✓ 1. $18\frac{1}{3}$ days
 - ✗ 2. $9\frac{2}{5}$ days
 - ✗ 3. $12\frac{1}{12}$ days
 - ✗ 4. $15\frac{2}{5}$ days

Q.4 Pipe X can fill a tank in 10 hours, and pipe Y can fill it in 15 hours. When both pipes are opened together, a leak at the bottom slows down the filling process, causing the tank to take 2 hours longer than expected to fill completely. If the tank is full, how much time will the leak alone take to empty the tank?

- Ans**
- ✗ 1. 20 hours
 - ✓ 2. 24 hours
 - ✗ 3. 30 hours
 - ✗ 4. 15 hours

Q.5 A shopkeeper marks an article at ₹500 and gives a 12% discount. If he still gains 10%, find the cost price.

- Ans**
- ☒ 1. ₹400
 - ☐ 2. ₹420
 - ☐ 3. ₹410
 - ☐ 4. ₹450

Q.6 A shoemaker marks his goods at 15% above the cost price. 30% of his goods are stolen and cannot be recovered. He sells the remaining 70% of the goods at the marked price. Find the overall percentage profit or loss on the total cost of all the goods.

- Ans**
- ☒ 1. 19.5% loss
 - ☐ 2. 19.5% profit
 - ☐ 3. 23% profit
 - ☐ 4. 23% loss

Q.7 A boat travels 24 km upstream (against the current) in 4 hours and returns the same distance downstream (with the current) in 3 hours. What is the speed of the water current?

- Ans**
- ☐ 1. 4 km/h
 - ☒ 2. 1 km/h
 - ☐ 3. 2 km/h
 - ☐ 4. 3 km/h

Q.8 A train travels the first half of a 240 km journey at 60 km/h and the second half at 40 km/h. What is the average speed of the train for the entire journey?

- Ans**
- ☐ 1. 52 km/h
 - ☐ 2. 50 km/h
 - ☐ 3. 45 km/h
 - ☒ 4. 48 km/h

Q.9 If the fourth proportional to 27, a, and 9a is 108, then find the positive value of a.

- Ans**
- ☐ 1. 16
 - ☒ 2. 18
 - ☐ 3. 14
 - ☐ 4. 17

Q.10 A shirt is marked at ₹800 and is sold after successive discounts of 20% and 10%. What is the net discount percentage?

- Ans**
- ☒ 1. 28%
 - ☐ 2. 24%
 - ☐ 3. 30%
 - ☐ 4. 26%

Q.11 A boat takes 3 hours to travel 48 km downstream and 4 hours to cover the same distance upstream. What is the speed of the stream?

- Ans**
- ☐ 1. 4 km/h
 - ☐ 2. 3 km/h
 - ☒ 3. 2 km/h
 - ☐ 4. 5 km/h

Q.12 A rectangular floor, measuring $12\text{ m} \times 7\text{ m}$, has a square tile design of side 3 m fitted exactly at one corner, such that it is flush with both adjacent sides of the rectangle. What is the total length of the boundary of the remaining visible portion of the floor?

- Ans**
- ☐ 1. 35 m
 - ☒ 2. 38 m
 - ☐ 3. 32 m
 - ☐ 4. 29 m

Q.13 Three numbers are in the ratio $5:7:9$, and their sum is 168 . If the smallest number is increased by 40% and the largest number is decreased by 25% , find the new ratio of the three numbers.

- Ans**
- ☒ 1. $28:28:27$
 - ☐ 2. $21:25:20$
 - ☐ 3. $5:8:7$
 - ☐ 4. $13:13:11$

Q.14 If the radius of a sphere is doubled, by what factor does its volume increase?

- Ans**
- ☐ 1. 4
 - ☐ 2. 6
 - ☐ 3. 2
 - ☒ 4. 8

Q.15 The profit made on a product is 76% . What is the loss percentage (rounded off to two decimal places) incurred on the sale if the figures of both cost price and selling price are interchanged?

- Ans**
- ☐ 1. 42.98%
 - ☐ 2. 47.13%
 - ☐ 3. 44.88%
 - ☒ 4. 43.18%

Q.16 The mean proportional between 0.04 and 4 is:

- Ans**
- ☐ 1. 0.16
 - ☐ 2. 0.004
 - ☒ 3. 0.4
 - ☐ 4. 0.2

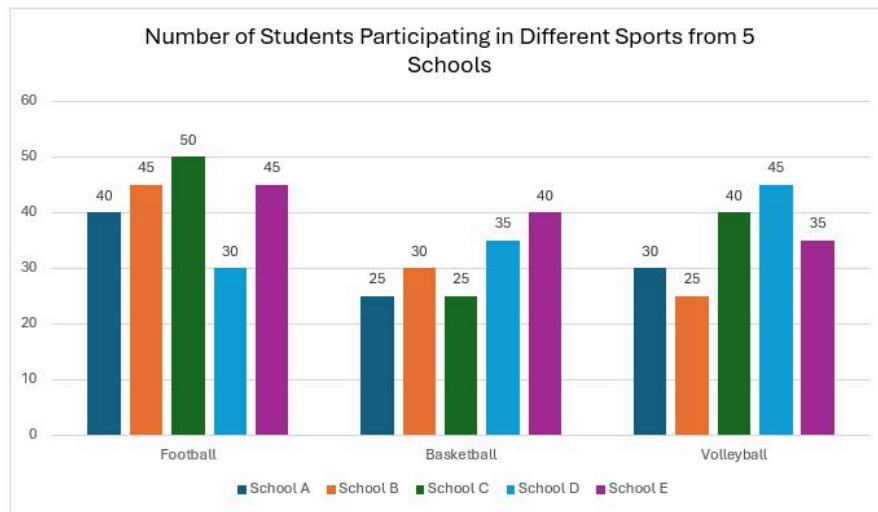
Q.17 A pipe can fill a tank in 24 hours. Due to a leakage, it actually fills it in 12 hours more. How long does the leakage alone take to empty the filled tank?

- Ans**
- ☒ 1. 72 hours
 - ☐ 2. 66 hours
 - ☐ 3. 84 hours
 - ☐ 4. 54 hours

Q.18 A cylindrical water tank has a radius of 3 m and a height of 7 m . Find the volume (in litres) of the tank. (Use $\pi = \frac{22}{7}$)

- Ans**
- ☐ 1. 189000
 - ☐ 2. 198700
 - ☒ 3. 198000
 - ☐ 4. 187500

Q.1 The graph below shows the number of students participating in different sports from five schools. Study the chart and answer the question that follows.



Across all the five schools, which school had the most consistent participation across all three sports, meaning the smallest difference between its highest and lowest number of participants in any sport?

- Ans
- ☒ 1. D
 - ☒ 2. B
 - ☒ 3. E
 - ☒ 4. A

Q.2 What is the equivalent single percentage increase of two successive percentage increases of 25% each?

- Ans
- ☒ 1. 54.25%
 - ☒ 2. 56.25%
 - ☒ 3. 55.25%
 - ☒ 4. 58.25%

Q.3 Three years ago from now, the average age of A, B and C was 50 years. After three years from now, the average age of A and C will be 47 years. What will be the age (in years) of B, after nine years from now?

- Ans
- ☒ 1. 77
 - ☒ 2. 80
 - ☒ 3. 79
 - ☒ 4. 83

Q.4 A sum of ₹7,00,000 is invested for 1 year at 8% per annum, compounded half yearly. What is the compound interest earned at the end of the year?

- Ans
- ☒ 1. ₹55,843
 - ☒ 2. ₹58,786
 - ☒ 3. ₹55,510
 - ☒ 4. ₹57,120

Q.5 Five years ago from now, the average age of A, B and C was 73 years. After five years from now, the average age of A and C will be 84 years. What will be the age (in years) of B, after six years from now?

- Ans ☒ 1. 82
☐ 2. 86
☐ 3. 83
☐ 4. 84

Q.6 What sum of money (in ₹) will amount to ₹3,480 at 4% per annum simple interest in 4 years?⁶⁹⁷⁴

- Ans ☒ 1. 3,000
☐ 2. 3,050
☐ 3. 2,950
☐ 4. 3,200

Q.7 A trader lost 10% by selling a shirt for ₹900. If he gains x% by selling it for ₹1,420, the value of x is:¹¹⁶⁶⁷

- Ans ☒ 1. 42
☐ 2. 32
☐ 3. 52
☐ 4. 57

Q.8 Evaluate: $\frac{1}{\left(\frac{7}{8}\right) + \left(\frac{5}{7}\right)} \div \frac{4}{15}$

- Ans ☐ 1. $2\frac{29}{89}$
☐ 2. $2\frac{33}{89}$
☐ 3. $2\frac{34}{89}$
☒ 4. $2\frac{32}{89}$

Q.9 A trader lost 10% by selling a shirt for ₹900. If he gains x% by selling it for ₹1,430, the value of x is:¹¹⁶⁶⁶

- Ans ☐ 1. 53
☐ 2. 33
☐ 3. 58
☒ 4. 43

Q.10 What is the smallest number to be added to 2019 to make it a perfect square?⁷¹⁹⁴

- Ans ☐ 1. 8
☐ 2. 16
☒ 3. 6
☐ 4. 12

Q.11 At what rate of interest per annum, compounded annually, will a sum of money become 50 times in 2 years? (Round off to one decimal place)

- Ans**
- ☐ 1. 614.9%
 - ☒ 2. 607.1%
 - ☐ 3. 600.9%
 - ☐ 4. 601.7%

Q.12 If we subtract 4 m 82 mm from 9 m 8 mm, we will get:

- Ans**
- ☒ 1. 4 m 926 mm
 - ☐ 2. 4 m 726 mm
 - ☐ 3. 4 m 826 mm
 - ☐ 4. 4 m 626 mm

Q.13 The current population of a town is 20,000. It increases by 60% in the first year and 14% in the second year, but decreases by 10% in the third year. What will be the population of the town at the end of the third year?

- Ans**
- ☐ 1. 32,823
 - ☐ 2. 32,827
 - ☐ 3. 32,841
 - ☒ 4. 32,832

Q.14 A class has 16 boys with an average score of 70 and 24 girls with an average score of 80. What is the average score of the whole class?

- Ans**
- ☐ 1. 72
 - ☐ 2. 75
 - ☐ 3. 74
 - ☒ 4. 76

Q.15 What is the average of the numbers 10, 20, 30 and 40?

- Ans**
- ☐ 1. 10
 - ☐ 2. 30
 - ☒ 3. 25
 - ☐ 4. 20

Q.16 An AC was bought for ₹31,000. The value of the AC was depreciated by 5% per annum. Find the value of the AC after 2 years.

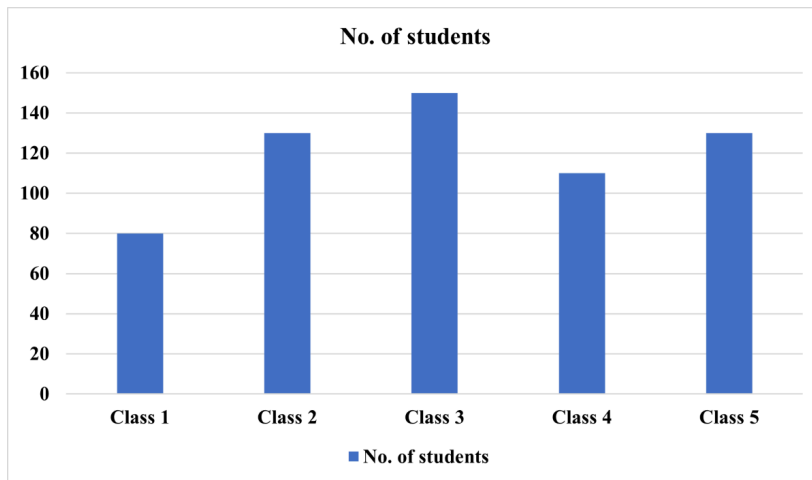
- Ans**
- ☐ 1. ₹28,235.5
 - ☐ 2. ₹29,889.5
 - ☒ 3. ₹27,977.5
 - ☐ 4. ₹27,124.5

Q.17 The equivalent fraction of $9.222\ldots$ is:

- Ans**
- ☐ 1. $\frac{93}{13}$
 - ☐ 2. $\frac{76}{3}$
 - ☒ 3. $\frac{83}{9}$
 - ☐ 4. $\frac{77}{8}$

Q.18 Observe the graph given below and answer the question.

The graph below represents the number of students in various classes (1 to 5) at a school. Assume all numbers here are multiples of 10.



What is the difference between the number of students in Class 3 and Class 4 together and those in Class 1 and Class 5 together?

- Ans
- ☒ 1. 50
 - ☐ 2. 40
 - ☐ 3. 30
 - ☐ 4. 20

Q.19 A number is increased by 10% and then again increased by 10%. What is the total percentage increase in the number?

- Ans
- ☐ 1. 22%
 - ☐ 2. 19%
 - ☒ 3. 21%
 - ☐ 4. 20%

Q.20 A number is first increased by 60% and then decreased by 20%. The result is 192. What is the original number?

- Ans
- ☐ 1. 140
 - ☐ 2. 160
 - ☒ 3. 150
 - ☐ 4. 130

Section : **Arithmetical and Numerical Ability1**

Q.1 Pipe A can fill a tank in 20 minutes, while Pipe B can fill the same tank in 30 minutes. If both pipes are opened together, how long (in minutes) will it take to fill the tank?

- Ans
- ☐ 1. 10
 - ☐ 2. 11
 - ☐ 3. 13
 - ☒ 4. 12

Q.2 A bus has a speed of 54 km/h when running without stoppages, and its effective speed reduces to 45 km/h when stoppages are included. Find the total time (in minutes) the bus stops in one hour.

- Ans**
- ☐ 1. 15 min
 - ☐ 2. 12 min
 - ☐ 3. 9 min
 - ☒ 4. 10 min

Q.3 A, B, and C can complete a work together in 5 days. If A alone can complete it in 10 days and B alone in 15 days, how many days will C alone take to finish the work?

- Ans**
- ☐ 1. 10 days
 - ☐ 2. 20 days
 - ☒ 3. 30 days
 - ☐ 4. 15 days

Q.4 A can finish a work in 16 days, and B can do the same work in eight days. With the help of C, they completed the work in four days. In how many days can C alone do the same work?

- Ans**
- ☒ 1. 16
 - ☐ 2. 17
 - ☐ 3. 14
 - ☐ 4. 15

Q.5 A gadget is listed at ₹9,200 in an online store. During a sale, the store gives a 10% festival discount, followed by a 5% special coupon discount. What is the final price the customer pays (in ₹)?

- Ans**
- ☐ 1. 7,920
 - ☒ 2. 7,866
 - ☐ 3. 7,900
 - ☐ 4. 7,850

Q.6 A person travels one-third distance at 20 km/hr and rest at 40 km/hr. Find the average speed.

- Ans**
- ☐ 1. 32 km/hr
 - ☐ 2. 34 km/hr
 - ☒ 3. 30 km/hr
 - ☐ 4. 36 km/hr

Q.7 Three numbers are in the ratio 4 : 5 : 6. If the difference between the largest and the smallest numbers is 30, what is the sum of all the three numbers?

- Ans**
- ☒ 1. 225
 - ☐ 2. 210
 - ☐ 3. 240
 - ☐ 4. 235

Q.8 A farmer buys 240 cows. He sells some of them at a gain of 20% and remaining at a gain of 30%. If he gains 28% on the whole, then how many did he sell at a gain of 20%

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- Ans**
- ☒ 1. 48
 - ☐ 2. 53
 - ☐ 3. 40
 - ☐ 4. 54

Q.9 A traveler covers a journey in three successive parts: 2 hours at 40 km/h, 3 hours at 60 km/h, and 1 hour at 80 km/h. Calculate the overall average speed for the entire journey. (Round your answer to two decimal places)

- Ans ☒ 1. 56.67 km/h
☐ 2. 66.67 km/h
☐ 3. 56.33 km/h
☐ 4. 76.67 km/h

Q.10 The radius and slant height of a solid right circular cone are 35 cm and Find the curved surface area of the cone. (Take $\pi = \frac{22}{7}$)

- Ans ☐ 1. 4170 cm²
☐ 2. 3910 cm²
☐ 3. 4110 cm²
☒ 4. 4070 cm²

Q.11 A shopkeeper purchased two varieties of dal, $20\frac{1}{4}$ kg at ₹18 per kg and $89\frac{3}{4}$ kg at ₹38 per kg. The shopkeeper being greedy, mixed the two varieties of dal and sold the mixture at a gain of 10%. Find the per kg selling price of the mixture. 13

- Ans ☐ 1. ₹35.50
☐ 2. ₹42.25
☒ 3. ₹37.75
☐ 4. ₹45.75

Q.12 A mobile phone is marked at ₹24,500. The shopkeeper offers a straight discount of 12% on it. Find the final selling price of the mobile phone.

- Ans ☐ 1. ₹22,400
☐ 2. ₹21,000
☒ 3. ₹21,560
☐ 4. ₹22,050

Q.13 If the mean proportional between two numbers is 12 and one number is 8, what is the other number?

- Ans ☐ 1. 32
☐ 2. 6
☒ 3. 18
☐ 4. 24

Q.14 A car travels 60 km at 30 km/h and the next 60 km at 60 km/h. What is the average speed of the car for the entire journey?

- Ans ☐ 1. 50 km/h
☐ 2. 45 km/h
☐ 3. 55 km/h
☒ 4. 40 km/h

Q.15 A metal sheet 27 cm long, 8 cm broad, and 1 cm thick is melted into a cube. The difference between the surface areas of the two solids is:

- Ans ☒ 1. 286 cm²
☐ 2. 266 cm²
☐ 3. 246 cm²
☐ 4. 306 cm²

Q.18 Which of the following is an eating disorder characterized by regular bouts of overeating followed by self-induced vomiting, associated with excessive concern about body weight?

- Ans**
- ☐ 1. Dystonia
 - ☒ 2. Bulimia
 - ☐ 3. Ataxia
 - ☐ 4. Myasthenia

Q.19 Which of the following compounds is commonly found in tea that acts as a mild stimulant and can have diuretic effects?

- Ans**
- ☐ 1. Atropine
 - ☒ 2. Theobromine
 - ☐ 3. Solanine
 - ☐ 4. Capsaicin

Q.20 Which among the following rivers is called the 'Sorrow of Bihar' due to frequent floods and shifting of river courses?

- Ans**
- ☐ 1. Ganga
 - ☒ 2. Kosi
 - ☐ 3. Son
 - ☐ 4. Gandak

Section : **Arithmetical and Numerical Ability**

Q.1 An investment of ₹62,000 decreased by 10% in the first year and increased by 12% in the second year. What was the value of the investment at the end of the two-year period?

- Ans**
- ☐ 1. ₹63,696
 - ☐ 2. ₹61,496
 - ☐ 3. ₹62,486
 - ☒ 4. ₹62,496

Q.2 The price of a laptop increases by 25% in January and again by 20% in February. What is the overall percentage increase?

- Ans**
- ☐ 1. 60%
 - ☐ 2. 55%
 - ☒ 3. 50%
 - ☐ 4. 45%

Q.3 A number is first increased by 40% and then decreased by 5%. The result is 133. What is the original number?

- Ans**
- ☐ 1. 90
 - ☒ 2. 100
 - ☐ 3. 110
 - ☐ 4. 120

Q.4 In what ratio must a grocer mix two varieties of pulses costing ₹75 per kg and ₹105 per kg to obtain a mixture worth ₹85 per kg?

- Ans**
- ☒ 1. 2:1
 - ☐ 2. 3:2
 - ☐ 3. 4:3
 - ☐ 4. 1:2

Q.5 At what rate of interest per annum will a certain sum of money become 47 times its original value in 2 years, if the interest is compounded annually? (Rounded off to one decimal place)

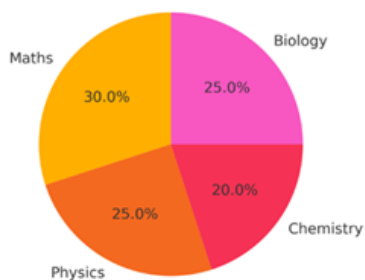
- Ans
- ☐ 1. 578.2%
 - ☐ 2. 594.4%
 - ☐ 3. 589.9%
 - ☒ 4. 585.6%

Q.6 Evaluate: $\frac{1}{\left(\frac{2}{3}\right) + \left(\frac{7}{9}\right)} \div \frac{4}{14}$

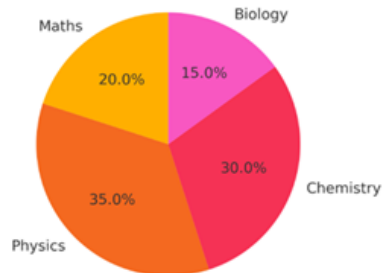
- Ans
- ☐ 1. $2\frac{5}{13}$
 - ☐ 2. $2\frac{4}{13}$
 - ☒ 3. $2\frac{11}{26}$
 - ☐ 4. $2\frac{9}{26}$

Q.7 The pie charts below show the distribution of students in two classes (A and B) across different subjects. Study the pie charts and answer the question.

Distribution of Students in Class A



Distribution of Students in Class B



Class A has 200 students and Class B has 300 students. What is the difference in the number of students studying Maths in the two classes?

- Ans
- ☐ 1. 40
 - ☐ 2. 25
 - ☒ 3. 0
 - ☐ 4. 10

Q.8

Evaluate: $\frac{1}{\left(\frac{7}{8}\right) + \left(\frac{5}{7}\right)} \div \frac{7}{19}$

Ans

✓ 1. $1\frac{63}{89}$

✗ 2. $1\frac{65}{89}$

✗ 3. $1\frac{62}{89}$

✗ 4. $1\frac{62}{91}$

Q.9 A trader lost 10% by selling a shirt for ₹900. If he gains x% by selling it for ₹1390, the value of x is:11670

Ans

✗ 1. 54

✗ 2. 49

✓ 3. 39

✗ 4. 29

Q.10 Find the simple interest (in ₹) on ₹1,800 at 3% per month for 2 months.

Ans

✗ 1. 9

✓ 2. 108

✗ 3. 18

✗ 4. 27

Q.11 A sum of ₹770000 is invested for 1 year at 2% per annum, compounded half-yearly. What is the compound interest earned at the end of the year?

Ans

✓ 1. ₹15477

✗ 2. ₹16044

✗ 3. ₹13849

✗ 4. ₹16611

Q.12 By selling an article for ₹120, a man loses 40%. At what price (in ₹) should he sell it to gain 28%?11674

Ans

✗ 1. 276

✗ 2. 246

✓ 3. 256

✗ 4. 266

- Q.13** Study the given table and answer the question that follows.
The table shows the production of rice (in million tonnes) in three states over five years.

States	Years				
	2018	2019	2020	2021	2022
P	6.3	5.8	7.1	5.6	3.4
Q	5.7	3.4	4.2	3.5	3.9
R	4.8	3.9	4.7	6.9	5.7

What is the average production of rice in state R over the years (in million tonnes)?

580

- Ans** ☒ 1. 5.2
☐ 2. 3.9
☐ 3. 4.8
☐ 4. 5.7
- Q.14** A number is first increased by 80% and then decreased by 25%. The result is 135. What is the original number?
- Ans** ☐ 1. 120
☐ 2. 90
☐ 3. 110
☒ 4. 100
- Q.15** Seven years ago from now, the average age of A, B and C was 43 years. After seven years from now, the average age of A and C will be 41 years. What will be the age (in years) of B, after six years from now?
- Ans** ☒ 1. 88
☐ 2. 89
☐ 3. 90
☐ 4. 93
- Q.16** Nine years ago from now, the average age of A, B and C was 19 years. After nine years from now, the average age of A and C will be 33 years. What will be the age (in years) of B, after five years from now?
- Ans** ☐ 1. 45
☐ 2. 40
☒ 3. 41
☐ 4. 39
- Q.17** If $X - 34 = 5 \times \sqrt{8 + \sqrt{1 + 27 \times 29}}$, then the value of $\sqrt{X}$ is:³⁰⁷²
- Ans** ☐ 1. 10
☐ 2. 5
☐ 3. 1
☒ 4. 8
- Q.18** Find the average of the following numbers.
12, 24, 36, 42, 52, 63, 75 and 56
- Ans** ☐ 1. 42
☐ 2. 43
☒ 3. 45
☐ 4. 48

Q.19 The difference between the compound interest (compounded annually) and simple interest on a certain principal for 2 years at 5% per annum is ₹25. Determine the value of the principal.

- Ans**
- ☒ 1. ₹10,000
 - ☐ 2. ₹12,000
 - ☐ 3. ₹8,000
 - ☐ 4. ₹9,000

Q.20 Find the HCF of 12, 44 and 68.7188

- Ans**
- ☐ 1. 3
 - ☐ 2. 6
 - ☒ 3. 4
 - ☐ 4. 2

Section : **Arithmetical and Numerical Ability1**

Q.1 The profit made on a product is 31%. What is the loss percentage (rounded off to two decimal places) incurred on the sale if the figures of both cost price and selling price are interchanged?

- Ans**
- ☐ 1. 21.84%
 - ☐ 2. 23.64%
 - ☒ 3. 23.66%
 - ☐ 4. 25.42%

Q.2 A retailer sets the marked price of a shirt at ₹1,200 and offers a discount of 20% on the marked price. What is the selling price of the shirt?

- Ans**
- ☒ 1. ₹960
 - ☐ 2. ₹840
 - ☐ 3. ₹980
 - ☐ 4. ₹890

Q.3 Let x be the fourth proportional to 0.6, 1.5, and 3.4. Let y be the fourth proportional to 5, 8, and 25. Find the final price of an item initially costing ₹ $(15x + 4y)$ after it is increased by 20%.

- Ans**
- ☐ 1. ₹ 315
 - ☐ 2. ₹ 385
 - ☐ 3. ₹ 360
 - ☒ 4. ₹ 345

Q.4 A cone has radius r units and height h units. If the radius is reduced to $r/2$ units and the height is doubled to $2h$ units, find the ratio of the new volume to the original volume.

- Ans**
- ☐ 1. 2:1
 - ☐ 2. 1:4
 - ☒ 3. 1:2
 - ☐ 4. 1:1

Q.5 An electric pump can fill a tank in 5 hours. Because of a leak in the tank, it takes 15 hours to fill. How much time (in hours) will the leak take to empty it?

- Ans
- ☐ 1. 10
 - ☐ 2. 12
 - ☒ 3. 15
 - ☐ 4. 16

Q.6 A group consisting of 2 men and 3 boys can complete a piece of work in 10 days, while another group of 3 men and 2 boys can finish the same work in 8 days. How many days will it take for 2 men and 1 boy to complete the same work?

- Ans
- ☐ 1. 13 days
 - ☐ 2. 10 days
 - ☐ 3. 11.5 days
 - ☒ 4. 12.5 days

Q.7 At a startup, team members A, B, and C can complete a software module in 10 days when working together. C alone can complete the same task in 20 days, and A alone can complete it in 40 days. After working together for 4 days, B leaves the team. How many more days will A and C take to finish the remaining work?

- Ans
- ☐ 1. 7 days
 - ☐ 2. 6 days
 - ☒ 3. 8 days
 - ☐ 4. 5 days

Q.8 A and B together have ₹7,200 in the ratio 7 : 5. A gives one-seventh of his money to B, and then B gives one-fifth of his money to A. What is the new ratio of A's money to B's money?

- Ans
- ☐ 1. 4 : 3
 - ☒ 2. 3 : 2
 - ☐ 3. 3 : 4
 - ☐ 4. 2 : 3

Q.9 The ratio of incomes of A and B is 4 : 5. The ratio of their expenditures is 3 : 4. Both save ₹2000 each. What is the income of B?

- Ans
- ☐ 1. ₹9000
 - ☐ 2. ₹12000
 - ☐ 3. ₹8000
 - ☒ 4. ₹10000

Q.10 The perimeter of a parallelogram is 200 cm, and one of its sides is 60 cm. If one of its diagonals measures 80 cm, then the area of this parallelogram (in cm^2) is:

- Ans
- ☐ 1. $625\sqrt{15}$
 - ☒ 2. $600\sqrt{15}$
 - ☐ 3. $580\sqrt{15}$
 - ☐ 4. $550\sqrt{15}$

Q.11 An electric ride-share car travels half of its journey at a speed of 90 km/h due to light traffic, and the remaining half at 45 km/h during congestion. What is the average speed for the entire trip?

- Ans**
- ☐ 1. 62.5 km/h
 - ☒ 2. 60 km/h
 - ☐ 3. 65 km/h
 - ☐ 4. 64.25 km/h

Q.12 A car travels at a uniform speed of 72 km/hr. Find the distance it will cover in 45 seconds.

- Ans**
- ☐ 1. 1,000 meters
 - ☐ 2. 1,200 meters
 - ☒ 3. 900 meters
 - ☐ 4. 800 meters

Q.13 If the surface area of a hollow sphere with external radius R and internal radius r is S , which expression correctly represents S ?

- Ans**
- ☒ 1. $4\pi(R^2 + r^2)$
 - ☐ 2. $4\pi(R^2 - r^2)$
 - ☐ 3. $2\pi(R^2 - r^2)$
 - ☐ 4. $2\pi(R^2 + r^2)$

Q.14 If three workers can complete a task in six days, and a fourth worker can complete the same task alone in 12 days, how long will it take for all four to complete the task together?

- Ans**
- ☐ 1. 3 days
 - ☐ 2. 5 days
 - ☐ 3. 4.5 days
 - ☒ 4. 4 days

Q.15 A car travels a total distance of 240 km from City A to City B. For the first 90 km, it moves at 60 km/h. For the next 90 km, it moves at 45 km/h. For the remaining distance, it moves at 40 km/h. It also takes a 1-hour break during the trip. What is the average speed of the car for the whole journey including the break?

- Ans**
- ☐ 1. 35 km/h
 - ☐ 2. 45 km/h
 - ☐ 3. 50 km/h
 - ☒ 4. 40 km/h

Q.16 A boat goes 40 km upstream and 60 km downstream in 13 hours. It goes 50 km upstream and 72 km downstream in 16 hours. Find the speed of the boat in still water.

- Ans**
- ☐ 1. 6.5 km/hr
 - ☐ 2. 7.5 km/hr
 - ☐ 3. 9.5 km/hr
 - ☒ 4. 8.5 km/hr

Q.17 The profit made on a product is 8%. What is the loss percentage (rounded off to two decimal places) incurred on the sale if the figures of both cost price and selling price are interchanged?

- Ans**
- ☒ 1. 7.41%
 - ☐ 2. 7.93%
 - ☐ 3. 10.21%
 - ☐ 4. 9.69%

Q.19 Which of the following Writs can be used when an illegal usurpation of a Public office by a person is done?

- Ans
- ☐ 1. Prohibition
 - ☐ 2. Injunction
 - ☐ 3. Mandamus
 - ☒ 4. Quo Warranto

Q.20 Repeated heating of the same oil during cooking leads to which of the following?

- Ans
- ☐ 1. Increase in vitamin content in the oil
 - ☐ 2. Conversion of oil into saturated fat
 - ☒ 3. Formation of harmful compounds in the oil
 - ☐ 4. Conversion of oil into carbohydrates

Section : Arithmetical and Numerical Ability

Q.1 By selling an article for ₹120, a man loses 40%. At what price (in ₹) should he sell it to gain 18%?

- Ans
- ☐ 1. 226
 - ☐ 2. 256
 - ☐ 3. 246
 - ☒ 4. 236

Q.2 A trader lost 10% by selling a shirt for ₹900. If he gains $x\%$ by selling it for ₹1,460, the value of x is: 11663

- Ans
- ☐ 1. 61
 - ☐ 2. 36
 - ☐ 3. 56
 - ☒ 4. 46

Q.3 Find the amount on the principal of ₹8,000 at 12% per annum, compounded half-yearly for 1 year.

- Ans
- ☐ 1. ₹8,976.70
 - ☐ 2. ₹8,868.60
 - ☒ 3. ₹8,988.80
 - ☐ 4. ₹8,872.90

Q.4 The cost of an article is increased by 6% and later the increased cost is decreased by 4%. If the initial cost of the article is ₹6,783, find its latest price. (Round off your answer to the nearest rupee.)

- Ans
- ☒ 1. ₹6,902
 - ☐ 2. ₹6,900
 - ☐ 3. ₹6,890
 - ☐ 4. ₹6,899

Q.5 The prices of four commodities A, B, C and D are ₹25, ₹20, ₹50, ₹5. If the weights associated with the commodities are 20, 25, 15 and 40 respectively, then find the weighted average price of the commodities.

- Ans
- ☐ 1. ₹22.00
 - ☐ 2. ₹20.50
 - ☐ 3. ₹20.00
 - ☒ 4. ₹19.50

Q.6 Find the simple interest (in ₹) on ₹1,800 at 3% per month for 3 months.

- Ans**
- ☒ 1. 162
 - ☐ 2. 27
 - ☐ 3. 13.50
 - ☐ 4. 33.50

Q.7 A student reduced the number 50 to 45. Calculate the percentage decrease.

- Ans**
- ☒ 1. 10%
 - ☐ 2. 5%
 - ☐ 3. 20%
 - ☐ 4. 15%

Q.8 The product of two numbers is 29645 and their H.C.F is 77. Find their L.C.M.

- Ans**
- ☐ 1. 375
 - ☐ 2. 390
 - ☐ 3. 382
 - ☒ 4. 385

Q.9 At what rate of interest per annum will a certain sum of money become 96 times its original value in 2 years, if the interest is compounded annually? (Rounded off to one decimal place)

- Ans**
- ☐ 1. 882.9%
 - ☐ 2. 873.2%
 - ☐ 3. 869.1%
 - ☒ 4. 879.8%

Q.10 Find the value of y , satisfying $20 \times 3 \times 504 \div \sqrt{3136} = y + 504$

- Ans**
- ☐ 1. 29
 - ☐ 2. 31
 - ☒ 3. 36
 - ☐ 4. 38

Q.11 The current population of a town is 10,500. It increases by 50% in the first year and 20% in the second year, but decreases by 24% in the third year. What will be the population of the town at the end of the third year?

- Ans**
- ☒ 1. 14,364
 - ☐ 2. 14,366
 - ☐ 3. 14,354
 - ☐ 4. 14,369

Q.12 Seven years ago from now, the average age of A, B and C was 64 years. After seven years from now, the average age of A and C will be 82 years. What will be the age (in years) of B, after eight years from now?

- Ans**
- ☐ 1. 68
 - ☐ 2. 66
 - ☐ 3. 75
 - ☒ 4. 71

Q.13 Study the following table and answer the question below.

Month	Product A	Product B
January	120	150
February	100	160
March	140	130
April	130	170
May	150	140

Which product showed a consistent month-on-month increase in sales from February to May?

- Ans
- ☒ 1. Product C
 - ☐ 2. Product A
 - ☐ 3. Product B
 - ☐ 4. Product A and B both

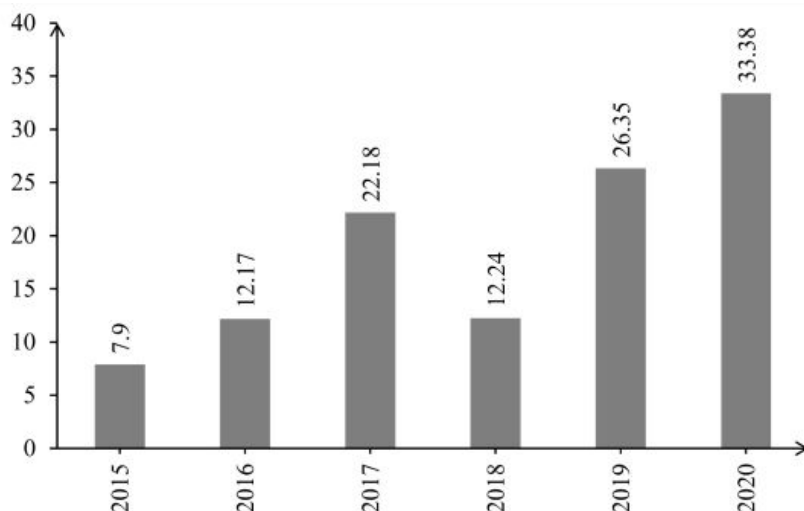
Q.14 Find the average of squares of consecutive odd numbers from 1 to 37.

- Ans
- ☐ 1. 741
 - ☐ 2. 950
 - ☒ 3. 481
 - ☐ 4. 494

Q.15 Atul's sales increased by 12% in the first year and by 22% in the second year. If his current sales are ₹1,50,304, what were his sales (in ₹) two years ago?

- Ans
- ☐ 1. 1,12,960
 - ☐ 2. 1,18,000
 - ☒ 3. 1,10,000
 - ☐ 4. 1,15,000

Q.16 Study the bar diagram carefully and answer the question. The bar diagram shows the trends of foreign direct investment (FDI) into India from all over the world (in ₹ crores).



Find the sum of FDI (in ₹ crores) of 2015 and 2016.

- Ans
- ☐ 1. 18.07
 - ☐ 2. 22.07
 - ☐ 3. 24.07
 - ☒ 4. 20.07

Q.17 A merchant mixes 5 kg of rice priced at ₹40 per kg with 3 kg of rice priced at ₹50 per kg. What is the average cost per kg of the mixture?

- Ans ☒ 1. ₹43.75
☐ 2. ₹42.50
☐ 3. ₹45.00
☐ 4. ₹47.50

Q.18 A sum of ₹1,90,000 is invested for 1 year at 10% per annum, compounded half yearly. What is the compound interest earned at the end of the year?

- Ans ☒ 1. ₹19,475
☐ 2. ₹18,701
☐ 3. ₹18,708
☐ 4. ₹20,642

Q.19 The LCM of $4^3 \times 8^2 \times 10$, $4^2 \times 10^2 \times 16$ and $8^3 \times 10^2 \times 16^2$ is:

- Ans ☐ 1. 218×52
☐ 2. 217×52
☒ 3. 219×52
☐ 4. 216×52

Q.20 The product of two numbers is 5292 and their H.C.F. is 21. The number of such pairs is:

- Ans ☐ 1. 1
☐ 2. 4
☐ 3. 3
☒ 4. 2

Section : **Arithmetical and Numerical Ability1**

Q.1 If the radius of a sphere is doubled, by what factor does its surface area increase?

- Ans ☐ 1. 16
☐ 2. 8
☐ 3. 2
☒ 4. 4

Q.2 Reya purchased two watches for ₹3,500 each. She sold these watches, losing 4% on one and gaining 3% on the other. Find her gain or loss percentage in the whole transaction.¹⁶

- Ans ☐ 1. 0.7% gain
☒ 2. 0.5% loss
☐ 3. 0.9% loss
☐ 4. 0.6% gain

Q.3 A solid cylinder has a base radius of 14 cm and a height of 20 cm. If its radius is increased by 50% and its height is decreased by 25%, find the absolute difference between the total surface areas of the original and the new cylinders.

$\left(\text{Use } \pi = \frac{22}{7} \right)$

- Ans ☐ 1. 1,848 square cm
☐ 2. 1,540 square cm
☐ 3. 2,112 square cm
☒ 4. 1,760 square cm

Q.4 A cube-shaped wooden box has side 0.5 m. Find the cost of painting all faces at ₹20 per m².

- Ans**
- ☒ 1. ₹30
 - ☐ 2. ₹25
 - ☐ 3. ₹60
 - ☐ 4. ₹70

Q.5 A person jogs 30 km at 15 km/h, 70 km at 35 km/h, and 100 km at 25 km/h. What is their average speed for the entire trip?

- Ans**
- ☐ 1. 24 km/h
 - ☒ 2. 25 km/h
 - ☐ 3. 28 km/h
 - ☐ 4. 22 km/h

Q.6 A stationary shop offers "Buy 3 Get 1 Free" scheme on pens costing ₹48 each. Find the effective discount percentage.

- Ans**
- ☐ 1. 29%
 - ☒ 2. 25%
 - ☐ 3. 23%
 - ☐ 4. 20%

Q.7 The percentage profit earned by selling an article for ₹3,170 is equal to the percentage loss incurred by selling the same article for ₹2,430. At what price should the article be sold to make a 15% profit?

- Ans**
- ☐ 1. ₹5,600
 - ☐ 2. ₹2,800
 - ☐ 3. ₹4,360
 - ☒ 4. ₹3,220

Q.8 There are two pipes that can fill a tank together in 15 minutes. If one pipe fills the tank one and a half times as fast as the other, how long (in minutes) will it take for the faster pipe alone to fill the tank?

- Ans**
- ☐ 1. 21
 - ☐ 2. 27
 - ☒ 3. 25
 - ☐ 4. 30

Q.9 A local retail shop offers a special deal where customers get 2 items free for every 3 items they purchase. What is the total discount percentage offered under this deal?

- Ans**
- ☐ 1. 20%
 - ☒ 2. 40%
 - ☐ 3. 60%
 - ☐ 4. 50%

Q.10 In a team, the ratio of managers to engineers to assistants is 2 : 5 : 3. The number of engineers is increased by 20% and the number of assistants is decreased by 10%. If the new number of assistants is 54, find the combined number of engineers and managers in the initial team.

- Ans**
- ☐ 1. 90
 - ☐ 2. 110
 - ☒ 3. 140
 - ☐ 4. 120

Q.11 A cistern has two inlet pipes that can fill it completely in 15 minutes and 20 minutes and an outlet pipe that can empty it in 30 minutes. If all the pipes are opened together, in how much time will the cistern be filled?

- Ans**
- ☐ 1. 18 minutes
 - ☒ 2. 12 minutes
 - ☐ 3. 20 minutes
 - ☐ 4. 15 minutes

Q.12 6 men can complete a piece of work in 10 days while 3 women can do it in 12 days. In how many days can 6 women and 5 men complete it?

- Ans**
- ☐ 1. 2 days
 - ☐ 2. 5 days
 - ☐ 3. 7 days
 - ☒ 4. 4 days

Q.13 Find the fourth proportional to x^2 , xy and y^2 .

- Ans**
- ☒ 1. $\frac{y^3}{x}$
 - ☐ 2. xy^2
 - ☐ 3. y^3
 - ☐ 4. $\frac{x^2}{y}$

Q.14 What is the mean proportional between 9 and 16?

- Ans**
- ☐ 1. 10
 - ☐ 2. 11
 - ☒ 3. 12
 - ☐ 4. 14

Q.15 Two inlet pipes, P and Q, and one outlet pipe, R, are connected to a cistern. P and Q together fill the cistern in 6 hours. If only P and R are open, then the full cistern is emptied in 8 hours. If only Q and R are open, then the full cistern is emptied in 12 hours. How long will pipe P take to fill the empty cistern alone?

- Ans**
- ☐ 1. 15 hours
 - ☐ 2. 20 hours
 - ☐ 3. 12 hours
 - ☒ 4. 16 hours

Q.16 Two numbers are in the ratio 4 : 7. If their sum is 66, what is the larger number?

- Ans**
- ☐ 1. 49
 - ☒ 2. 42
 - ☐ 3. 56
 - ☐ 4. 40

Q.17 A person covers $\frac{1}{4}$ th of his total journey at 30 km/hr, one-third of his total journey at 40 km/hr, and the remaining distance at 50 km/hr. Find his average speed for the entire journey.

- Ans**
- ☐ 1. 42 km/hr
 - ☐ 2. 38 km/hr
 - ☐ 3. 45 km/hr
 - ☒ 4. 40 km/hr

Q.14 Which mechanism in the Indian Constitution allows citizens to directly approach the courts for the enforcement of their fundamental rights?

- Ans**
- ✓ 1. Right to constitutional remedies
 - ✗ 2. National Human Rights Commission
 - ✗ 3. Writ of prohibition
 - ✗ 4. National Commission for Women

Q.15 Which of the following monument–architectural style pairs is INCORRECTLY matched?

- Ans**
- ✓ 1. Sun Temple Konark – Dravida Style
 - ✗ 2. Khajuraho Temple – Nagara Style
 - ✗ 3. Lingaraja Temple – Deula Style
 - ✗ 4. Brihadeshwara Temple – Dravida Style

Q.16 The Gaan-Ngai festival, a post-harvest celebration in Manipur, is associated with which of the following tribes?

- Ans**
- ✗ 1. Dhuria
 - ✗ 2. Purigpa
 - ✗ 3. Gadwa
 - ✓ 4. Zeliangrong

Q.17 In the human nervous system, what is meant by a nerve impulse?

- Ans**
- ✗ 1. A release of chemical substances into the bloodstream
 - ✗ 2. A structural junction formed between two neurons
 - ✗ 3. A contraction of muscle fibres during movement
 - ✓ 4. A wave of electrical disturbance traveling along a neuron

Q.18 Which of the following is not listed as one of the 6 Fundamental Rights guaranteed to Indian citizens?

- Ans**
- ✗ 1. Right to Constitutional Remedies
 - ✗ 2. Right against Exploitation
 - ✗ 3. Right to Equality
 - ✓ 4. Right to Property

Q.19 Which pair of processes is responsible for converting genetic information in DNA into proteins in cells?

- Ans**
- ✓ 1. Transcription and translation
 - ✗ 2. Replication and methylation
 - ✗ 3. Polyadenylation and capping
 - ✗ 4. Replication and polyadenylation

Q.20 In early Buddhist sculptures, which symbol meant to indicate the meditation of the Buddha?

- Ans**
- ✓ 1. Empty seat
 - ✗ 2. Tree
 - ✗ 3. Stupa
 - ✗ 4. Wheel

Q.1 A number is first increased by 5% and then decreased by 10%. The result is 10395. What is the original number?

- Ans
- ☒ 1. 11000
 - ☐ 2. 11100
 - ☐ 3. 11300
 - ☐ 4. 11200

Q.2 A trader lost 10% by selling a shirt for ₹900. If he gains x% by selling it for ₹1,450, the value of x is:11664

- Ans
- ☐ 1. 60
 - ☐ 2. 55
 - ☐ 3. 35
 - ☒ 4. 45

Q.3 The simplified value of $209 - 2 \times (23 + 13) + 47$ is:

- Ans
- ☐ 1. 180
 - ☐ 2. 178
 - ☒ 3. 184
 - ☐ 4. 176

Q.4 Which of the following numbers is divisible by 95?

- Ans
- ☐ 1. 573065
 - ☐ 2. 573593
 - ☐ 3. 577403
 - ☒ 4. 574940

Q.5 The fraction equivalent to 1.0909... is:

- Ans
- ☐ 1. $\frac{17}{5}$
 - ☐ 2. $\frac{7}{15}$
 - ☒ 3. $\frac{12}{11}$
 - ☐ 4. $\frac{13}{20}$

Q.6 Find the simplified value of $\frac{(3^4 \times 5^3 \times 5^5)}{(3^1 \times 5^3 \times 5^2)}$

3157

- Ans
- ☒ 1. 3375
 - ☐ 2. 3384
 - ☐ 3. 3376
 - ☐ 4. 3381

Q.7 At what rate of interest per annum will a certain sum of money become 95 times its original value in 2 years, if the interest is compounded annually? (Rounded off to one decimal place)

- Ans**
- ☐ 1. 883.5%
 - ☐ 2. 882.4%
 - ☒ 3. 874.7%
 - ☐ 4. 881.5%

Q.8 A manufacturer sells a product to a wholesaler at a profit of 25%. The wholesaler, in turn, sells it to a retailer at a profit of 25%, and the retailer sells it to a customer at a profit of 34%. If the customer pays ₹402, find the cost price (in ₹) for the manufacturer.

- Ans**
- ☐ 1. 189
 - ☒ 2. 192
 - ☐ 3. 194
 - ☐ 4. 191

Q.9 Ajit's monthly income is ₹12,800, and his monthly expenditure is ₹4,000. If his income decreases by 25% and his expenditure decreases by ₹1,000, find the change in his monthly savings.

- Ans**
- ☐ 1. Increased by ₹2,000
 - ☒ 2. Decreased by ₹2,200
 - ☐ 3. Increased by ₹2,200
 - ☐ 4. Decreased by ₹2,000

Q.10 A sum of ₹34,100 is deposited at a rate of 8% per annum for 2 years. Find the difference (in ₹) between the compound interest (compounded annually) and the simple interest.

- Ans**
- ☐ 1. ₹254.30
 - ☐ 2. ₹224.44
 - ☐ 3. ₹210.10
 - ☒ 4. ₹218.24

Q.11 A technician blends 12 litres of a 25% alcohol solution with 18 litres of a 40% alcohol solution. What is the concentration of alcohol in the final mixture?

- Ans**
- ☐ 1. 40%
 - ☐ 2. 36%
 - ☒ 3. 34%
 - ☐ 4. 31%

Q.12 There are 30 members in group A, 40 members in group B, and 15 members in group C. All the members of these groups went to a restaurant. The average amount spent per member in groups A, B, and C is ₹298, ₹349, and ₹179 respectively. Find the overall average amount (in ₹) spent per member.

- Ans**
- ☐ 1. 296
 - ☐ 2. 302
 - ☒ 3. 301
 - ☐ 4. 303

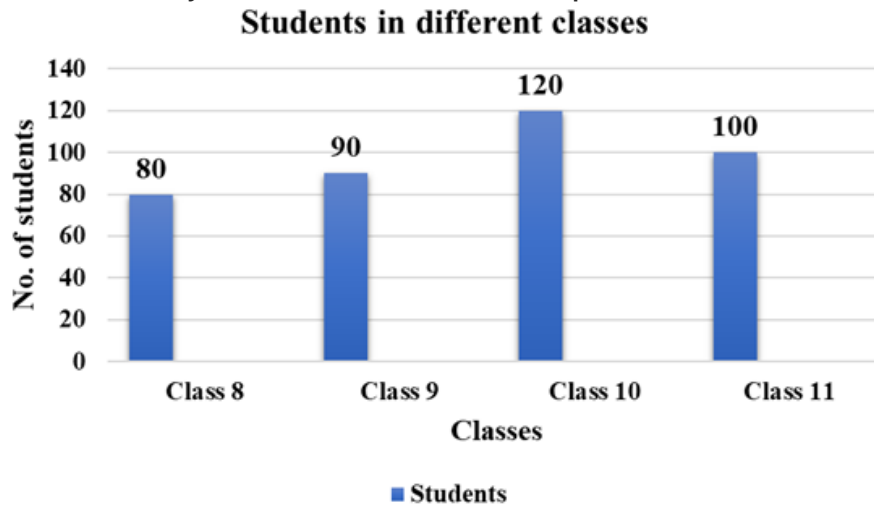
Q.13 The average of 8 results is 50 and that of the first 7 is 49. The 8th result is:

- Ans**
- ☐ 1. 49
 - ☐ 2. 56
 - ☒ 3. 57
 - ☐ 4. 50

Q.14 Arav's monthly income is ₹40,000. He spends 60% on household expenses, 20% on rent, and the rest is saved. How much does he save monthly?

- Ans
- ☐ 1. ₹6,000
 - ☐ 2. ₹12,000
 - ☒ 3. ₹8,000
 - ☐ 4. ₹10,000

Q.15 The given bar graph represents the number of students in different classes in a school. How many more students are in class 10 compared to class 8?



- Ans
- ☐ 1. 30 students
 - ☒ 2. 40 students
 - ☐ 3. 50 students
 - ☐ 4. 20 students

Q.16 Find the simple interest (in ₹) on ₹1,800 at 3% per month for 1 month.

- Ans
- ☐ 1. 9
 - ☒ 2. 54
 - ☐ 3. 4.50
 - ☐ 4. 24.50

Q.17 A class consists of 20 boys and 30 girls. The average score of the boys in a test is 65 and the average score of the girls is 80. Find the overall average score of the entire class.

- Ans
- ☒ 1. 74
 - ☐ 2. 71
 - ☐ 3. 72
 - ☐ 4. 73

Q.18 A bank offers 7.5% compound interest per annum, compounded half-yearly. A customer deposits ₹5,062 on 1 January and another ₹5,062 on 1 July of the same year. By the end of that year, what is the total interest earned?

(Use $(1.0375)^2 = 1.076$ and give your answer correct to two decimal places.)

- Ans
- ☐ 1. ₹596.59
 - ☐ 2. ₹578.62
 - ☒ 3. ₹574.54
 - ☐ 4. ₹573.95

Q.19 A number is first increased by 70% and then decreased by 20%. The result is 204. What is the original number?

- Ans**
- ☒ 1. 150
 - ☐ 2. 155
 - ☐ 3. 140
 - ☐ 4. 145

Q.20 The table below shows the number of books issued from a library in a week.

Day	Monday	Tuesday	Wednesday	Thursday	Friday
Books Issued	80	95	70	100	85

On which day was the number of books issued the least, and what is the difference between the highest and lowest number of books issued?

- Ans**
- ☐ 1. Tuesday, and 20
 - ☐ 2. Monday, and 25
 - ☒ 3. Wednesday, and 30
 - ☐ 4. Wednesday, and 35

Section : **Arithmetical and Numerical Ability1**

Q.1 Two machines can complete a task in 8 hours and 12 hours. If both machines work simultaneously, how long will it take to complete the task?

- Ans**
- ☐ 1. 4.2 hours
 - ☐ 2. 3.6 hours
 - ☒ 3. 4.8 hours
 - ☐ 4. 5.2 hours

Q.2 A vehicle travels 50 km in five parts of 10 km each. It covers the first 10 km at 50 km/h, and for each of the next 10 km, its speed becomes half of the previous segment's speed. After each segment, it stops for a 15-minute safety check. What is the total time taken for the whole journey?

- Ans**
- ☐ 1. 6 hours 12 minutes
 - ☒ 2. 7 hours 12 minutes
 - ☐ 3. 9 hours 24 minutes
 - ☐ 4. 8 hours 24 minutes

Q.3 Deepak marks the price of an article at 25% above its cost price. If he sells the article for ₹27,810 after allowing a discount of 20%, then what was the cost price (in ₹) of the article?

- Ans**
- ☒ 1. 27,810
 - ☐ 2. 27,840
 - ☐ 3. 27,820
 - ☐ 4. 27,830

Q.4 Two trains of lengths 120 m and 180 m are running in opposite directions at speeds of 40 km/h and 60 km/h. How long will they take to cross each other?

- Ans**
- ☒ 1. 10.8 seconds
 - ☐ 2. 12.6 seconds
 - ☐ 3. 8.4 seconds
 - ☐ 4. 14.4 seconds

Q.5 A cuboidal water tank has internal dimensions of $2.5 \text{ m} \times 1.6 \text{ m} \times 1.2 \text{ m}$. Due to leakage, 10% of the water is lost after filling the tank completely. How much water remains in the tank (rounded off to two decimal places)?

- Ans**
- ☐ 1. 5.24 m³
 - ☐ 2. 5.12 m³
 - ☒ 3. 4.32 m³
 - ☐ 4. 3.24 m³

Q.6 Ramesh covers a distance of 400 km. He travels the first 100 km at 50 km/h, the next 175 km at 25 km/h, and the last 125 km at 75 km/h. Find his average speed (in km/h) for the entire journey.

- Ans**
- ☐ 1. 36
 - ☐ 2. 37
 - ☐ 3. 36.5
 - ☒ 4. 37.5

Q.7 The radius of the base of a cone is 3.5 cm and its slant height is 10.5 cm. Find the total surface area of the cone. (Use $\pi = 22/7$)

- Ans**
- ☒ 1. 154 sq. cm.
 - ☐ 2. 144 sq. cm.
 - ☐ 3. 168 sq. cm.
 - ☐ 4. 164 sq. cm.

Q.8 Ram buys 50 chairs at ₹400 each. He sells 30 of them at a 15% profit and the remaining at a 10% loss. Calculate the overall profit or loss percentage.

- Ans**
- ☐ 1. 5.5% profit
 - ☐ 2. 4% loss
 - ☐ 3. 4.5% loss
 - ☒ 4. 5% profit

Q.9 Three pipes, A, B, and C, are connected to a tank. Pipe A fills the tank in 4 hours, pipe B fills it in 6 hours, and pipe C empties it in 12 hours. If all three are opened together, how long (in hours) will it take to fill half of the empty tank?

- Ans**
- ☐ 1. 2.1 hours
 - ☐ 2. 1.4 hours
 - ☐ 3. 2.2 hours
 - ☒ 4. 1.5 hours

Q.10 If a pipe can fill a tank in 10 hours and another pipe can empty the same tank in 15 hours, how long will it take to fill the tank if both pipes are opened together?

- Ans**
- ☐ 1. 26 hours
 - ☒ 2. 30 hours
 - ☐ 3. 32 hours
 - ☐ 4. 28 hours

Q.11 A book is marked at ₹940. It is sold at a discount of 12%. Find the selling price.

- Ans**
- ☐ 1. ₹857.40
 - ☒ 2. ₹827.20
 - ☐ 3. ₹817.30
 - ☐ 4. ₹847.60

Q.12 A fashion app lists a smartwatch at a marked price of ₹2,750. During a seasonal sale, the app offers a flat 12% discount. What is the selling price of the smartwatch (in ₹)?

- Ans
- ☐ 1. 2,600
 - ☐ 2. 2,530
 - ☐ 3. 2,350
 - ☒ 4. 2,420

Q.13 The data consumption of a video call is directly proportional to the time spent on the call. If 2 GB of data is consumed in 40 minutes, then how much data will be required for 60 minutes of continuous video calling?

- Ans
- ☒ 1. 3 GB
 - ☐ 2. 4 GB
 - ☐ 3. 3.5 GB
 - ☐ 4. 2.5 GB

Q.14 Two trains 170 m and 190 m in length, respectively, are running in opposite directions at a speed of 74 km/hr and the other at a speed of 70 km/h. In how much time will they completely cross each other from the moment they meet?

- Ans
- ☐ 1. 10 seconds
 - ☒ 2. 9 seconds
 - ☐ 3. 7 seconds
 - ☐ 4. 8 seconds

Q.15 A sphere has a radius of 5 cm. What is the volume of the sphere (in cubic centimeters), rounded off to two decimal places? (Use $\pi = 3.14$)

- Ans
- ☒ 1. 523.33
 - ☐ 2. 545.83
 - ☐ 3. 514.23
 - ☐ 4. 557.44

Q.16 Find the fourth proportional to the numbers 14, 21, and 30.

- Ans
- ☐ 1. 40
 - ☐ 2. 50
 - ☐ 3. 35
 - ☒ 4. 45

Q.17 Find the fourth proportional to $5x + 3$, $4x + 2$ and $4x$, if $x = 1$.

- Ans
- ☒ 1. 3
 - ☐ 2. 5
 - ☐ 3. 4
 - ☐ 4. 2

Q.18 In a 60-litre mixture, the ratio of water to alcohol is 7:3. Now, 10 litres of this mixture is removed and replaced with 10 litres of alcohol. Subsequently, a certain quantity of water is added to the new mixture until the ratio of water to alcohol becomes 3:2. Find the amount of water added.

- Ans
- ☐ 1. 3.5 litres
 - ☒ 2. 2.5 litres
 - ☐ 3. 2 litres
 - ☐ 4. 3 litres

Q.19 Which of the following phenomena results in alteration of DNA sequences and consequently, results in changes in the genotype and the phenotype of an organism?

- Ans
- ☐ 1. Gene shuffling
 - ☐ 2. Transposition
 - ☐ 3. Xenogenetic shift
 - ☒ 4. Mutation

Q.20 The Gram Sabha consists of which of the following ?

- Ans
- ☐ 1. Only elected representatives
 - ☐ 2. Village officials
 - ☒ 3. All adults of the village
 - ☐ 4. Only Sarpanch and Panchs

Section : **Arithmetical and Numerical Ability**

Q.1 A and B are two numbers, $A : B = 1 : 3$, $A \times B = 4107$, find the HC



- Ans
- ☐ 1. 17
 - ☐ 2. 35
 - ☐ 3. 19
 - ☒ 4. 37

Q.2 A sum of ₹890000 is invested for 1 year at 8% per annum, compounded half yearly. What is the compound interest earned at the end of the year?

- Ans
- ☒ 1. ₹72624
 - ☐ 2. ₹71042
 - ☐ 3. ₹71672
 - ☐ 4. ₹73448

Q.3 A manufacturer wants to prepare a 60 kg alloy costing ₹200 per kg by mixing Metal A priced at ₹175 per kg and Metal B priced at ₹235 per kg. How much of Metal A should be used in the mixture?

- Ans
- ☐ 1. 50 kg
 - ☐ 2. 25 kg
 - ☐ 3. 40 kg
 - ☒ 4. 35kg

Q.4 By selling an article for ₹120, a man loses 40%. At what price (in ₹) should he sell it to gain 25%?11676

- Ans
- ☒ 1. 250
 - ☐ 2. 260
 - ☐ 3. 270
 - ☐ 4. 240

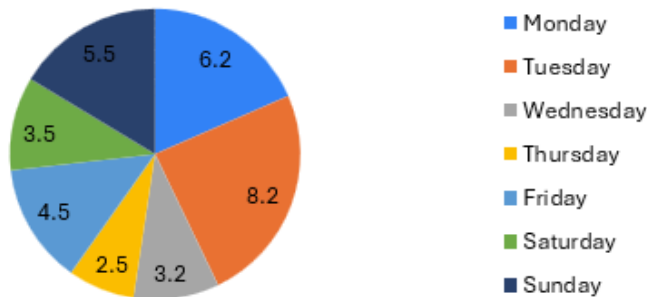
Q.5 Seven years ago from now, the average age of A, B and C was 50 years. After seven years from now, the average age of A and C will be 56 years. What will be the age (in years) of B, after seven years from now?

- Ans
- ☐ 1. 84
 - ☒ 2. 80
 - ☐ 3. 85
 - ☐ 4. 78

Q.6 Study the given pie chart and answer the question that follows.

The given pie chart shows the data of sales of a product (in lakh) on the different days of a week.

Sales of a product (in lakh) on different days of a week



Which three successive days occupy 31.25% of the area in the pie chart?

- Ans
- ☐ 1. Monday, Tuesday and Wednesday
 - ☐ 2. Tuesday, Wednesday and Thursday
 - ☐ 3. Wednesday, Thursday and Friday
 - ☒ 4. Thursday, Friday and Saturday

Q.7 An alloy contains zinc and copper in the ratio 5 : 3. If 20 kg of zinc is added, the ratio becomes 3 : 1. Find the initial quantity of copper.

- Ans
- ☒ 1. 15 kg
 - ☐ 2. 24 kg
 - ☐ 3. 18 kg
 - ☐ 4. 20 kg

Q.8 The current population of a town is 10,952. It increases by 50% in the first year and 25% in the second year, but decreases by 60% in the third year. What will be the population of the town at the end of the third year?

- Ans
- ☐ 1. 8212
 - ☒ 2. 8214
 - ☐ 3. 8209
 - ☐ 4. 8208

Q.9 By selling an article for ₹120, a man loses 40%. At what price (in ₹) should he sell it to gain 30%?11673

- Ans
- ☐ 1. 250
 - ☐ 2. 280
 - ☐ 3. 270
 - ☒ 4. 260

Q.10 Find the simplified value of $\frac{(5^5 \times 3^4 \times 6^3)}{(5^3 \times 3^1 \times 6^3)}$

3156

- Ans
- ☐ 1. 676
 - ☒ 2. 675
 - ☐ 3. 683
 - ☐ 4. 680

Q.11 Find the simple interest (in ₹) on ₹1,800 at 3% per month for 6 months.

Ans ☒ 1. 324

☐ 2. 47

☐ 3. 27

☐ 4. 54

Q.12 Mr. Kapoor's salary was increased by 10% in the first year and decreased by 10% in the second year. If his salary two years ago was ₹53,000, then what is his current salary?

Ans ☐ 1. ₹52,420

☒ 2. ₹52,470

☐ 3. ₹52,870

☐ 4. ₹52,490

Q.13 A number is first increased by 10% and then decreased by 20%. The result is 176. What is the original number?

Ans ☒ 1. 200

☐ 2. 210

☐ 3. 190

☐ 4. 180

Q.14 The LCM of $3^3 \times 7^2 \times 15$, $3^2 \times 15^2 \times 16$ and $7^3 \times 15^2 \times 16^2$ is:

Ans ☐ 1. $28 \times 35 \times 52 \times 73$

☒ 2. $28 \times 34 \times 52 \times 73$

☐ 3. $29 \times 34 \times 52 \times 73$

☐ 4. $28 \times 34 \times 52 \times 74$

Q.15 A sum of ₹640000 is invested for 1 year at 6% per annum compounded half yearly. What is the compound interest earned at the end of the year?

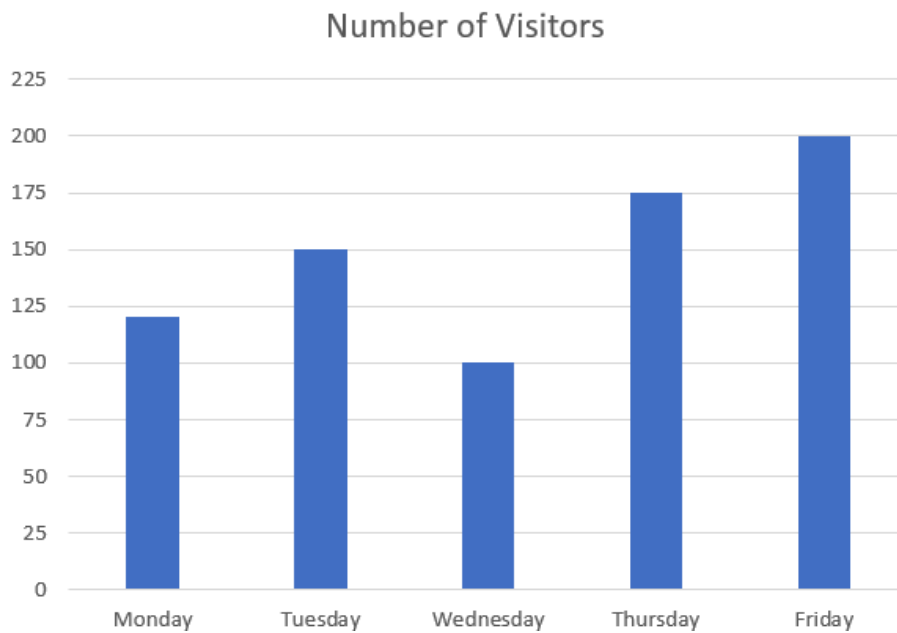
Ans ☐ 1. ₹38269

☐ 2. ₹39773

☒ 3. ₹38976

☐ 4. ₹38066

Q.16 The bar graph below shows the number of visitors to a Science Exhibition over 5 days.



On which day was the number of visitors least, and what was the difference between the highest and lowest?

- Ans**
- ☒ 1. Wednesday, 55
 - ☒ 2. Monday, 75
 - ☒ 3. Monday, 55
 - ☒ 4. Wednesday, 100

Q.17 Kartik saves 32% of his monthly salary, gives 15% of his salary as rent, and spends the rest. Find the monthly amount spent by him if he earns ₹74,200 per month.

- Ans**
- ☒ 1. ₹39,326
 - ☒ 2. ₹39,200
 - ☒ 3. ₹39,500
 - ☒ 4. ₹38,520

Q.18 The H.C.F of 328 and 492 is:

- Ans**
- ☒ 1. 23
 - ☒ 2. 92
 - ☒ 3. 41
 - ☒ 4. 164

Q.19 Find the difference between the compound interest, compounded annually, and the simple interest on ₹5,000 for 2 years at 10% interest per annum.

- Ans**
- ☒ 1. ₹75
 - ☒ 2. ₹50
 - ☒ 3. ₹80
 - ☒ 4. ₹60

Q.20 The average (rounded off to two decimal place) of the squares of the first 9 natural numbers is

- Ans**
- ☒ 1. 31.67
 - ☒ 2. 32.67
 - ☒ 3. 33.67
 - ☒ 4. 30.67

Section : Arithmetical and Numerical Ability1

Q.1 Anand purchased an item and incurred ₹53 in repair expenses. Subsequently, he sold it to Bharath with a 50% profit. Eventually, Bharath sold the item for ₹2,340, making a 25% loss. What was the original cost price (in ₹) of the item for Anand?

- Ans**
- ☐ 1. 2,078
 - ☒ 2. 2,027
 - ☐ 3. 2,083
 - ☐ 4. 2,077

Q.2 A boat can travel at 15 km/h in still water. If the speed of the stream is 3 km/h, what is the speed of the boat while going downstream?

- Ans**
- ☐ 1. 15 km/h
 - ☒ 2. 18 km/h
 - ☐ 3. 11 km/h
 - ☐ 4. 12 km/h

Q.3 Two pipes, A and B, can fill a tank completely in 12 hours and 16 hours, respectively. Pipes A and B are opened together and after 4 hours, pipe A is closed. How much additional time will pipe B take to fill the remaining tank?

- Ans**
- ☐ 1. 8 hours
 - ☐ 2. 8 hours 40 minutes
 - ☒ 3. 6 hours 40 minutes
 - ☐ 4. 12 hours

Q.4 A closed cuboid has length of 8 cm, breadth of 5 cm, and height of 4 cm. Find the total surface area of the cuboid.

- Ans**
- ☒ 1. 184 cm²
 - ☐ 2. 208 cm²
 - ☐ 3. 196 cm²
 - ☐ 4. 176 cm²

Q.5 The ratio of sand to gravel in a mixture is 6:7, while that of gravel to cement is 5: 6. What is the ratio of sand to cement in the mixture?

- Ans**
- ☐ 1. 7:6
 - ☐ 2. 5:6
 - ☐ 3. 5:8
 - ☒ 4. 5:7

Q.6 Train X departs from Station A at 4 p.m. and reaches Station B at 5 p.m., while Train Y departs from Station B at 4 p.m. and reaches Station A at 5:30 p.m. Determine the time at which the two trains cross each other.

- Ans**
- ☐ 1. 4 : 30 p.m.
 - ☐ 2. 4 : 42 p.m.
 - ☒ 3. 4 : 36 p.m.
 - ☐ 4. 4 : 45 p.m.

Q.7 Two trains, one of length 190 m and the other 210 m, are moving on parallel tracks. When both trains travel in the same direction, the faster train completely overtakes the slower train in 40 seconds. When they move in opposite directions, they cross each other completely in 8 seconds. Find the speed of the faster train.

- Ans**
- ☐ 1. 20 m/sec
 - ☐ 2. 25 m/sec
 - ☐ 3. 35 m/sec
 - ☒ 4. 30 m/sec

Q.8 A tank can be filled by a tap in 12 hours and emptied by another tap in 16 hours. If both taps are opened together, how long will it take to fill the tank?

- Ans**
- ☐ 1. 42 hours
 - ☐ 2. 50 hours
 - ☐ 3. 36 hours
 - ☒ 4. 48 hours

Q.9 A laptop is marked at ₹50,000. It is sold after two successive discounts of 20% and 10%. Find the final selling price of the laptop.

- Ans**
- ☒ 1. ₹36,000
 - ☐ 2. ₹38,000
 - ☐ 3. ₹34,000
 - ☐ 4. ₹35,000

Q.10 The fourth proportional of 12, 18 and 24 is d. Find the ratio of d to the third proportional of 12 and 18.

- Ans**
- ☒ 1. 4 : 3
 - ☐ 2. 4 : 5
 - ☐ 3. 3 : 2
 - ☐ 4. 5 : 6

Q.11 A map is drawn to the scale 1 : 50,000. If the distance between two cities on the map is 3 cm, what is the actual distance between the two cities, in km?

- Ans**
- ☐ 1. 3 km
 - ☒ 2. 1.5 km
 - ☐ 3. 2 km
 - ☐ 4. 4 km

Q.12 A cube of side 12 cm is cut into small cubes each of side 3 cm. What is the total surface area of all the small cubes together?

- Ans**
- ☐ 1. 4356 cm²
 - ☐ 2. 3654 cm²
 - ☐ 3. 3546 cm²
 - ☒ 4. 3456 cm²

Q.13 Raj and Tarun can do a task together in 16 hours. Raj can do the task alone in 24 hours. In how many hours can Tarun do the task alone?

- Ans**
- ☐ 1. 24
 - ☐ 2. 32
 - ☐ 3. 20
 - ☒ 4. 48

Q.14 The ages of A, B and C are in the ratio 2:3:4. If the sum of the ages of A and C is 36 years more than B's age, what is B's age?

- Ans
- ☐ 1. 24 years
 - ☐ 2. 27 years
 - ☐ 3. 30 years
 - ☒ 4. 36 years

Q.15 The profit made on a product is 92%. What is the loss percentage (rounded off to two decimal places) incurred on the sale if the figures of both cost price and selling price are interchanged?

- Ans
- ☐ 1. 45.14%
 - ☐ 2. 47.98%
 - ☒ 3. 47.92%
 - ☐ 4. 50.16%

Q.16 A spherical water tank has an external diameter of 1.54 m and a uniform thickness of 7 cm. If the tank is currently filled to exactly half its internal capacity, and the inner surface in contact with the water needs to be coated with a specialized anti-corrosive paint costing ₹120 per m², what is the total cost of painting the inner surface? (Use $\pi = 22/7$)

- Ans
- ☐ 1. ₹382.65
 - ☐ 2. ₹312.59
 - ☒ 3. ₹369.60
 - ☐ 4. ₹322.58

Q.17 Find the discount percentage, if an article is marked at ₹1,500 and is sold for ₹900.

- Ans
- ☐ 1. 44%
 - ☒ 2. 40%
 - ☐ 3. 38%
 - ☐ 4. 30%

Q.18 A tugboat travels 120 km from Port A to Port B against a current of 4 km/h in 10 hours. On the way back, it pulls a heavy barge, which reduces its speed in still water by 25%. How much extra time does the full round trip take compared to if the boat returned without towing the barge?

- Ans
- ☐ 1. 1.25 hours
 - ☐ 2. 2.25 hours
 - ☒ 3. 1.50 hours
 - ☐ 4. 1.75 hours

Q.19 A cistern has two inlet pipes that can fill it in 10 hours and 15 hours. An outlet pipe can empty the full cistern in 12 hours. All three pipes are opened together. After 5 hours, the outlet pipe is closed. How much more time will it take to fill the cistern?

- Ans
- ☐ 1. 2.5 hours
 - ☐ 2. 0.75 hours
 - ☐ 3. 2 hours
 - ☒ 4. 3.5 hours

Q.20 A water tank is in the shape of a cuboid with dimensions 5 m, 4 m, and 3 m. Find the total cost of filling it completely with water at the rate of ₹15 per cubic meter.

- Ans
- ☐ 1. ₹1,500
 - ☒ 2. ₹900
 - ☐ 3. ₹1,200
 - ☐ 4. ₹750

Q.14 Which of the following Union Territories has representatives in Rajya Sabha, effective from 31 October 2019?

- Ans**
- ☐ 1. Ladakh
 - ☐ 2. Lakshadweep
 - ☐ 3. Andaman and Nicobar Islands
 - ☒ 4. Jammu and Kashmir

Q.15 Which of the following bridges (highest railway bridge in the world) is part of the Udhampur-Srinagar-Baramulla Rail Link Project?

- Ans**
- ☐ 1. Ravi bridge
 - ☒ 2. Chenab bridge
 - ☐ 3. Jhelum bridge
 - ☐ 4. Indus bridge

Q.16 Which major division of the Peninsular Plateau lies south of the Narmada River in India?

- Ans**
- ☐ 1. Central Highlands
 - ☐ 2. Malwa Plateau
 - ☒ 3. Deccan Plateau
 - ☐ 4. Chotanagpur Plateau

Q.17 The protection against double jeopardy, stated as “no person shall be prosecuted and punished for the same offence more than once,” is guaranteed under which Article of the Constitution of India?

- Ans**
- ☐ 1. Article 14
 - ☐ 2. Article 22
 - ☐ 3. Article 21
 - ☒ 4. Article 20(2)

Q.18 Which of the following features characterises the Wangala festival of Meghalaya?

- Ans**
- ☐ 1. Celebration of spring through community dances after jhum cultivation
 - ☐ 2. Group dances associated with clearing forests for cultivation
 - ☒ 3. Performance of dances to honour the Sun God (Misi Saljong) after harvest
 - ☐ 4. Use of bamboo dance formations such as Cheraw as a central performance

Q.19 What is the name of the bond that connects amino acids in a protein?

- Ans**
- ☐ 1. Glycosidic bond
 - ☐ 2. Hydrogen bond
 - ☒ 3. Peptide bond
 - ☐ 4. Ionic bond

Q.20 Which state had the highest sex ratio in India according to the 2011 Census?

- Ans**
- ☐ 1. Haryana
 - ☒ 2. Kerala
 - ☐ 3. Tamil Nadu
 - ☐ 4. Punjab

Q.1 The number 37890 is divisible by which of the following numbers?

- Ans
- ☒ 1. 5
 - ☐ 2. 7
 - ☐ 3. 4
 - ☐ 4. 8

Q.2 The price of a book is increased by 20%. Later, the new price is decreased by 15%. What is the overall percentage change in the price of the book?

- Ans
- ☐ 1. 2% decrease
 - ☐ 2. 5% increase
 - ☐ 3. 5% decrease
 - ☒ 4. 2% increase

Q.3 A sum of ₹4,10,000 is invested for 1 year at 4% per annum, compounded half yearly. What is the compound interest earned at the end of the year?

- Ans
- ☐ 1. ₹15,207
 - ☐ 2. ₹18,425
 - ☒ 3. ₹16,564
 - ☐ 4. ₹17,980

Q.4 If the rates of interest for two successive years are 4% and 5%, respectively, what will be the compound interest on ₹75,000 after 2 years, compounded annually?

- Ans
- ☐ 1. ₹6,500
 - ☐ 2. ₹6,000
 - ☐ 3. ₹6,200
 - ☒ 4. ₹6,900

Q.5 In what ratio must a shopkeeper mix two types of wheat worth ₹110

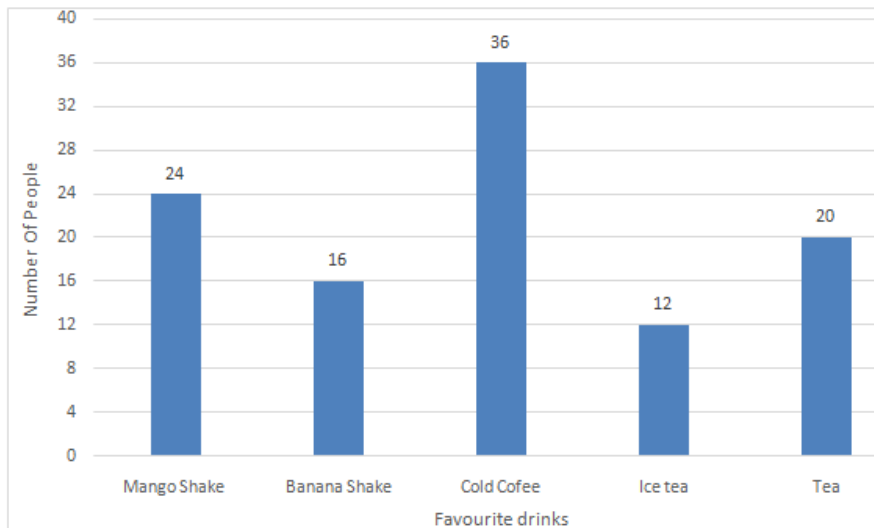


- Ans
- ☐ 1. 2 : 1
 - ☒ 2. 1 : 2
 - ☐ 3. 1 : 3
 - ☐ 4. 3 : 1

Q.6 A person has an original monthly income of \$4,000 and original monthly expenditure of \$3,200. If their income increases by 20% and their expenditure increases by 10%, what is the percentage increase in their savings?

- Ans
- ☐ 1. 48%
 - ☒ 2. 60%
 - ☐ 3. 38%
 - ☐ 4. 52%

Q.7 A survey was conducted among 108 people about their favourite drink. The results are represented in the bar graph below. Study the graph carefully and answer the question that follows.



As per the survey figures, what is the difference between the number of people opting for the most liked drink and the least liked drink?

- Ans**
- ☐ 1. 30
 - ☐ 2. 23
 - ☒ 3. 24
 - ☐ 4. 22

Q.8 Evaluate: $11 - 2 + 8 \div 4 \times 8$

- Ans**
- ☐ 1. 28
 - ☐ 2. 26
 - ☐ 3. 21
 - ☒ 4. 25

Q.9 What sum of money (in ₹) will amount to ₹3,600 at 5% per annum simple interest in 4 years?

- Ans**
- ☐ 1. 18,000
 - ☐ 2. 2,950
 - ☐ 3. 3,050
 - ☒ 4. 3,000

Q.10 Express 0.722222..... as a vulgar fraction.

- Ans**
- ☐ 1. $\frac{17}{18}$
 - ☐ 2. $\frac{5}{18}$
 - ☒ 3. $\frac{13}{18}$
 - ☐ 4. $\frac{45}{79}$

Q.11 Reena's salary is increased by 18% and then increased salary is decreased by 16%. Find the net increased or decreased percentage of Reena's salary (correct to two places of decimals).

- Ans**
- ☐ 1. 1.56% increase
 - ☒ 2. 0.88% decrease
 - ☐ 3. 0.88% increase
 - ☐ 4. 1.56% decrease

Q.12 A person who spends 20% of his monthly income is able to save ₹6,886 per month. His monthly expenses (in ₹) are:

- Ans**
- ☒ 1. 27,544
 - ☐ 2. 27,533
 - ☐ 3. 27,465
 - ☐ 4. 27,591

Q.13 For 11 innings, a cricketer has an average of 91 runs. In the 12th inning, he scores 152 runs. His average score increased by (rounded off to the nearest whole number):

- Ans**
- ☐ 1. 14
 - ☐ 2. 13
 - ☒ 3. 5
 - ☐ 4. 1

Q.14 The given pie chart represents the amount of time a person spends on different activities daily (in hours).

Study the following pie chart carefully and answer the question that follows.



The number of hours spent on sleeping is what percentage of number of hours spent on office work?

- Ans
- ☒ 1. 87.5%
 - ☐ 2. 90%
 - ☐ 3. 92.25%
 - ☐ 4. 85%

Q.15 A sum of ₹8,00,000 is invested at 15% compound interest per annum, compounded annually. If the final amount is ₹12,16,700, find the time period.

- Ans
- ☐ 1. 3.5 years
 - ☐ 2. 2.5 years
 - ☒ 3. 3 years
 - ☐ 4. 2 years

Q.16 A trader lost 10% by selling a shirt for ₹900. If he gains $x\%$ by selling it for ₹1,470, the value of x is: 11662

- Ans
- ☐ 1. 37
 - ☐ 2. 62
 - ☐ 3. 57
 - ☒ 4. 47

Q.17 A trader lost 10% by selling a shirt for ₹900. If he gains x% by selling it for ₹1,500, the value of x is: 11659

- Ans
- ☐ 1. 40
 - ☐ 2. 60
 - ☐ 3. 65
 - ☒ 4. 50

Q.18 Simplify.

$$\frac{\sqrt{50} \times \sqrt{18} \times \sqrt{6400}}{\sqrt{576}}$$

- Ans
- ☐ 1. 200
 - ☒ 2. 100
 - ☐ 3. 10
 - ☐ 4. 1000

Q.19 When a student was asked to find out the average of the numbers 30, 110, 70, 150, 10, 80, 190, 170, 210, 140 and Ω , then the average was found to be 100. The value of Ω is:

- Ans
- ☐ 1. 40
 - ☒ 2. -60
 - ☐ 3. 60
 - ☐ 4. -80

Q.20 Find the average of the following numbers: 385, 441, 876, 221, 536, 46, 291, 428.

- Ans
- ☐ 1. 405
 - ☐ 2. 402
 - ☒ 3. 403
 - ☐ 4. 400

Section : Arithmetical and Numerical Ability1

Q.1 Two battery-powered metro trains in a smart city are moving in opposite directions on a green transit line. Each train is 120 meters long. Their speeds are 54 km/h and 36 km/h respectively. How much time (in seconds) will they take to completely cross each other?

- Ans
- ☒ 1. 9.6
 - ☐ 2. 10
 - ☐ 3. 8.4
 - ☐ 4. 12

Q.2 Ravi began a business with ₹85,000. He was joined afterwards by Avinash with ₹42,500. For how many months Avinash remained in the business in the year, if the profits at the end of the year are divided in the ratio 4 : 1?

- Ans
- ☒ 1. 6
 - ☐ 2. 7
 - ☐ 3. 4
 - ☐ 4. 8

Q.3 A, B, and C can complete a piece of work in 15 days, 20 days, and 30 days, respectively. They start working together. After 5 days, A leaves the work, B's efficiency is reduced by 25%, and C continues at full efficiency. In how many days will the entire work be completed?

- Ans**
- ☒ 1. $10\frac{9}{17}$
 - ☒ 2. $8\frac{9}{17}$
 - ☒ 3. $8\frac{5}{11}$
 - ☒ 4. $10\frac{5}{11}$

Q.4 An EV startup sold electric cars, bikes, and scooters in a certain ratio of 7 : 5 : 3 respectively during a particular month. The total number of vehicles sold was 450. How many electric scooters were sold by the startup?

- Ans**
- ☒ 1. 90
 - ☒ 2. 135
 - ☒ 3. 60
 - ☒ 4. 120

Q.5 A storage tank is shaped like a cuboid. Its length is 12 m, breadth is 15 m, and height is 18 m. If water is filled into the tank at a rate of 90 m^3 per minute, find the time required to fill the tank completely.

- Ans**
- ☒ 1. 32 minutes
 - ☒ 2. 36 minutes
 - ☒ 3. 34 minutes
 - ☒ 4. 38 minutes

Q.6 If a person covers three equal distances at speeds of 8 km/h, 4 km/h, and 3 km/h, respectively, find his average speed for the entire journey.

- Ans**
- ☒ 1. $1\frac{4}{17} \text{ km/h}$
 - ☒ 2. $3\frac{4}{17} \text{ km/h}$
 - ☒ 3. $2\frac{4}{17} \text{ km/h}$
 - ☒ 4. $4\frac{4}{17} \text{ km/h}$

Q.7 The area of a rectangle of length 48 cm is double the area of a square whose side is 24 cm long. Find the breadth of the rectangle.

- Ans**
- ☒ 1. 27 cm
 - ☒ 2. 32 cm
 - ☒ 3. 24 cm
 - ☒ 4. 18 cm

Q.8 A shop announces "Buy 2 Get 10% Off" on a product with marked price ₹500. What is the total discount on buying 2 items?

- Ans**
- ☒ 1. ₹140
 - ☒ 2. ₹120
 - ☒ 3. ₹50
 - ☒ 4. ₹100

Q.9 If $A:B=5:7$ and $B:C=3:4$, find the value of $A:C$.

- Ans
- ☐ 1. 12:17
 - ☐ 2. 3:4
 - ☒ 3. 15:28
 - ☐ 4. 9:11

Q.10 A, B and C can complete a task in 10 days. If A and B together can complete the task in 15 days, then how long will C alone take to complete the task?

- Ans
- ☐ 1. 48 days
 - ☐ 2. 32 days
 - ☒ 3. 30 days
 - ☐ 4. 40 days

Q.11 3 men or 6 women can do a job in 2 days. 3 men work for 1 day and leave. The number of women required to complete the remaining work in 6 days is:

- Ans
- ☐ 1. 2
 - ☐ 2. 3
 - ☒ 3. 1
 - ☐ 4. 4

Q.12 A streaming platform reports that subscriptions to its Mobile, Standard, and Premium plans are in the ratio 5 : 8 : 12. After an update, Mobile subscriptions decrease by 10%, Premium subscriptions increase by 25%, and Standard remains unchanged. If the new total number of subscriptions is 55,000, then find the difference between the original Premium and Mobile subscriptions.

- Ans
- ☒ 1. 14,000
 - ☐ 2. 12,000
 - ☐ 3. 16,000
 - ☐ 4. 10,000

Q.13 Goods marked at ₹10,000 are purchased by a retailer from a wholesaler who allows a trade discount of 15% and a cash discount of 5%. Find the amount paid.

- Ans
- ☐ 1. ₹7,500
 - ☐ 2. ₹8,000
 - ☐ 3. ₹9,000
 - ☒ 4. ₹8,075

Q.14 Two trains of lengths 245 m and 210 m start moving towards each other. Their speeds are 54 km/hr and 72 km/hr, respectively. Find the time it will take them to cross each other.

- Ans
- ☐ 1. 12 seconds
 - ☒ 2. 13 seconds
 - ☐ 3. 11 seconds
 - ☐ 4. 10 seconds

Q.20 The Nuakhai festival, an agrarian celebration marking the welcoming of the new rice harvest and predominantly observed in the western region of a state with limited observance in adjoining areas, was primarily associated with which Indian state?

- Ans**
- ☒ 1. Odisha
 - ☐ 2. Tamil Nadu
 - ☐ 3. Madhya Pradesh
 - ☐ 4. Kerala

Section : Arithmetical and Numerical Ability

Q.1 The average of 8 numbers is 39. If each number is decreased by 5, what will the new average be?

- Ans**
- ☐ 1. 8
 - ☐ 2. 39
 - ☐ 3. 29
 - ☒ 4. 34

Q.2 Which of the following numbers is divisible by 4?⁴¹⁴⁸

- Ans**
- ☐ 1. 6930
 - ☐ 2. 5058
 - ☒ 3. 5988
 - ☐ 4. 7611

Q.3 A sum of ₹820000 is invested for 1 year at 2% per annum, compounded half yearly. What is the compound interest earned at the end of the year?

- Ans**
- ☒ 1. ₹16482
 - ☐ 2. ₹17360
 - ☐ 3. ₹14888
 - ☐ 4. ₹14865

Q.4 The price of an item increases by 16% in the first year and then decreases by 12% in the second year. If the initial price of the item was ₹2600, calculate the final price at the end of the second year. [Give the answer rounded off to the nearest integer value]

- Ans**
- ☐ 1. ₹2,676
 - ☐ 2. ₹2,662
 - ☐ 3. ₹2,688
 - ☒ 4. ₹2,654

Q.5 There are 403 litres, 434 litres and 465 litres of milk, respectively, in three containers. Find the maximum capacity (in litres) of a container which can measure milk in the three containers.⁶⁹⁶

- Ans**
- ☐ 1. 41
 - ☐ 2. 84
 - ☐ 3. 62
 - ☒ 4. 31

Q.6 Simplify.

$$\frac{20^8 \times 5^4}{4^4 \times 20^4 \times 5^8 \times 3}$$

Ans

- ☒ 1. $\frac{1}{2}$
- ☒ 2. $\frac{1}{4}$
- ☒ 3. $\frac{1}{5}$
- ☒ 4. $\frac{1}{3}$

Q.7 A shopkeeper mixes 30 kg of rice costing ₹90 per kg and 20 kg of rice costing ₹120 per kg. Find the weighted average price per kg of the mixture.

- Ans
- ☒ 1. ₹100
 - ☒ 2. ₹105
 - ☒ 3. ₹108
 - ☒ 4. ₹102

Q.8 A manufacturer sells a product to a wholesaler at a profit of 10%. The wholesaler, in turn, sells it to a retailer at a profit of 25%, and the retailer sells it to a customer at a profit of 44%. If the customer pays ₹891, find the cost price (in ₹) for the manufacturer.

- Ans
- ☒ 1. 450
 - ☒ 2. 447
 - ☒ 3. 448
 - ☒ 4. 452

Q.9 A sum of ₹3,30,000 is invested for 1 year at 10% per annum, compounded half yearly. What is the compound interest earned at the end of the year?

- Ans
- ☒ 1. ₹32,624
 - ☒ 2. ₹33,879
 - ☒ 3. ₹33,952
 - ☒ 4. ₹33,825

Q.10 The average of three numbers is 21. If two numbers are 15 and 25, the third number is:4375

- Ans
- ☒ 1. 24
 - ☒ 2. 23
 - ☒ 3. 22
 - ☒ 4. 25

Q.11 What sum of money (in ₹) will amount to ₹3,360 at 5% per annum simple interest in 5 years?6976

- Ans
- ☒ 1. 2,638
 - ☒ 2. 2,738
 - ☒ 3. 2,688
 - ☒ 4. 2,488

Q.12 A person deposits ₹12,000 at 6% per annum, compounded annually. Find the compound interest earned after 2 years.

- Ans**
- ☐ 1. ₹1,443.20
 - ☒ 2. ₹1,483.20
 - ☐ 3. ₹1,383.20
 - ☐ 4. ₹1,487.20

Q.13 A dishonest milk vendor professes that he sells milk at the cost price. But he mixes water in the milk and gains 10%. Find the percentage of water in the mixture (rounded off to two decimal places).

- Ans**
- ☐ 1. 10.01%
 - ☒ 2. 9.09%
 - ☐ 3. 9.19%
 - ☐ 4. 10.19%

Q.14 A salary is decreased by 5% and then increased by 5%. What is the overall percentage change?

- Ans**
- ☐ 1. 1% decrease
 - ☒ 2. 0.25% decrease
 - ☐ 3. No change
 - ☐ 4. 0.5% decrease

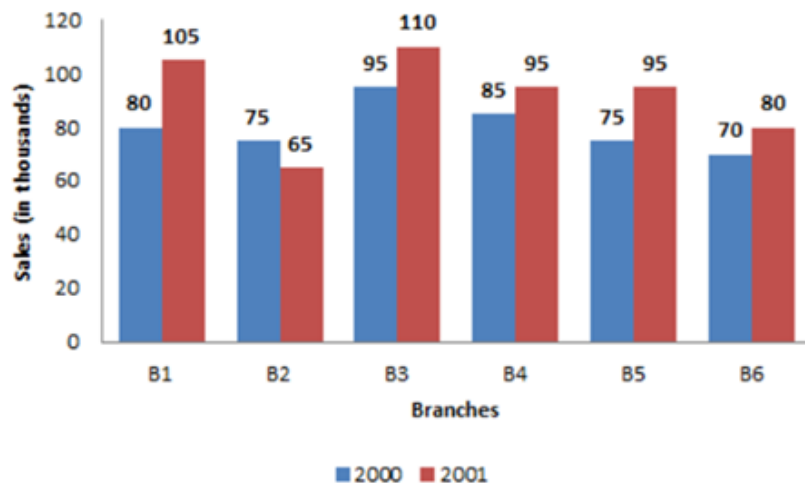
Q.15 Evaluate: $11 - 2 + 8 \div 4 \times 5$

- Ans**
- ☐ 1. 20
 - ☐ 2. 22
 - ☒ 3. 19
 - ☐ 4. 15

Q.16 The price of an item is increased by 25%. By what percentage should it be decreased to bring it back to the original price?

- Ans**
- ☐ 1. 16%
 - ☐ 2. 18%
 - ☒ 3. 20%
 - ☐ 4. 22%

Q.17 The bar graph given below shows the sales of books (in thousands) from six branches of a publishing company during the two consecutive years 2000 and 2001.



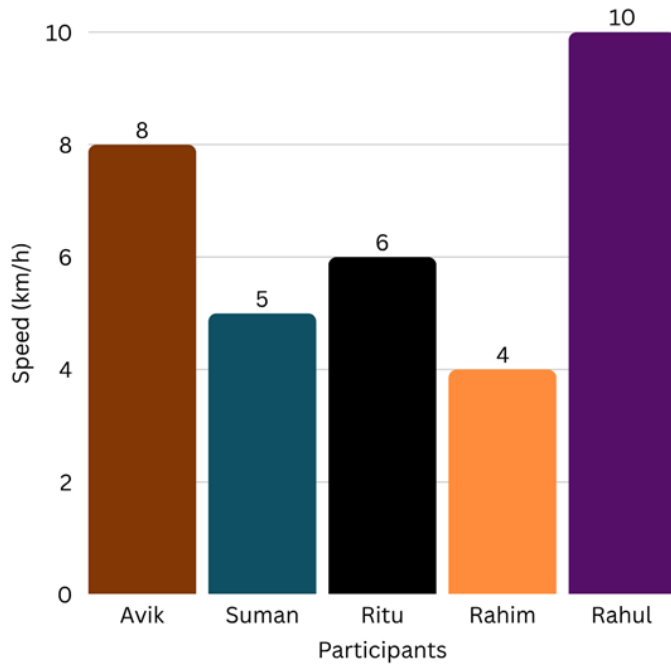
Find the total number (in thousands) of sales from branches B1, B3, and B5 combined for both years.

- Ans
- ☐ 1. 310
 - ☐ 2. 435
 - ☒ 3. 560
 - ☐ 4. 250

Q.18 Nitin sells two articles for ₹5,811 each with no profit, no loss in the entire transaction. If one article was sold at a gain of 50%, then the other article is sold at a loss of:

- Ans
- ☐ 1. 26%
 - ☐ 2. 27%
 - ☒ 3. 25%
 - ☐ 4. 28%

Q.19 The bar graph below shows the swimming speeds (in still water) of five participants in a hypothetical river swim challenge. Read the bar graph carefully and answer the question that follows.



Suman swims downstream in River Beta from Point A to Point B, a distance of 18 km. The river's current flows at a constant speed of 4 km/h. How much time will Suman take to reach Point B?

- Ans**
- ☒ 1. 1.2 hours
 - ☒ 2. 1.5 hours
 - ☒ 3. 1 hour
 - ☒ 4. 2 hours

Q.20 If an amount increases from ₹60 to ₹81, what is the percentage increase?

- Ans**
- ☒ 1. 35%
 - ☒ 2. 30%
 - ☒ 3. 38%
 - ☒ 4. 32%

Section : **Arithmetical and Numerical Ability1**

Q.1 A retailer gives 6% discount on the marked price and gives 1 item free for buying every 20 items and thus gets a profit of 15%. The marked price is above the cost price by (rounded off to two decimal places):

- Ans**
- ☒ 1. 28.46%
 - ☒ 2. 16.16%
 - ☒ 3. 24.69%
 - ☒ 4. 18.56%

Q.2 A spherical water tank has a radius of 1.5 m. What is the maximum volume of water it can hold? (Use $\pi = 3.14$)

- Ans**
- ☒ 1. 28.26 m³
 - ☒ 2. 7.07 m³
 - ☒ 3. 42.39 m³
 - ☒ 4. 14.13 m³

Q.3 Sourabh covers a certain distance in 2 hours 24 minutes by covering four-fifths of the total distance at 12 km/hr and the remaining distance at 15 km/hr. Find the total distance covered by him.

- Ans**
- ☐ 1. 24 km
 - ☒ 2. 30 km
 - ☐ 3. 21 km
 - ☐ 4. 36 km

Q.4 The profit made on a product is 57%. What is the loss percentage (correct to two decimal places) incurred on the sale if the figures of both cost price and selling price are interchanged?

- Ans**
- ☒ 1. 36.31%
 - ☐ 2. 39.88%
 - ☐ 3. 35.23%
 - ☐ 4. 35.39%

Q.5 A hydrogen-powered smart ferry travels 40 km upstream and returns 40 km downstream on a river in a smart city transport system. The speed of the ferry in still water is 15 km/h, and the river current flows at 5 km/h. What is the approximate average speed of the ferry for the entire journey?

- Ans**
- ☐ 1. 11.5 km/h
 - ☐ 2. 12.5 km/h
 - ☐ 3. 10.8 km/h
 - ☒ 4. 13.3 km/h

Q.6 If 76% of first number is equal to eight-ninths of second number, what is the ratio of the first number to the second number?

- Ans**
- ☒ 1. 200 : 171
 - ☐ 2. 202 : 168
 - ☐ 3. 199 : 176
 - ☐ 4. 205 : 170

Q.7 Manoj can paint a room in 5 days working 7 hours each day, while Ra

How long will they take to paint the room, if they work together $7\frac{7}{11}$



- Ans**
- ☐ 1. 2 days
 - ☐ 2. 3 days
 - ☐ 3. 3.5 days
 - ☒ 4. 2.5 days

Q.8 A and B start a business with investments in the ratio 4 : 7. After 6 months, C joins with an investment in the ratio 3 : 4 to B. If the annual profit is ₹4,36,000, what is C's share?

- Ans**
- ☐ 1. ₹83,000
 - ☐ 2. ₹80,000
 - ☐ 3. ₹82,000
 - ☒ 4. ₹84,000

Q.9 A policeman spots a thief who is 200 meters ahead. At that moment, both start running in the same direction—the thief at a speed of 10 km/h and the policeman at 11 km/h. What will be the distance between them after 6 minutes?

- Ans**
- ☐ 1. 200 m
 - ☒ 2. 100 m
 - ☐ 3. 150 m
 - ☐ 4. 190 m

Q.10 Two numbers are in the ratio 7 : 9. When 6 is added to the smaller number and 18 is added to the larger number, the ratio becomes 2 : 3. What is the sum of the original two numbers?

- Ans**
- ☐ 1. 84
 - ☐ 2. 90
 - ☒ 3. 96
 - ☐ 4. 104

Q.11 In a residential complex, two inlet pipes D1 and E1 can fill a water tank in 9 hours and 18 hours, respectively, while a maintenance drain F1 can empty the tank in 36 hours. If all three are opened simultaneously, how long will it take to fill the tank?

- Ans**
- ☒ 1. 7.2 hours
 - ☐ 2. 7.5 hours
 - ☐ 3. 6.8 hours
 - ☐ 4. 7 hours

Q.12 A triangular glass section of a rooftop greenhouse has a base of 1.35 meters and a height of 2.4 meters. What is the area of the glass section?

- Ans**
- ☐ 1. 2.70 square meters
 - ☐ 2. 1.80 square meters
 - ☒ 3. 1.62 square meters
 - ☐ 4. 3.24 square meters

Q.13 The profit made on a product is 33%. What is the loss percentage (rounded off to two decimal places) incurred on the sale if the figures of both cost price and selling price are interchanged?

- Ans**
- ☐ 1. 24.48%
 - ☒ 2. 24.81%
 - ☐ 3. 23.25%
 - ☐ 4. 26.61%

Q.14 If a right circular cone of height 24 cm has a volume of $800\pi \text{ cm}^3$, the

- Ans**
- ☐ 1. $282\pi \text{ cm}^2$
 - ☐ 2. $286\pi \text{ cm}^2$
 - ☐ 3. $266\pi \text{ cm}^2$
 - ☒ 4. $260\pi \text{ cm}^2$

Q.15 Three solid metallic cubes of sides 6 cm, 8 cm, and 10 cm are melted together to form a single solid cuboid. If the length and the breadth of the newly formed cuboid are 16 cm and 12 cm, respectively, then what percentage less than the length of a side of the largest cube is the height of the cuboid?

- Ans**
- ☐ 1. 8%
 - ☐ 2. 4%
 - ☐ 3. 6%
 - ☒ 4. 10%

Q.20 In 2015, the Smart Cities Mission was established with the goal of enhancing the standard of living in how many cities by offering sustainable solutions, strong infrastructure, and effective services?

- Ans**
- ☒ 1. 100
 - ☐ 2. 150
 - ☐ 3. 200
 - ☐ 4. 120

Section : Arithmetical and Numerical Ability

Q.1 A class of 34 students took a Physics test. 14 students had an average score of 69. The other students had an average score of 60. What is the average score (rounded off to one decimal place) of the whole class?¹⁶¹⁹

- Ans**
- ☐ 1. 56.8
 - ☐ 2. 65.3
 - ☒ 3. 63.7
 - ☐ 4. 60.3

Q.2 Which of the following numbers is divisible by 7?²⁰⁸⁴

- Ans**
- ☐ 1. 157107
 - ☒ 2. 156023
 - ☐ 3. 155811
 - ☐ 4. 156708

Q.3 A sum of ₹10,00,000 is invested at 3% compound interest per annum, compounded annually. If the final amount is ₹10,92,727, find the time period.

- Ans**
- ☐ 1. 2 years
 - ☐ 2. 3.5 years
 - ☐ 3. 2.5 years
 - ☒ 4. 3 years

Q.4 A sum of ₹10,00,000 is invested at 7% per annum compound interest, compounded annually. If the amount becomes ₹12,25,043, what is the time of the investment?

- Ans**
- ☒ 1. 3 years
 - ☐ 2. 3.5 years
 - ☐ 3. 2 years
 - ☐ 4. 2.5 years

Q.5 Nitin sells two articles for ₹2,178 each with no profit, no loss in the entire transaction. If one article was sold at a gain of 50%, then the other article is sold at a loss of:

- Ans**
- ☐ 1. 22%
 - ☐ 2. 26%
 - ☒ 3. 25%
 - ☐ 4. 23%

Q.6 An amount of ₹75,000 is the monthly income of Gajju. He devotes 55% of his monthly income to housing expenses, while 30% of the remaining is allocated to personal and educational expenses. The remainder of his monthly income is his savings. Determine the aggregate savings over a six-month period.

- Ans**
- ☐ 1. ₹45,580
 - ☐ 2. ₹60,750
 - ☐ 3. ₹1,50,000
 - ☒ 4. ₹1,41,750

Q.7 The number of seats in an auditorium is increased by 20%. The price of a ticket is also increased by 8%. Then the percentage increase in revenue collection will be:

- Ans**
- ☒ 1. 29.6%
 - ☐ 2. 26.5%
 - ☐ 3. 28.8%
 - ☐ 4. 33.3%

Q.8 The average of three numbers is 21. If two of the three numbers are 15 and 29, the third number is:

- Ans**
- ☐ 1. 18
 - ☐ 2. 20
 - ☒ 3. 19
 - ☐ 4. 21

Q.9 Mr. Rajesh spends 80% of his income. His income is increased by 20% and he increases his expenditure by 10%. His savings are increased by ____.

- Ans**
- ☒ 1. 60%
 - ☐ 2. 65%
 - ☐ 3. 50%
 - ☐ 4. 55%

Q.10 Simplify $16 \times (4 \times (5^2)) \div 10 + 39 - 54$

- Ans**
- ☒ 1. 145
 - ☐ 2. 149
 - ☐ 3. 152
 - ☐ 4. 142

Q.11 The price of peanut oil is ₹1,200 for 10 litres. If the price is decreased by 2.5% and then increased by 8%, then what is the cost of 15 litres?

- Ans**
- ☒ 1. ₹1,895.40
 - ☐ 2. ₹2,065.80
 - ☐ 3. ₹1,765.50
 - ☐ 4. ₹1,970

Q.12 A sum of ₹60,000 is invested at a compound interest rate of 5% per annum, compounded annually, for 2 years. Find the total compound interest earned at the end of the period.

- Ans**
- ☐ 1. ₹5,800
 - ☐ 2. ₹6,450
 - ☐ 3. ₹6,050
 - ☒ 4. ₹6,150

Q.13 A manufacturer sells a product to a wholesaler at a profit of 35%. The wholesaler, in turn, sells it to a retailer at a profit of 25%, and the retailer sells it to a customer at a profit of 28%. If the customer pays ₹540, find the cost price (in ₹) for the manufacturer.

Ans ☒ 1. 250

☐ 2. 251

☐ 3. 253

☐ 4. 248

Q.14 Find the smallest number which, when divided by both 12 and 15, leaves a remainder of 7 in each case.

Ans ☒ 1. 67

☐ 2. 71

☐ 3. 57

☐ 4. 74

Q.15 The positive square root of $(25^2 - 15^2)$ is:

Ans ☐ 1. 28

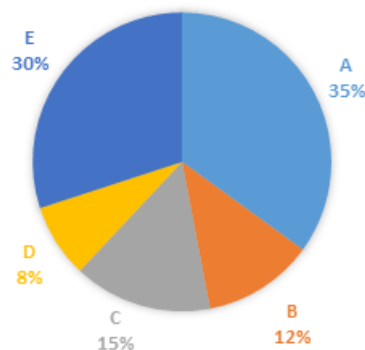
☐ 2. 10

☐ 3. 26

☒ 4. 20

Q.16 The following pie chart shows the percentage distribution of students of graduation level in five different institutes, A, B, C, D and E, in a town. Study the pie chart and answer the question that follows. The total number of students is 25,000.

THE PERCENTAGE DISTRIBUTION OF STUDENTS OF GRADUATION LEVEL IN FIVE DIFFERENT INSTITUTES A,B,C,D AND E IN A TOWN.



How many students are studying in institute A, C and E together?

Ans ☒ 1. 20,000

☐ 2. 22,254

☐ 3. 20,845

☐ 4. 16,200

Q.17 The average weight (in kg) of a family of five members whose weights are 40 kg, 49 kg, 57 kg, 70 kg and 35 kg is:

Ans ☐ 1. 52.2

☐ 2. 49.2

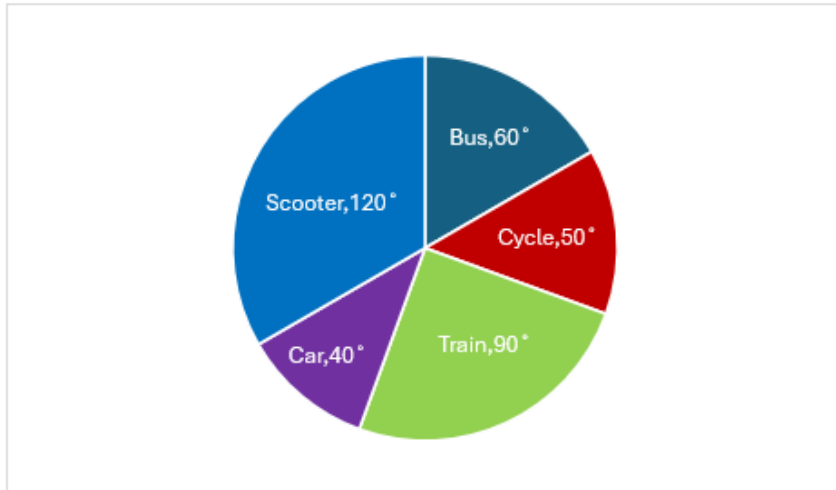
☐ 3. 51.2

☒ 4. 50.2

Q.18 Find the simple interest (in ₹) on ₹1,800 at 3% per month for 7 months.

- Ans**
- ☒ 1. 378
 - ☐ 2. 31.50
 - ☐ 3. 63
 - ☐ 4. 51.50

Q.19 The given pie chart shows the modes of transport used by the students of a school. The total number of students is 1,080. Study the chart and answer the question that follows.



Find the total number of students who used the bus and the car as modes of transport.

- Ans**
- ☒ 1. 300
 - ☐ 2. 340
 - ☐ 3. 400
 - ☐ 4. 420

Q.20 A juice vendor mixes three equal-sized jugs of orange juice to water in the ratios 2 : 5, 3 : 4, and 4 : 5. What is the final ratio of orange juice to water in the mixture?

- Ans**
- ☐ 1. 71 : 114
 - ☐ 2. 75 : 118
 - ☐ 3. 70 : 113
 - ☒ 4. 73 : 116

Section : **Arithmetical and Numerical Ability1**

Q.1 Four students A, B, C and D scored marks in Math and Science in the ratios 45 : 60, 32 : 48, 50 : 75 and 36 : 54 respectively. Which student has the highest proportion of Math marks to Science marks?

- Ans**
- ☐ 1. D
 - ☐ 2. C
 - ☐ 3. B
 - ☒ 4. A

Q.2 A cylinder whose height is equal to its radius is placed on top of a hemisphere. The combination forms a solid of total height H cm. If the curved surface area of the hemisphere is 22π cm², find the value of H. (use $\pi = \frac{22}{7}$)

- Ans
- ☐ 1. 5
 - ☐ 2. 8
 - ☒ 3. 7
 - ☐ 4. 6

Q.3 A dealer marks his goods 30% above the cost price. Then, he allows a discount of 30% on it. What is his loss percentage?

- Ans
- ☐ 1. 6%
 - ☒ 2. 9%
 - ☐ 3. 5%
 - ☐ 4. 10%

Q.4 6 men and 16 women can complete a piece of work in 17 days, and 9 men and 14 women can complete the same work in 13 days. The work of how many women is equivalent to that of one man?

- Ans
- ☐ 1. 4
 - ☐ 2. 9
 - ☐ 3. 8
 - ☒ 4. 6

Q.5 A delivery truck covers four legs of a journey as described below.
the first 60 km at a speed of 30 km/hr
the next 90 km at a speed of 45 km/hr
the next 75 km at a speed of 25 km/hr
the final 45 km at a speed of 36 km/hr
What is the average speed of the truck for the complete journey? (Give your answer in km/hr, rounded off to the nearest whole number.)

- Ans
- ☐ 1. 30
 - ☐ 2. 32
 - ☒ 3. 33
 - ☐ 4. 35

Q.6 A, B, and C start a partnership. A invests ₹70,000 for 12 months, B invests ₹42,000 for 12 months, and C invests ₹28,000 for 12 months. They agree that 20% of the total profit will be reserved for charity before distribution. If the total profit is ₹56,000, what is B's share?

- Ans
- ☐ 1. ₹22,440
 - ☐ 2. ₹8,960
 - ☐ 3. ₹13,450
 - ☒ 4. ₹13,440

Q.7 A cyclist travels from point A to B at a speed of 18 km/hr, then from B to C at 24 km/hr, and finally from C back to A at a speed of 12 km/hr. If AB = 36 km, BC = 48 km, and CA = 60 km, find the average speed for the round trip.

- Ans
- ☐ 1. 18 km/hr
 - ☐ 2. 17 km/hr
 - ☐ 3. 15 km/hr
 - ☒ 4. 16 km/hr

Q.8 The dimensions of a cuboid are in the ratio 1 : 2 : 4. A cube has the same volume as the cuboid. The cuboid's surface area exceeds the cube's surface area by 196 cm^2 . Find the length (in cm) of an edge of the cube.

- Ans
- ☐ 1. 10
 - ☐ 2. 16
 - ☒ 3. 14
 - ☐ 4. 12

Q.9 Amit and Bharati invest money in a business in the ratio 5:7. At the end of the year, they earn a profit of ₹10,000. How much profit does Bharati get? (Round off your answer to two decimal places)

- Ans
- ☐ 1. ₹5,853.33
 - ☐ 2. ₹5,607.33
 - ☒ 3. ₹5,833.33
 - ☐ 4. ₹5,843.33

Q.10 A can do a job in 22 days and B can do the same job in 10 days. With the help of C, they did the job in 4 days. Then, C alone can do the job in:

- Ans
- ☐ 1. $15\frac{13}{23}$ days
 - ☒ 2. $9\frac{13}{23}$ days
 - ☐ 3. $14\frac{13}{23}$ days
 - ☐ 4. $17\frac{13}{23}$ days

Q.11 A shopkeeper makes 8% more profit by selling an umbrella for ₹ 320 than by selling it for ₹ 300. Find the selling price (in ₹) of the umbrella if he is to make a profit of 30%.

- Ans
- ☐ 1. 300
 - ☐ 2. 250
 - ☐ 3. 285
 - ☒ 4. 325

Q.12 The surface area (in cm^2) of a sphere of radius 7 cm is:

(Take $\pi = \frac{22}{7}$)

- Ans
- ☒ 1. 616
 - ☐ 2. 619
 - ☐ 3. 617
 - ☐ 4. 618

Q.13 A, B and C can do a piece of work in 6 days, 9 days and 18 days, respectively. If they work together, then find the time (in days) taken to complete the work.

- Ans
- ☐ 1. 2
 - ☐ 2. 4
 - ☐ 3. 5
 - ☒ 4. 3

Q.14 A person buys an item for a discount of 14% on its marked price ₹7,200. If he sells this item for ₹7,200, then find the profit percentage. (Round off to two decimal places.)

- Ans
- ☒ 1. 16.28%
 - ☐ 2. 28.05%
 - ☐ 3. 15.75%
 - ☐ 4. 14.05%

Q.15 A solid gold bar in the shape of a cuboid with dimensions 12 cm × 6 cm × 3 cm is melted and recast into a solid cube. Assuming no material is lost, what is the length (in cm) of each side of the resulting cube?

- Ans
- ☐ 1. 8
 - ☐ 2. 4
 - ☒ 3. 6
 - ☐ 4. 12

Q.16 7 men or 8 women can do a job in 11 days. 7 men work for 5 days and leave. The number of women required to complete the remaining work in 8 days is:

- Ans
- ☐ 1. 7
 - ☐ 2. 9
 - ☐ 3. 4
 - ☒ 4. 6

Q.17 If A:B=1:2, C:B=4:3, 9D=6C, and D:E=12:16, then the value of A:B:C:D:E is:

- Ans
- ☐ 1. 27:72:48:54:64
 - ☒ 2. 27:54:72:48:64
 - ☐ 3. 27:72:54:48:64
 - ☐ 4. 27:54:68:48:64

Q.18 A car sets out on a long journey and maintains a steady pace of 106 kilometers every hour. After driving non-stop for 450 minutes, how far did the car travel?

- Ans
- ☐ 1. 800 km
 - ☐ 2. 765 km
 - ☒ 3. 795 km
 - ☐ 4. 755 km

Q.19 A boat travels 18 km downstream in 3 hours and returns upstream in 4 hours. What is the speed of the boat against the stream?

- Ans
- ☒ 1. 4.5 km/h
 - ☐ 2. 6 km/h
 - ☐ 3. 4 km/h
 - ☐ 4. 3.5 km/h

Q.20 The profit made on a product is 84%. What is the loss percentage (correct to two decimal places) incurred on the sale if the figures of both cost price and selling price are interchanged?

- Ans
- ☐ 1. 45.88%
 - ☐ 2. 48.23%
 - ☒ 3. 45.65%
 - ☐ 4. 48.28%

Q.17 Which of the following structures in Buddhist architecture is primarily used to house sacred relics of the Buddha?

- Ans**
- ☐ 1. Torana
 - ☒ 2. Stupa
 - ☐ 3. Vihara
 - ☐ 4. Chaitya

Q.18 The Kailasa Temple at Ellora was built by which dynasty?

- Ans**
- ☐ 1. Pallava
 - ☐ 2. Gupta
 - ☐ 3. Maurya
 - ☒ 4. Rashtrakuta

Q.19 When assessing the nutritional value of a meal, which combination most effectively supplies the body with both quick energy and long-term energy storage?

- Ans**
- ☐ 1. Consuming a diet rich in proteins only
 - ☐ 2. Focusing on vitamins and minerals exclusively
 - ☒ 3. Including both carbohydrates and fats
 - ☐ 4. Relying mainly on dietary fibre for energy

Q.20 The Gupta period Buddhist art is especially known for____.

- Ans**
- ☐ 1. Massive stone pillars
 - ☐ 2. Brick stupas only
 - ☒ 3. Refined aesthetic restraint
 - ☐ 4. Wooden architecture

Section : Arithmetical and Numerical Ability

Q.1 The cost of type 1 wheat is ₹40 per kg and type 2 wheat is ₹50 per kg. If both type 1 wheat and type 2 wheat are mixed in the ratio 1 : 4, then find the price per kg of the mixed variety of wheat.

- Ans**
- ☐ 1. ₹54
 - ☒ 2. ₹48
 - ☐ 3. ₹46
 - ☐ 4. ₹52

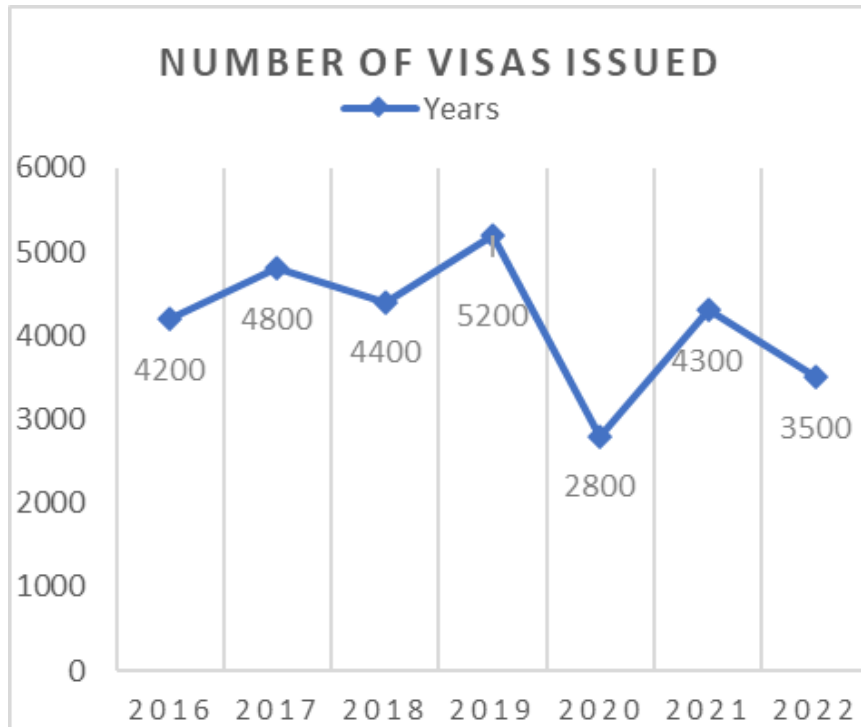
Q.2 A person spent 30%, 25% and 20% of his monthly income on house rent, food and children's education, respectively. If his monthly income is ₹40,000, find the remaining amount.

- Ans**
- ☒ 1. ₹10,000
 - ☐ 2. ₹12,500
 - ☐ 3. ₹13,200
 - ☐ 4. ₹10,350

Q.3 A salary is decreased by 10% and then increased by 10%. What is the overall percentage change in the salary?

- Ans**
- ☐ 1. No change
 - ☒ 2. 1% decrease
 - ☐ 3. 2% increase
 - ☐ 4. 3% decrease

- Q.4 Study the following line graph and answer the question based on it.
The line graph below shows the number of work visas issued by a country in each year from 2016 to 2022.



What is the total number of visas issued by a country from years 2018 to 2022?

- Ans
- ☐ 1. 20,800
 - ☒ 2. 20,200
 - ☐ 3. 20,400
 - ☐ 4. 20,600

- Q.5 What sum of money (in ₹) will amount to ₹3,600 at 5% per annum simple interest in 5 years?6968

- Ans
- ☐ 1. 2,830
 - ☒ 2. 2,880
 - ☐ 3. 2,930
 - ☐ 4. 14,400

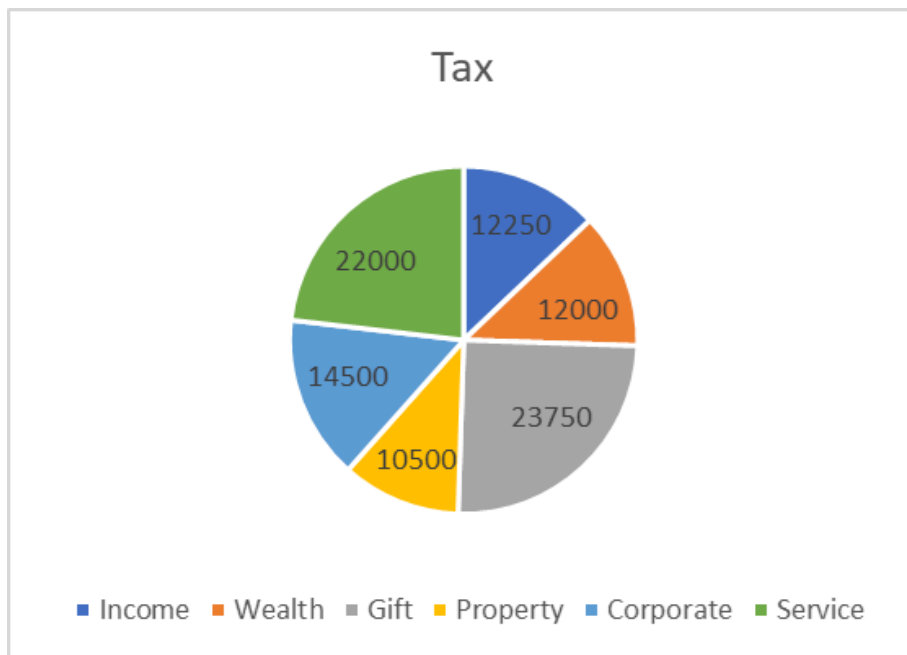
- Q.6 Three bells ring at intervals of 15 minutes, 20 minutes and 25 minutes. If they ring together at 11:12 a.m., when will they next ring together?

- Ans
- ☐ 1. 3:18 p.m.
 - ☐ 2. 1:42 p.m.
 - ☒ 3. 4:12 p.m.
 - ☐ 4. 5:16 p.m.

- Q.7 Nitin sells two articles for ₹4,581 each with no profit, no loss in the entire transaction. If one article was sold at a gain of 50%, then the other article is sold at a loss of:

- Ans
- ☐ 1. 24%
 - ☐ 2. 23%
 - ☐ 3. 26%
 - ☒ 4. 25%

- Q.8 The following pie chart shows the number of different sources of funds on which tax is to be collected. Study the given pie chart carefully and answer the question that follows.



The central angle (approximately) corresponding to Service is:

- Ans
- ✓ 1. 83.37°
 - ✗ 2. 108°
 - ✗ 3. 92.32°
 - ✗ 4. 85.55°

- Q.9 The positive square root of $(35^2 - 28^2)$ is:

- Ans
- ✗ 1. 15
 - ✓ 2. 21
 - ✗ 3. 11
 - ✗ 4. 24

- Q.10 A sum of ₹2,50,000 is invested at 6% compound interest per annum, compounded annually. If the final amount is ₹2,80,900, find the time period.

- Ans
- ✗ 1. 2.5 years
 - ✗ 2. 1.5 years
 - ✓ 3. 2 years
 - ✗ 4. 1 year

- Q.11 Nitin sells two articles for ₹5,964 each with no profit, no loss in the entire transaction. If one article was sold at a gain of 50%, then the other article is sold at a loss of:

- Ans
- ✗ 1. 23%
 - ✗ 2. 22%
 - ✗ 3. 26%
 - ✓ 4. 25%

Q.12 The current population of a town is 1,67,500. It increases by 15% in the first year and 20% in the second year, but decreases by 60% in the third year. What will be the population of the town at the end of the third year?

- Ans
- ☐ 1. 92,510
 - ☒ 2. 92,460
 - ☐ 3. 92,490
 - ☐ 4. 92,560

Q.13 Simplify $2 \times (8 \times (1^2)) \div 8 + 94 - 60$.

- Ans
- ☐ 1. 29
 - ☒ 2. 36
 - ☐ 3. 45
 - ☐ 4. 40

Q.14 A shirt initially undergoes a 10% discount, followed by a 10% price increase on the reduced amount. Find out the net percentage change in the shirt's original price.

- Ans
- ☐ 1. 1% increase
 - ☐ 2. 2% decrease
 - ☒ 3. 1% decrease
 - ☐ 4. 2% increase

Q.15 The average of the three numbers is 21. If the two numbers are 15 and 24, the third number is: 4376

- Ans
- ☐ 1. 26
 - ☐ 2. 23
 - ☐ 3. 25
 - ☒ 4. 24

Q.16 Which of the following numbers is divisible by 54?

- Ans
- ☐ 1. 863170
 - ☒ 2. 861030
 - ☐ 3. 862570
 - ☐ 4. 861932

Q.17 Find the compound interest on ₹26,000 at 5% per annum for 2 years, interest compounded annually.

- Ans
- ☐ 1. ₹2,645
 - ☐ 2. ₹2,625
 - ☐ 3. ₹2,685
 - ☒ 4. ₹2,665

Q.18 A sum of ₹10,000 is invested at 3% per annum compound interest, compounded annually. If the amount becomes ₹10,609, what is the time of the investment?

- Ans
- ☐ 1. 2.5 years
 - ☐ 2. 1.5 years
 - ☐ 3. 1 year
 - ☒ 4. 2 years

Q.19 The average age of 37 students of a class is 15 years. If the age of the teacher is also included, the average age of the whole group becomes 16 years. The age (in years) of the teacher is:1615

- Ans**
- ☐ 1. 51
 - ☒ 2. 53
 - ☐ 3. 55
 - ☐ 4. 50

Q.20 In what ratio must water be mixed with milk costing ₹72 per litre so that the mixture costs ₹70 per litre? (Assume that water is available free of cost.)

- Ans**
- ☐ 1. 1:34
 - ☒ 2. 1:35
 - ☐ 3. 1:28
 - ☐ 4. 1:30

Section : **Arithmetical and Numerical Ability1**

Q.1 A, B, and C enter into a partnership. They invest ₹20,000, ₹40,000, and ₹60,000, respectively. At the end of the first year, B withdraws ₹20,000, while at the end of the second year, C withdraws ₹40,000. In what ratio will the profit be shared at the end of 3 years?

- Ans**
- ☐ 1. 3:5:7
 - ☐ 2. 4:5:7
 - ☒ 3. 3:4:7
 - ☐ 4. 3:5:6

Q.2 The profit on a product is 62%. If the cost price and selling price are interchanged, what is the loss percentage (rounded off to two decimal places)?

- Ans**
- ☐ 1. 37.32%
 - ☒ 2. 38.27%
 - ☐ 3. 37.56%
 - ☐ 4. 41.41%

Q.3 A retailer buys an item with a 10% trade discount. If the trade discount is ₹18, what is the list price of the item?

- Ans**
- ☐ 1. ₹150
 - ☐ 2. ₹136
 - ☐ 3. ₹160
 - ☒ 4. ₹180

Q.4 An open cube (one surface is open) of edge 10 cm is to be painted on the outside. What would be the total cost (in ₹) of painting when it costs ₹2 per cm²?

- Ans**
- ☐ 1. 500
 - ☐ 2. 200
 - ☒ 3. 1,000
 - ☐ 4. 1,200

Q.5 If Suresh runs at 8.5 km/hr instead of walking at 4.5 km/hr, he would have covered 28 km more in the same time. Find the actual distance covered by him.

- Ans**
- ☐ 1. 36.5 km
 - ☒ 2. 31.5 km
 - ☐ 3. 59.5 km
 - ☐ 4. 48.5 km

Q.6 The surface area of a sphere is 13.86 cm^2 . Find its radius. (Use $\pi = 22/7$)

- Ans
- ☐ 1. 1.15 cm
 - ☐ 2. 1.20 cm
 - ☒ 3. 1.05 cm
 - ☐ 4. 1.10 cm

Q.7 A cylindrical water tank has a radius of 3 m and a height of 5 m. Find the curved surface area of the cylinder. (Use $\pi = 3.14$)

- Ans
- ☐ 1. 91.2 m²
 - ☐ 2. 94 m²
 - ☐ 3. 84.2 m²
 - ☒ 4. 94.2 m²

Q.8 Amit and Riya started a cloud kitchen business. Amit invested ₹40,000 for the entire year. Riya invested ₹50,000 at the beginning, but after 4 months, she withdrew ₹20,000. The total profit earned at the end of the year was ₹54,000. What is Riya's approximate share in the total profit (in ₹)?

- Ans
- ☒ 1. 25,826
 - ☐ 2. 25,500
 - ☐ 3. 26,600
 - ☐ 4. 26,500

Q.9 A boat's speed in still water is 15 km/h. The stream speed is 5 km/h while going downstream, but due to tide it becomes 7 km/h during the return trip upstream. The boat travels 24 km downstream and then returns to the starting point. What is the total time for the complete journey?

- Ans
- ☐ 1. 4.0 hours
 - ☐ 2. 5.0 hours
 - ☒ 3. 4.2 hours
 - ☐ 4. 5.3 hours

Q.10 Two trains, P and Q, start from stations A and B, respectively, which are 315 km apart. P leaves A at 8:00 AM at 90 km/hr. Q leaves B at 9:00 AM towards A at 60 km/hr. At what time do they meet?

- Ans
- ☐ 1. 10:50 AM
 - ☐ 2. 10:45 AM
 - ☐ 3. 11:30 AM
 - ☒ 4. 10:30 AM

Q.11 Atharv and Bonita can complete a job in 16 days working together. At for 10 days, and left. How long will Atharv take to complete the remain



- Ans
- ☐ 1. 18 days
 - ☒ 2. 19 days
 - ☐ 3. 22 days
 - ☐ 4. 20 days

Q.12 The profit made on a product is 22%. What is the loss percentage (correct to two decimal places) incurred on the sale if the figures of both cost price and selling price are interchanged?

- Ans
- ☒ 1. 18.03%
 - ☐ 2. 19.77%
 - ☐ 3. 19.48%
 - ☐ 4. 15.97%

Q.13 Arjun and Neha started an online business. Arjun invested ₹20,000 for 12 months, while Neha invested ₹30,000 for 6 months. At the end of the year, the total profit earned was ₹11,000. What is Neha's approximate share in the profit (in ₹)?

- Ans
- ☐ 1. 4,500
 - ☐ 2. 4,200
 - ☒ 3. 4,714
 - ☐ 4. 4,820

Q.14 The sides of a triangle are 13.60 cm, 14.20 cm and 15.80 cm. Find its area. (Round off your answer to 2 decimal places.)

- Ans
- ☐ 1. 90.64 cm²
 - ☐ 2. 90.14 cm²
 - ☒ 3. 90.29 cm²
 - ☐ 4. 90.84 cm²

Q.15 A train is travelling at 54 km/h and completely crosses another train, which has twice its length and is moving in the opposite direction at 36km/h, in 15 seconds. It also passes a railway platform in 45 seconds. What is the length of the platform?

- Ans
- ☐ 1. 564 meters
 - ☐ 2. 480 meters
 - ☐ 3. 512 meters
 - ☒ 4. 550 meters

Q.16 A full tank gets emptied in 9 min due to presence of a hole in it. On of What is the capacity of tank?



- Ans
- ☐ 1. 370 L
 - ☒ 2. 360 L
 - ☐ 3. 358 L
 - ☐ 4. 365 L

Q.17 11 men and 15 women can complete a piece of work in 16 days, and 18 men and 8 women can complete the same work in 10 days. The work of how many women is equivalent to that of one man?

- Ans
- ☐ 1. 42
 - ☐ 2. 45
 - ☐ 3. 41
 - ☒ 4. 40

Q.18 The marked price of a laptop is ₹38,800, but it was sold for ₹32,400. What is the total discount amount?

- Ans
- ☐ 1. ₹6,300
 - ☐ 2. ₹6,500
 - ☐ 3. ₹6,200
 - ☒ 4. ₹6,400

Q.16 In the context of water transport, what is the specific purpose of "National Waterway 1" (NW 1)?

- Ans**
- ☐ 1. To facilitate navigation on the Krishna River (Vijayawada - Muktyala)
 - ☒ 2. To enable inland movement on the Ganga River from Allahabad to Haldia
 - ☐ 3. To connect the canal stretches between Kollam and Kotapuram
 - ☐ 4. To facilitate navigation on the Brahmaputra River in Assam

Q.17 Which statement among the following is/are Correct about Religious Communities of India, according to 2011 Census.

1. Jains have major concentration in the urban areas of Rajasthan, Gujarat and Maharashtra, while the Buddhists are concentrated mostly in Maharashtra.
2. The other areas of Buddhist majority are Sikkim, Arunachal Pradesh, Ladakh in Jammu & Kashmir, Tripura, and Lahul and Spiti in Himachal Pradesh.

- Ans**
- ☐ 1. Statement 1-Correct & Statement 2- Not Correct
 - ☒ 2. Statement 1-Correct & Statement 2- Correct
 - ☐ 3. Statement 1-Not Correct & Statement 2- Not Correct
 - ☐ 4. Statement 1- Not Correct & Statement 2- Correct

Q.18 What is another name for the Latina type of shikhara?

- Ans**
- ☒ 1. Rekha-prasada
 - ☐ 2. Mandapa-prasada
 - ☐ 3. Kuta-prasada
 - ☐ 4. Dravida-prasada

Q.19 What is the primary limitation of Ocean Thermal Energy Conversion (OTEC) infrastructure to run efficiently?

- Ans**
- ☐ 1. It produces large amounts of methane gas which is harmful to the environment.
 - ☐ 2. The density of water requires more turbines (at least five times) than those used in wind farms.
 - ☒ 3. It requires a significant temperature difference (of at least 20° C) between surface and deep water.
 - ☐ 4. It can only function during high tide when water rushes into the reservoirs.

Q.20 Judicial interpretation in cases, such as the M.C. Mehta series, treated the constitutional duty relating to protection of the environment as binding on State action. This duty is contained in which of the following Articles of the Indian Constitution?

- Ans**
- ☐ 1. Article 32
 - ☒ 2. Article 51A(g)
 - ☐ 3. Article 25
 - ☐ 4. Article 18

Section : Arithmetical and Numerical Ability

Q.1 In a test out of a maximum of 105 marks, A scored 75 marks and B scored 60 marks. What percentage of B's marks was A's marks?

- Ans**
- ☐ 1. 80%
 - ☒ 2. 125%
 - ☐ 3. 71.43%
 - ☐ 4. 105%

Q.2 A trader lost 10% by selling a shirt for ₹900. If he gains $x\%$ by selling it for ₹1,510, the value of x is:11658

- Ans
- ☒ 1. 51
 - ☐ 2. 61
 - ☐ 3. 41
 - ☐ 4. 66

Q.3 The average of the first 26 odd natural numbers is:

- Ans
- ☐ 1. 27
 - ☐ 2. 26.5
 - ☐ 3. 25.5
 - ☒ 4. 26

Q.4 A trader lost 10% by selling a shirt for ₹900. If he gains $x\%$ by selling it for ₹1,480, the value of x is:11661

- Ans
- ☐ 1. 58
 - ☒ 2. 48
 - ☐ 3. 38
 - ☐ 4. 63

Q.5 A certain amount triples itself in 4 years when compounded annually.

- Ans
- ☒ 1. 30%
 - ☐ 2. 28%
 - ☐ 3. 32%
 - ☐ 4. 24%

Q.6 A student scores 12, 15, and 9 marks in three subjects. What is the minimum score she needs in the fourth subject to achieve an average of at least 15?

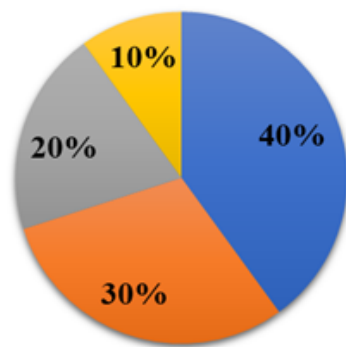
- Ans
- ☐ 1. 18
 - ☐ 2. 20
 - ☒ 3. 24
 - ☐ 4. 15

Q.7 A number 460 is successively increased by 4% and 6%. Find the resultant number. (Round off your answer to two decimal places.)

- Ans
- ☒ 1. 507.10
 - ☐ 2. 495.50
 - ☐ 3. 497.20
 - ☐ 4. 510.10

Q.8 A company's revenue distribution is shown in the pie chart. If the total revenue is ₹1,200 crore, what is the revenue from product B?

Company's revenue distribution

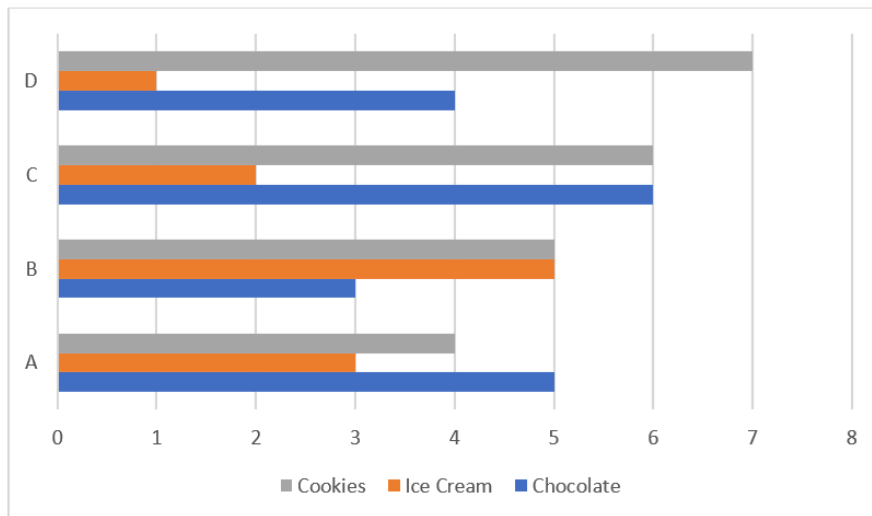


■ Product A ■ Product B ■ Product C ■ Product D

- Ans
- ☒ 1. ₹240 crore
 - ☒ 2. ₹360 crore
 - ☒ 3. ₹300 crore
 - ☒ 4. ₹480 crore

Q.9 Study the following graph carefully and answer the question given below it.

The graph shows the number of items (in thousands), i.e., cookies, ice cream, and chocolate, produced by different companies.



What is the difference between the total production of Company C and Company D?

- Ans
- ☒ 1. 4000
 - ☒ 2. 2
 - ☒ 3. 4
 - ☒ 4. 2000

Q.10 The monthly incomes of two friends, Vijay and Mohan, are in the ratio 5 : 9, respectively, and each of them saves ₹93,000 every month. If the ratio of their monthly expenditure is 2 : 4, find the monthly income of Vijay (in ₹).

- Ans
- ☒ 1. 4,64,000
 - ☒ 2. 4,66,000
 - ☒ 3. 4,65,000
 - ☒ 4. 6,51,000

Q.11 A sum of ₹1,25,000 is invested at 14% per annum compound interest, compounded annually. If the amount becomes ₹1,85,193, what is the time of the investment?

- Ans
- ☐ 1. 2.5 years
 - ☒ 2. 3 years
 - ☐ 3. 3.5 years
 - ☐ 4. 2 years

Q.12 If the HCF of three numbers 'x', 153 and 102 is 17, then the number 'x' CANNOT be:

- Ans
- ☐ 1. 34
 - ☐ 2. 85
 - ☐ 3. 68
 - ☒ 4. 51

Q.13 The average of first 4 odd natural numbers is:

- Ans
- ☐ 1. 4.5
 - ☒ 2. 4
 - ☐ 3. 5
 - ☐ 4. 3.5

Q.14 Simplify: $\frac{1}{\frac{2}{3} + \frac{6}{8}} \div \frac{7}{27}$

- Ans
- ☐ 1. $2\frac{13}{18}$
 - ☐ 2. $2\frac{19}{119}$
 - ☐ 3. $2\frac{1}{19}$
 - ☒ 4. $2\frac{86}{119}$

Q.15 Simplify $4 \times (15 \times (3^2)) \div 11 + 96 - 23$

- Ans
- ☐ 1. $\frac{1336}{11}$
 - ☒ 2. $\frac{1343}{11}$
 - ☐ 3. $\frac{1349}{11}$
 - ☐ 4. $\frac{1345}{11}$

Q.16 What is the maximum value that must be assigned to A so that the 8-digit number 993A6729 is divisible by 3?

- Ans
- ☐ 1. 4
 - ☒ 2. 9
 - ☐ 3. 6
 - ☐ 4. 5

Q.17 A sum of ₹4,00,000 is invested at 15% per annum compound interest, compounded annually. If the amount becomes ₹5,29,000, what is the time of the investment?

- Ans
- ☐ 1. 2.5 years
 - ☒ 2. 2 years
 - ☐ 3. 1 year
 - ☐ 4. 1.5 years

Q.18 What sum of money (in ₹) will amount to ₹3480 at 5% per annum simple interest in 5 years?

- Ans
- ☐ 1. 13920
 - ☒ 2. 2784
 - ☐ 3. 2834
 - ☐ 4. 2734

Q.19 A person who spends 50% of his monthly income is able to save ₹6,570 per month. His monthly expenses (in ₹) are:

- Ans
- ☐ 1. 6,655
 - ☒ 2. 6,570
 - ☐ 3. 6,650
 - ☐ 4. 6,481

Q.20 The average of the marks of 14 students in a class is 64. If the marks of each student are doubled, find the new average.

- Ans
- ☐ 1. 64
 - ☐ 2. 14
 - ☒ 3. 128
 - ☐ 4. 28

Section : Arithmetical and Numerical Ability1

Q.1 A solid cylinder of radius 7 cm and height 6 cm is melted and recast into a sphere. Find the radius of the sphere. (Round off your answer to two decimal places.)

- Ans
- ☒ 1. 6.04 cm
 - ☐ 2. 6.24 cm
 - ☐ 3. 6.16 cm
 - ☐ 4. 6.15 cm

Q.2 A can do a job in 20 days and B can do the same job in 13 days. With the help of C, they did the job in 2 days. Then, C alone can do the job in:

- Ans
- ☐ 1. $5\frac{66}{97}$ days
 - ☒ 2. $2\frac{66}{97}$ days
 - ☐ 3. $12\frac{66}{97}$ days
 - ☐ 4. $6\frac{66}{97}$ days

Q.3 A decorative spherical metal ball used in a garden has a diameter of 70 cm. If it needs to be painted completely, what is the total surface area to be painted? (Take $\pi = 22/7$)

- Ans
- ☐ 1. 12,864 cm²
 - ☒ 2. 15,400 cm²
 - ☐ 3. 17,693 cm²
 - ☐ 4. 10,780 cm²

Q.4 A, B and C can do a piece of work in 16, 24 and 48 days, respectively. In how many days can A do the work if he is assisted by both B and C on every third day?

- Ans
- ☐ 1. 15
 - ☐ 2. 14
 - ☒ 3. 12
 - ☐ 4. 10

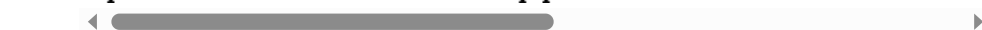
Q.5 Find the fourth proportional to $\frac{1}{2}$, $\frac{1}{3}$ and $\frac{1}{4}$.

- Ans
- ☐ 1. $\frac{1}{8}$
 - ☐ 2. $\frac{1}{12}$
 - ☐ 3. $\frac{1}{24}$
 - ☒ 4. $\frac{1}{6}$

Q.6 The profit made on a product is 15%. What is the loss percentage (correct to two decimal places) incurred on the sale if the figures of both cost price and selling price are interchanged?

- Ans
- ☐ 1. 14.49%
 - ☒ 2. 13.04%
 - ☐ 3. 16.03%
 - ☐ 4. 11.08%

Q.7 Pipe A is 5 times slower than the pipe B and takes 40 min more time to fill a tank than pipe B.



- Ans
- ☐ 1. 16 min
 - ☒ 2. 10 min
 - ☐ 3. 15 min
 - ☐ 4. 12 min

Q.8 Neetu travels 180 km in two parts. She drives the first part at 35 km/h and the second part at 65 km/h. The total journey takes 5 hours. Find the distance of the first part (rounded off to the nearest km).

- Ans
- ☐ 1. 163 km
 - ☐ 2. 153 km
 - ☒ 3. 169 km
 - ☐ 4. 159 km

Q.9 A shopkeeper marks the price of a shirt at ₹1,200 and offers a 25% discount on the marked price. What is the selling price of the shirt?

- Ans ☒ 1. ₹900
☐ 2. ₹1,000
☐ 3. ₹950
☐ 4. ₹850

Q.10 4 women and 5 men can complete a certain work in 15 days, whereas 2 men and 3 women can do it in 30 days. In how many days can 10 women complete the same work?

- Ans ☒ 1. 21
☐ 2. 18
☐ 3. 24
☐ 4. 14

Q.11 An online retail company recorded sales of 36 items in April and 324 items in June. Assuming that the sales in May represent the mean proportional between April and June, find the number of items sold in May.

- Ans ☒ 1. 108
☐ 2. 144
☐ 3. 216
☐ 4. 72

Q.12 A man leaves his home for the office at a speed of 40 km/hr and reaches 15 minutes late. If he increases his speed by 10 km/hr, he reaches 5 minutes early. Find the normal time required to reach the office exactly on time.

- Ans ☐ 1. 1 hour 30 minutes
☐ 2. 1 hour 20 minutes
☒ 3. 1 hour 25 minutes
☐ 4. 1 hour 15 minutes

Q.13 A, B, and C invest in the ratio 3 : 4 : 5. If the total profit is ₹24,000, what is C's share?

- Ans ☐ 1. ₹8,000
☐ 2. ₹6,000
☐ 3. ₹12,000
☒ 4. ₹10,000

Q.14 The profit made on a product is 73%. What is the loss percentage (rounded off to two decimal places) incurred on the sale if the figures of both cost price and selling price are interchanged?

- Ans ☐ 1. 39.93%
☐ 2. 43.59%
☐ 3. 44.17%
☒ 4. 42.20%

Q.15 If the areas of the three adjacent faces of a cuboidal box are 64 cm^2 , 96 cm^2 , and 144 cm^2 respectively, then find the volume of the box.

- Ans ☐ 1. 248 cm^3
☐ 2. 260 cm^3
☐ 3. 216 cm^3
☒ 4. 240 cm^3

Q.18 Which Article of the Directive Principles of State Policy (DPSP) is implemented by the 73rd Amendment?

- Ans**
- ☒ 1. Article 40
 - ☐ 2. Article 21
 - ☐ 3. Article 15
 - ☐ 4. Article 32

Q.19 When polypeptide chains fold into a compact, spherical shape, they form _____.

- Ans**
- ☐ 1. Columnar proteins
 - ☐ 2. Fibrous proteins
 - ☒ 3. Globular proteins
 - ☐ 4. Ciliated proteins

Q.20 During cooking, some foods develop a brown color due to a heat-induced reaction involving sugars only, without the participation of amino acids. Which process best describes this browning reaction?

- Ans**
- ☐ 1. Neutralization
 - ☐ 2. Saponification
 - ☐ 3. Fermentation
 - ☒ 4. Caramelization

Section : **Arithmetical and Numerical Ability**

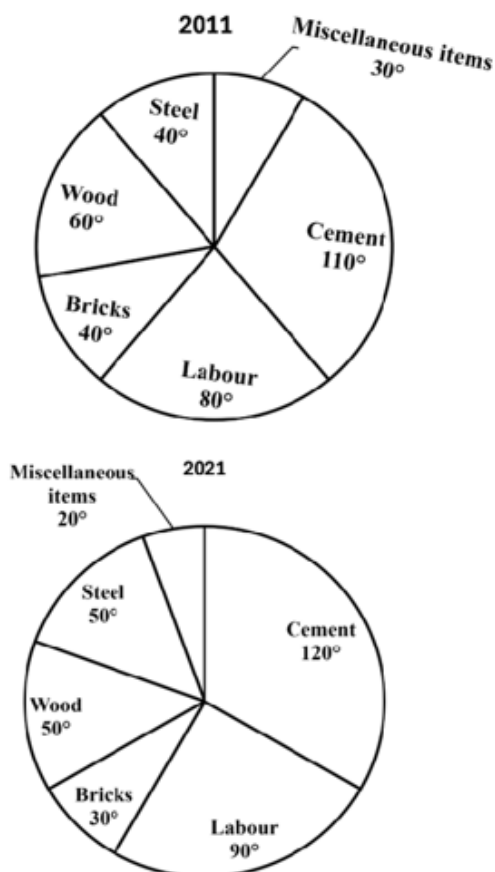
Q.1 The current population of a town is 12,600. It increases by 25% in the first year and 60% in the second year, but decreases by 62% in the third year. What will be the population of the town at the end of the third year?

- Ans**
- ☐ 1. 9,574
 - ☒ 2. 9,576
 - ☐ 3. 9,567
 - ☐ 4. 9,566

Q.2 In a data analytics dashboard of an online learning platform, the average score of 7 students in a mock test is recorded as 66. One of the students scored 80 marks. What is the average score of the remaining six students (round your answer to nearest integer)?

- Ans**
- ☒ 1. 64
 - ☐ 2. 66
 - ☐ 3. 68
 - ☐ 4. 62

Q.3 The following pie-charts show the expenses on various heads in construction of a house in 2011 and 2021.



If the total cost of constructing the house is ₹6,00,000 in 2011 and ₹7,20,000 in 2021, what is the amount spent on wood in 2011 and 2021, respectively?

- Ans
- ☒ 1. ₹70000 , ₹100000
 - ☒ 2. ₹50000 , ₹100000
 - ☒ 3. ₹100000 , ₹100000
 - ☒ 4. ₹50000 , ₹70000

Q.4 Find the simple interest (in ₹) on ₹1,500 at 6% per month for 10 months.

- Ans
- ☒ 1. 900
 - ☒ 2. 60
 - ☒ 3. 150
 - ☒ 4. 75

Q.5 The average of the first 32 odd natural numbers is:

- Ans
- ☒ 1. 31.5
 - ☒ 2. 32.5
 - ☒ 3. 33
 - ☒ 4. 32

Q.6 An investor deposits a sum of ₹20,000 in a scheme that offers 10% interest compounded annually. How many years must the sum remain in the account to grow to ₹26,620?

- Ans
- ☒ 1. 2
 - ☒ 2. 5
 - ☒ 3. 4
 - ☒ 4. 3

Q.7 The average weight (in kg) of a family of five members whose weights are 40 kg, 49 kg, 57 kg, 70 kg and 38 kg is:

- Ans**
- ☒ 1. 50.8
 - ☐ 2. 49.8
 - ☐ 3. 51.8
 - ☐ 4. 52.8

Q.8 A sum of ₹5,30,000 is invested for 1 year at 6% per annum, compounded half yearly. What is the compound interest earned at the end of the year?

- Ans**
- ☐ 1. ₹30,956
 - ☐ 2. ₹33,917
 - ☐ 3. ₹32,464
 - ☒ 4. ₹32,277

Q.9 The following table provides the sales of laptops by a store over 5 months.

Month	January	February	March	April	May
Laptops Sold	120	135	150	130	165

What is the average number of laptops sold per month over these 5 months?

- Ans**
- ☐ 1. 160
 - ☐ 2. 135
 - ☒ 3. 140
 - ☐ 4. 150

Q.10 The HCF and the LCM of two numbers are 14 and 140, respectively. If one of the numbers is 70, find the other one.

- Ans**
- ☐ 1. 95
 - ☒ 2. 28
 - ☐ 3. 90
 - ☐ 4. 70

Q.11 The average of 8 results is 49 and that of the first 7 is 48. The 8th result is:

- Ans**
- ☐ 1. 55
 - ☐ 2. 48
 - ☒ 3. 56
 - ☐ 4. 49

Q.12 If an amount increases from ₹60 to ₹72, what is the percentage increase?

- Ans**
- ☐ 1. 16%
 - ☐ 2. 18%
 - ☐ 3. 24%
 - ☒ 4. 20%

Q.13 The price of peanut oil is ₹1,200 for 5 litres. If the price is decreased by 2.5% and then increased by 5%, then what is the cost of 8 litres?

- Ans**
- ☒ 1. ₹1,965.60
 - ☐ 2. ₹1,980
 - ☐ 3. ₹1,765.40
 - ☐ 4. ₹1,890.50

Q.14 A trader lost 10% by selling a shirt for ₹900. If he gains $x\%$ by selling it for ₹1,440, the value of x is: 11665

- Ans
- ☐ 1. 34
 - ☐ 2. 59
 - ☐ 3. 54
 - ☒ 4. 44

Q.15 A number is first increased by 40% and then decreased by 50%. What is the net percentage change?

- Ans
- ☐ 1. 20% decrease
 - ☐ 2. 10% decrease
 - ☐ 3. No change
 - ☒ 4. 30% decrease

Q.16 Which of the following numbers is divisible by 74?

- Ans
- ☐ 1. 548712
 - ☒ 2. 549006
 - ☐ 3. 550840
 - ☐ 4. 551002

Q.17 Find the value of y , satisfying $24 \times 2 \times 585 \div \sqrt{2025} = y + 890$

- Ans
- ☒ 1. -266
 - ☐ 2. -260
 - ☐ 3. -270
 - ☐ 4. -262

Q.18 A trader lost 10% by selling a shirt for ₹900. If he gains $x\%$ by selling it for ₹1380, the value of x is: 11671

- Ans
- ☐ 1. 28
 - ☒ 2. 38
 - ☐ 3. 53
 - ☐ 4. 48

Q.19 The LCM of the numbers 3.4 and 0.6 is:

- Ans
- ☐ 1. 102
 - ☐ 2. 0.102
 - ☒ 3. 10.2
 - ☐ 4. 1.02

Q.20 A sum of ₹1,10,000 is invested for 1 year at 2% per annum, compounded half-yearly. What is the compound interest earned at the end of the year? ear

- Ans
- ☐ 1. ₹2,896
 - ☐ 2. ₹2,440
 - ☐ 3. ₹1,813
 - ☒ 4. ₹2,211

Q.1 Rahul walks to a park and returns by bike along the same route. The total time taken for the trip is 4 hours. If he had used his bike for both journeys, he would have saved 1 hour. Find the time taken by him to walk both ways.

- Ans**
- ☐ 1. 4 hours
 - ☐ 2. 5.5 hours
 - ☐ 3. 4.5 hours
 - ☒ 4. 5 hours

Q.2 The profit made on a product is 71%. What is the loss percentage (rounded off to two decimal places) incurred on the sale if the figures of both cost price and selling price are interchanged?

- Ans**
- ☐ 1. 41.89%
 - ☒ 2. 41.52%
 - ☐ 3. 44.68%
 - ☐ 4. 43.03%

Q.3 A company wants to paint the outer surface of 6 identical spherical tanks, each with a radius of 2 m. If 1 litre of paint covers 25.12 m^2 , how many litres of paint are required? (Take $\pi = 3.14$)

- Ans**
- ☒ 1. 12
 - ☐ 2. 6
 - ☐ 3. 10
 - ☐ 4. 8

Q.4 An interstate transporter offers a discount of 20% on his quoted price if the booking is made one month in advance. Even after giving the discount, he makes a profit of 15% on the cost of providing the service. On one such booking made one month in advance, the transporter makes a profit of ₹7,500. What was the quoted price (in ₹)?

- Ans**
- ☐ 1. 72,585
 - ☒ 2. 71,875
 - ☐ 3. 75,550
 - ☐ 4. 75,450

Q.5 Train A is 180 m long and runs at a speed of 54 km/h. Another train B is 120 m long and runs at a constant speed. If trains A and B run in opposite directions and cross each other in 10 seconds, what is the speed of train B in km/h?

- Ans**
- ☐ 1. 60 km/h
 - ☐ 2. 36 km/h
 - ☒ 3. 54 km/h
 - ☐ 4. 48 km/h

Q.6 A cyclist travels at a speed of 20 km/h for 2 hours and subsequently increases the speed to 30 km/h for another 1 hour. What is the total distance covered by the cyclist during the trip?

- Ans**
- ☐ 1. 60 km
 - ☐ 2. 80 km
 - ☒ 3. 70 km
 - ☐ 4. 50 km

Q.7 A frustum of a right circular cone has a diameter of base and top of 22 cm and 14 cm, respectively, and a height of 12 cm. Find the volume of the frustum.

- Ans
- ☐ 1. $874\pi \text{ cm}^3$
 - ☒ 2. $988\pi \text{ cm}^3$
 - ☐ 3. $1008\pi \text{ cm}^3$
 - ☐ 4. $934\pi \text{ cm}^3$

Q.8 If a number N is added to 6, 9, 15, and 21, the resulting numbers, in that order, are in proportion. Find the fourth proportion of 4N, N+2 and 3N.

- Ans
- ☒ 1. 3.75
 - ☐ 2. 3
 - ☐ 3. 3.25
 - ☐ 4. 3.5

Q.9 The incomes of A and B are in the ratio 3 : 4, while their expenditures are in the ratio 2 : 3. If each saves ₹6,000 per month, then what is the income of B?

- Ans
- ☐ 1. ₹18,000
 - ☐ 2. ₹20,000
 - ☒ 3. ₹24,000
 - ☐ 4. ₹28,000

Q.10 A pipe can fill a tank in 24 minutes, and another pipe can fill the same tank in 36 minutes. If both pipes are opened together, what percentage of the tank will be filled in nine minutes?

- Ans
- ☐ 1. 63.75%
 - ☐ 2. 59.2%
 - ☒ 3. 62.5%
 - ☐ 4. 60.25%

Q.11 A cylindrical road roller has a diameter of 1.4 meters and a length of 2 meters. Find the total area of the road leveled by it in 500 complete revolutions.

$$\left(\text{Use } \pi = \frac{22}{7} \right)$$

- Ans
- ☐ 1. 4,800 square meters
 - ☐ 2. 4,200 square meters
 - ☐ 3. 3,800 square meters
 - ☒ 4. 4,400 square meters

Q.12 Pipes P and Q can fill a cistern in 15 minutes and 20 minutes respectively, while Pipe R can empty it in 30 minutes. Initially, Pipes P and Q are opened together for 4 minutes. Then, Pipe P is closed and Pipe R is opened alongside Q. Find the total time taken to fill the cistern from the start.

- Ans
- ☐ 1. 32 minutes
 - ☐ 2. 28 minutes
 - ☐ 3. 40 minutes
 - ☒ 4. 36 minutes

Q.13 A piece of work can be completed by A, B, and C individually in 8 days, 12 days, and 16 days respectively. A starts the work and works for the first 2 days. After that, B continues the work and completes one-third of the remaining work. Finally, C completes the rest of the work. Find the total time taken to complete the work.

- Ans**
- ☒ 1. 13 days
 - ☐ 2. 9 days
 - ☐ 3. 14 days
 - ☐ 4. 11 days

Q.14 A reservoir has two inlet pipes and one outlet pipe. Inlet pipe A can fill the tank in 8 hours, and Inlet pipe B can fill it in 12 hours, while Outlet pipe C can empty the full tank in 24 hours. If all three pipes are opened at the same time, how long will it take to completely fill the tank?

- Ans**
- ☐ 1. 8 hours
 - ☐ 2. 4 hours
 - ☒ 3. 6 hours
 - ☐ 4. 5 hours

Q.15 A shopkeeper marks an item 25% above its cost price. He offers a discount on the marked price and makes a profit of 10.5%. Find the discount rate.

- Ans**
- ☐ 1. 12.8%
 - ☐ 2. 12.2%
 - ☒ 3. 11.6%
 - ☐ 4. 10.7%

Q.16 A T-shirt has a marked price of ₹500. If two successive discounts of 20% and 15% on the marked price are applied, what will be the final selling price?

- Ans**
- ☒ 1. ₹340
 - ☐ 2. ₹450
 - ☐ 3. ₹360
 - ☐ 4. ₹240

Q.17 Two trains of lengths 120 m and 180 m are moving in opposite directions at speeds of 54 km/hr and 36 km/hr, respectively. What is the time taken for the trains to completely cross each other?

- Ans**
- ☐ 1. 10 seconds
 - ☒ 2. 12 seconds
 - ☐ 3. 14 seconds
 - ☐ 4. 15 seconds

Q.18 Two partners invest ₹5,000 and ₹7,500 in a business. If the total profit is ₹5,000, what is the positive difference between their profit shares?

- Ans**
- ☒ 1. ₹1,000
 - ☐ 2. ₹1,200
 - ☐ 3. ₹1,400
 - ☐ 4. ₹1,600

Q.18 What was the total Hindu population in India according to Census 2011?

- Ans**
- ☒ 1. 96.63 crores
 - ☐ 2. 78.69 crores
 - ☐ 3. 79.80 crores
 - ☐ 4. 90.83 crores

Q.19 In which Article did the Constitution (91st Amendment) Act, 2003 insert clause 1A which limits the size of the Council of Ministers, including the Prime Minister?

- Ans**
- ☒ 1. Article 75
 - ☐ 2. Article 55
 - ☐ 3. Article 61
 - ☐ 4. Article 89

Q.20 Which ancient Indian monument is renowned for its massive granite structure and monolithic Nandi sculpture, along with an impressive temple tower?

- Ans**
- ☐ 1. Ashokan pillars
 - ☐ 2. Pancha Rathas
 - ☐ 3. Shore Temple
 - ☒ 4. Brihadeshwara Temple

Section : **Arithmetical and Numerical Ability**

Q.1 The length and breadth of a rectangle are increased by 35% and 18%, respectively. I



- Ans**
- ☒ 1. 59.3%
 - ☐ 2. 54.3%
 - ☐ 3. 57.3%
 - ☐ 4. 56.3%

Q.2 A trader marks his goods at 46% above the cost price and allows a discount of 9% on it. If he gains x%, then the value of x is:

- Ans**
- ☐ 1. 34.86
 - ☒ 2. 32.86
 - ☐ 3. 33.86
 - ☐ 4. 31.86

Q.3 In how much time would ₹3,000 amount to ₹3,630 at 10% per annum compound interest, compounded annually?

- Ans**
- ☐ 1. $1\frac{1}{2}$ years
 - ☐ 2. $3\frac{1}{2}$ years
 - ☐ 3. 3 years
 - ☒ 4. 2 years

Q.4 Two students appeared in an examination. One of them secured 4 marks more than the other and his marks were 68% of the sum of their marks. The sum of the marks obtained by them (rounded off to two decimal places) was:

- Ans**
- ☐ 1. 12.11
 - ☐ 2. 15.11
 - ☐ 3. 7.11
 - ☒ 4. 11.11

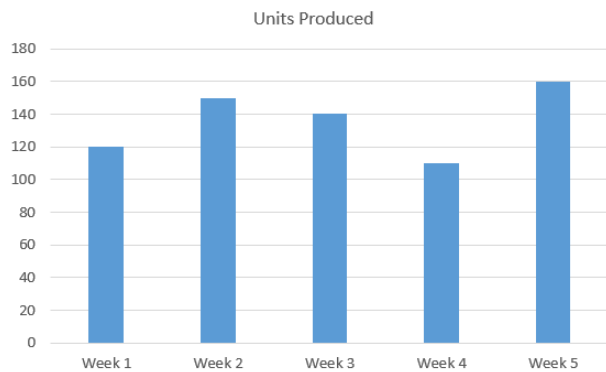
Q.5 A sum of ₹10,00,000 amounts to ₹16,01,613 in 3 years at a certain rate of interest per annum, compounded annually. The rate of interest per annum is:8155

- Ans**
- ☒ 1. 17%
 - ☐ 2. 15%
 - ☐ 3. 18%
 - ☐ 4. 14%

Q.6 What sum of money (in ₹) will amount to ₹3,720 at 4% per annum simple interest in 6 years?6966

- Ans**
- ☐ 1. 3,050
 - ☐ 2. 2,950
 - ☐ 3. 15,500
 - ☒ 4. 3,000

Q.7 If the factory aims to produce a minimum of 130 units each week, in how many weeks did the factory meet or exceed this target?

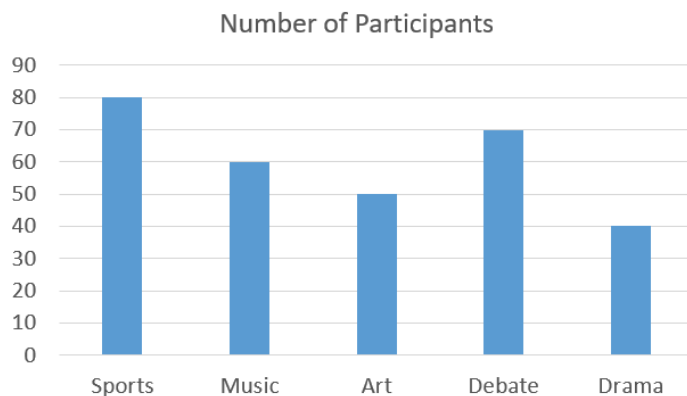


- Ans**
- ☐ 1. 2 weeks
 - ☐ 2. 5 weeks
 - ☐ 3. 4 weeks
 - ☒ 4. 3 weeks

Q.8 The cost of 58 mangoes is ₹870. What is the cost of 22 mangoes?

- Ans**
- ☒ 1. ₹330
 - ☐ 2. ₹280
 - ☐ 3. ₹380
 - ☐ 4. ₹420

Q.9 What is the total number of students who participated in Debate and Drama combined?



- Ans**
- ☒ 1. 110
 - ☐ 2. 140
 - ☐ 3. 70
 - ☐ 4. 120

Q.10 The average of first 10 natural numbers is:

- Ans
- ☐ 1. 6.5
 - ☐ 2. 5
 - ☒ 3. 5.5
 - ☐ 4. 6

Q.11 The LCM of 34, 38 and 46 is:

- Ans
- ☐ 1. 15000
 - ☒ 2. 14858
 - ☐ 3. 14786
 - ☐ 4. 15856

Q.12 A sum of ₹2,500 is invested at 2% per annum compound interest, compounded annually. If the amount becomes ₹2,601, what is the time of the investment?

- Ans
- ☐ 1. 1.5 years
 - ☐ 2. 1 year
 - ☐ 3. 2.5 years
 - ☒ 4. 2 years

Q.13 The average of 8 numbers is 37. If each number is decreased by 6, what will the new average be?

- Ans
- ☐ 1. 8
 - ☐ 2. 37
 - ☒ 3. 31
 - ☐ 4. 25

Q.14 A trader marks his goods at 45% above the cost price and allows a discount of 18% on it. If he gains x%, then the value of x is:

- Ans
- ☐ 1. 20.9
 - ☒ 2. 18.9
 - ☐ 3. 19.9
 - ☐ 4. 17.9

Q.15 On mixing two classes of students having average marks 20 and 35 respectively, the overall average obtained is 25 marks. Find the ratio of students in the classes.

- Ans
- ☐ 1. 2:3
 - ☒ 2. 2:1
 - ☐ 3. 3:1
 - ☐ 4. 1:2

Q.16 Find the value of 'a' in the expression $\frac{(477 \div 9 \times 8 + 18)}{a} = 6^2 \div$

- Ans
- ☐ 1. 41
 - ☐ 2. 37
 - ☒ 3. 34
 - ☐ 4. 35

Q.17 A man has three types of wheat costing ₹30, ₹40, and ₹50 per kg, respectively. He mixes them in the ratio 2 : 3 : 5. What is the cost price per kg of the resulting mixture?

- Ans
- ☐ 1. ₹42
 - ☒ 2. ₹43
 - ☐ 3. ₹41
 - ☐ 4. ₹40

Q.18 The length and breadth of a rectangle are increased by 12% and 5% respectively. What is the percentage increase in area?

- Ans
- ☒ 1. 17.6%
 - ☐ 2. 17.4%
 - ☐ 3. 17.7%
 - ☐ 4. 17.5%

Q.19 Simplify: $\frac{5^{28} \times 7^3 \times 119 \times 3^{25}}{15^{25} \times 17}$

- Ans
- ☐ 1. 315982
 - ☐ 2. 309456
 - ☐ 3. 312098
 - ☒ 4. 300125

Q.20 If a T-shirt originally costs ₹1,199 and is now on sale for ₹999, what is the percentage decrease in price (rounded off to one decimal place)?

- Ans
- ☐ 1. 13.4%
 - ☐ 2. 14.8%
 - ☐ 3. 12.5%
 - ☒ 4. 16.7%

Section : Arithmetical and Numerical Ability1

Q.1 Two trains of lengths 180 m and 160 m are running with speeds of 95 km /hr and 85 km /hr respectively towards each other on parallel lines. If they are 110 m apart, after how many seconds will they cross each other?

- Ans
- ☐ 1. 14
 - ☒ 2. 9
 - ☐ 3. 12
 - ☐ 4. 10

Q.2 The profit made on a product is 75%. What is the loss percentage (correct to two decimal places) incurred on the sale if the figures of both cost price and selling price are interchanged?

- Ans
- ☐ 1. 45.05%
 - ☒ 2. 42.86%
 - ☐ 3. 40.01%
 - ☐ 4. 41.44%

Q.3 A bus moving at a speed of 42 km/hr overtakes a truck 140 meters ahead going in the same direction in 36 seconds. What is the speed of the truck?

- Ans
- ☐ 1. 27 km/hr
 - ☐ 2. 30 km/hr
 - ☒ 3. 28 km/hr
 - ☐ 4. 25 km/hr

Q.4 A work can be completed by A, B, C, and D in 5 days, 6 days, 8 days and 10 days, respectively, working alone. They all decided to work one by one on alternate days, starting with B on the first day, D on the second day, A on the third day and C on the fourth day, again B on the fifth day and so on. In how many days will the work get finished?

- Ans
- ☐ 1. $5\frac{12}{19}$ days
 - ☐ 2. $7\frac{12}{23}$ days
 - ☐ 3. $8\frac{19}{21}$ days
 - ☒ 4. $6\frac{17}{24}$ days

Q.5 A merchant has announced a 30% rebate on the marked price of readymade garments at the time of sale. If a purchaser wants a rebate of ₹408, how many shirts, each marked at ₹340, should he purchase?

- Ans
- ☐ 1. 3
 - ☐ 2. 5
 - ☒ 3. 4
 - ☐ 4. 2

Q.6 Two trains of length 110 m and 90 m are running on parallel lines in the same direction with speeds of 35 km/hr and 40 km/hr, respectively. How long will the faster train take to completely overtake the other train?

- Ans
- ☐ 1. 158 seconds
 - ☐ 2. 154 seconds
 - ☒ 3. 144 seconds
 - ☐ 4. 148 seconds

Q.7 A can complete a job in 18 days, and B can complete the same job in 10 days. With the help of C, they completed the job in 3 days. Then, C alone can complete the job in:

- Ans
- ☒ 1. $5\frac{5}{8}$ days
 - ☐ 2. $7\frac{5}{8}$ days
 - ☐ 3. $14\frac{5}{8}$ days
 - ☐ 4. $11\frac{5}{8}$ days

Q.8 A can complete a piece of work alone in 20 days, and B can destroy the same work alone in 30 days. If they work on alternate days (i.e., A works on odd days and B works on even days), in how many days will the work be completed for the first time?

- Ans
- ☐ 1. 110
 - ☐ 2. 105
 - ☒ 3. 115
 - ☐ 4. 120

Q.9 T and P together can complete a work in 12 days. T alone takes twice as long as P alone to finish the work. How many days will T alone take to complete the work?

- Ans
- ☐ 1. 25
 - ☒ 2. 36
 - ☐ 3. 15
 - ☐ 4. 18

Q.10 The profit made on a product is 93%. What is the loss percentage (correct to two decimal places) incurred on the sale if the figures of both cost price and selling price are interchanged?

- Ans
- ☐ 1. 48.24%
 - ☒ 2. 48.19%
 - ☐ 3. 47.73%
 - ☐ 4. 45.46%

Q.11 A solid hemisphere of radius 24.5 cm is melted and recast into smaller hemispheres of radius 10.5 cm. How many complete smaller hemispheres are formed?

- Ans
- ☒ 1. 12
 - ☐ 2. 15
 - ☐ 3. 14
 - ☐ 4. 13

Q.12 The distance between two places A and B is 440 km. A train starts from A at 50 kmph at 6:00 a.m. and another starts from B at 80 kmph at 7:00 a.m. towards each other. At what time will they meet?

- Ans
- ☐ 1. 11:35 am
 - ☐ 2. 10:40 am
 - ☒ 3. 10:00 am
 - ☐ 4. 11:20 am

Q.13 The circumference of the base of a cylindrical vessel is 132 cm and its height is 50 cm. How many litres of water can it hold?

$$\left(\text{Use } \pi = \frac{22}{7} \right)$$

- Ans
- ☐ 1. 77.7
 - ☒ 2. 69.3
 - ☐ 3. 67.9
 - ☐ 4. 71.6

Q.14 A solid metallic sphere of radius 9 cm is melted and recast into a solid cone of radius 6 cm. Find the height of the cone.

- Ans
- ☐ 1. 54 cm
 - ☐ 2. 27 cm
 - ☐ 3. 63 cm
 - ☒ 4. 81 cm

Q.19 Which change takes place when iron utensils rust in the kitchen?

- Ans
- ☐ 1. Physical change
 - ☐ 2. Temporary change
 - ☐ 3. Reversible change
 - ☒ 4. Chemical change

Q.20 Turmeric turns red in the presence of soap solution because soap is ____.

- Ans
- ☐ 1. Neutral
 - ☐ 2. Salty
 - ☒ 3. Basic
 - ☐ 4. Acidic

Section : Arithmetical and Numerical Ability

Q.1 Simplify $\frac{(873 + 542)^2 + (873 - 542)^2}{(873 \times 873 + 542 \times 542)}$.

- Ans
- ☐ 1. 8
 - ☐ 2. 4
 - ☐ 3. 1
 - ☒ 4. 2

Q.2 Simplify: $8 \text{ of } \frac{5}{2} \div 4 \times 3 + 9 \div \frac{3}{2} \text{ of } \frac{2}{9}$.

- Ans
- ☐ 1. 35
 - ☒ 2. 42
 - ☐ 3. 49
 - ☐ 4. 56

Q.3 What sum of money (in ₹) will amount to ₹3,720 at 5% per annum simple interest in 4 years?⁶⁹⁶⁵

- Ans
- ☐ 1. 18,600
 - ☐ 2. 3,050
 - ☒ 3. 3,100
 - ☐ 4. 3,150

Q.4 A product's price is first decreased by 20% and then increased by 20%. What is the net percentage decrease in the price?

- Ans
- ☒ 1. 4
 - ☐ 2. 0
 - ☐ 3. 2
 - ☐ 4. 5

Q.5 The length of a rectangle is decreased by 20%, and the width is increased by 30%. Find the percentage change in the area of the rectangle.

- Ans
- ☒ 1. 4% increase
 - ☐ 2. 2% decrease
 - ☐ 3. 2% increase
 - ☐ 4. 4% decrease

Q.6 Ravi gets a 10% increase in his sales in the first year and a 15% increase in the second year. If his present sales amount is ₹1,26,500, what was his sales amount (in ₹) two years ago?

- Ans
- ☐ 1. 1,01,000
 - ☐ 2. 1,10,000
 - ☒ 3. 1,00,000
 - ☐ 4. 1,02,500

Q.7 A merchant has 30 kg of rice at ₹40 per kg and 40 kg of rice at ₹65 per kg. If he mixes both types, what is the average price per kg of the mixture (rounded off to two decimal places)?

- Ans
- ☐ 1. ₹52.29
 - ☒ 2. ₹54.29
 - ☐ 3. ₹53.29
 - ☐ 4. ₹55.29

Q.8 The average of the first 98 natural numbers is:

- Ans
- ☐ 1. 49
 - ☐ 2. 50.5
 - ☐ 3. 50
 - ☒ 4. 49.5

Q.9 The average of the first 101 natural numbers is:

- Ans
- ☐ 1. 50.5
 - ☐ 2. 52
 - ☒ 3. 51
 - ☐ 4. 51.5

Q.10 Simplify

$$\left(\frac{x^1}{x^m}\right)^{1+m} \left(\frac{x^m}{x^n}\right)^{m+n} \left(\frac{x^n}{x^1}\right)^{n+1}$$

- Ans
- ☐ 1. n
 - ☒ 2. 1
 - ☐ 3. l
 - ☐ 4. m

Q.11 A solution contains acid and water in the ratio 3 : 5. How much water should be added to 40 litres of this solution to make the ratio 3 : 7?

- Ans
- ☐ 1. 8 litres
 - ☒ 2. 10 litres
 - ☐ 3. 12 litres
 - ☐ 4. 14 litres

Q.12 A sum of ₹10,000 is invested at 7% per annum compound interest, compounded annually. If the amount becomes ₹11,449, what is the time of the investment?

- Ans
- ☐ 1. 1 year
 - ☒ 2. 2 years
 - ☐ 3. 1.5 years
 - ☐ 4. 2.5 years

Q.13 A sum of money is invested at 10% per annum compounded annually. If the interest earned in the second year is ₹1,100, find the principal amount.

- Ans
- ✓ 1. ₹10,000
 - ✗ 2. ₹9,000
 - ✗ 3. ₹11,000
 - ✗ 4. ₹9,500

Q.14 A manufacturer sells a product to a wholesaler at a profit of 44%. The wholesaler, in turn, sells it to a retailer at a profit of 25%, and the retailer sells it to a customer at a profit of 25%. If the customer pays ₹783, find the cost price (in ₹) for the manufacturer.

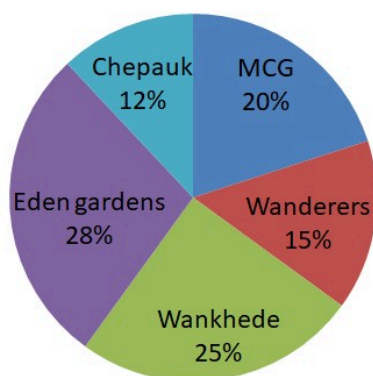
- Ans
- ✓ 1. 348
 - ✗ 2. 346
 - ✗ 3. 351
 - ✗ 4. 349

Q.15 Simplify $10 \times (11 \times (4^2)) \div 7 + 37 - 55$

- Ans
- ✗ 1. $\frac{1628}{7}$
 - ✗ 2. $\frac{1636}{7}$
 - ✗ 3. $\frac{1642}{7}$
 - ✓ 4. $\frac{1634}{7}$

Q.16 The given pie chart shows the number of cricket matches played by team India at five different cricket stadiums around the world. Study the pie chart and answer the question that follows.

**Total number of matches
played by team india= 300**



The number of matches played by team India at MCG is what percentage of the number of matches played by them at Wankhede?

- Ans
- ✗ 1. 70%
 - ✓ 2. 80%
 - ✗ 3. 65%
 - ✗ 4. 74%

Q.17 A sum of ₹670000 is invested for 1 year at 10% per annum, compounded half yearly. What is the compound interest earned at the end of the year?

- Ans
- ☐ 1. ₹69151
 - ☐ 2. ₹70487
 - ☒ 3. ₹68675
 - ☐ 4. ₹70163

Q.18 Two students appeared in an examination. One of them secured 10 marks more than the other and his marks were 52% of the sum of their marks. The sum of the marks obtained by them was:

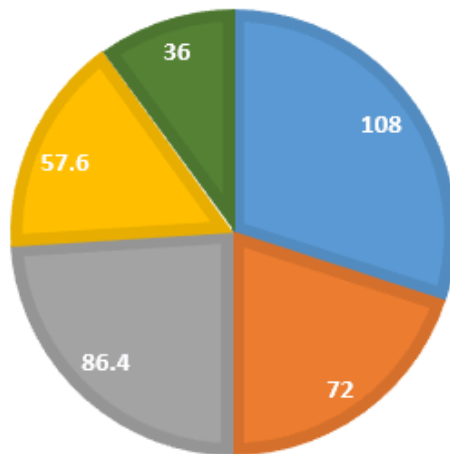
- Ans
- ☐ 1. 246
 - ☐ 2. 226
 - ☒ 3. 250
 - ☐ 4. 220

Q.19 A manufacturer sells a product to a wholesaler at a profit of 25%. The wholesaler, in turn, sells it to a retailer at a profit of 36%, and the retailer sells it to a customer at a profit of 25%. If the customer pays ₹119, find the cost price (in ₹) for the manufacturer.

- Ans
- ☐ 1. 55
 - ☐ 2. 57
 - ☐ 3. 53
 - ☒ 4. 56

Q.20 The following pie chart shows the degree-wise distribution of the favourite fruits of 50 students in a class. What percentage of students like mango?

**FAVOURITE FRUITS OF STUDENTS IN A CLASS
(IN DEGREES)**



■ Mango ■ Apple ■ Banana ■ Grapes ■ Oranges

- Ans
- ☐ 1. 32%
 - ☐ 2. 28%
 - ☒ 3. 30%
 - ☐ 4. 25%

Q.1 An eco-friendly electric water taxi operates on a smart river transport system. The speed of the taxi in still water is 10 km/h, while the speed of the river current is 3 km/h. What is the time taken by the taxi to travel 26 km downstream?

- Ans
- ☒ 1. 2 hours
 - ☐ 2. 1.5 hours
 - ☐ 3. 2.25 hours
 - ☐ 4. 2.5 hours

Q.2 A can complete a job in 19 days, and B can complete the same job in 12 days. With the help of C, they completed the job in 3 days. Then, C alone can complete the job in:

- Ans
- ☐ 1. $10\frac{1}{15}$ days
 - ☐ 2. $11\frac{1}{15}$ days
 - ☒ 3. $5\frac{1}{15}$ days
 - ☐ 4. $7\frac{1}{15}$ days

Q.3 Two trains A and B of lengths 175 m and 140 m, respectively, are moving in opposite directions on parallel tracks. The speed of train A is 72 km/h and train B is 54 km/h. In how many seconds will both trains completely cross each other?

- Ans
- ☐ 1. 10 seconds
 - ☐ 2. 7 seconds
 - ☐ 3. 8 seconds
 - ☒ 4. 9 seconds

Q.4 The volume (in m^3) of a cuboidal tank, whose dimensions are given as 7 m $\times$ 50 m $\times$ 17 m, is:

- Ans
- ☒ 1. 5950
 - ☐ 2. 5933
 - ☐ 3. 5957
 - ☐ 4. 5951

Q.5 The radius and height of a right circular cone are in the ratio 3: 4. Find the volume of the cone if the slant height is 10 cm.

- Ans
- ☐ 1. $110\pi \text{ cm}^3$
 - ☒ 2. $96\pi \text{ cm}^3$
 - ☐ 3. $108\pi \text{ cm}^3$
 - ☐ 4. $88\pi \text{ cm}^3$

Q.6 The profit made on a product is 60%. What is the loss percentage incurred on the sale if the figures of both cost price and selling price are interchanged?

- Ans
- ☐ 1. 36.2%
 - ☐ 2. 37.1%
 - ☐ 3. 39.9%
 - ☒ 4. 37.5%

Q.7 Divide ₹4,298 into three parts in such a way that half of the first part, one-fourth of the second part and one-eighth of the third part are equal. What is the value of the third part (in ₹)?

- Ans**
- ☐ 1. 2,356
 - ☐ 2. 2,256
 - ☐ 3. 2,556
 - ☒ 4. 2,456

Q.8 Three numbers are in the ratio $\frac{1}{3} : \frac{2}{9} : \frac{1}{12}$. The difference between the greatest and the smallest number is 189. The average of the three numbers is:

- Ans**
- ☐ 1. 207
 - ☒ 2. 161
 - ☐ 3. 157
 - ☐ 4. 184

Q.9 Anjali and Minal together invested ₹54,600 in a business. At the end of the year, out of a total profit of ₹9,100, Anjali's share was ₹1,300. What was the investment of Minal?

- Ans**
- ☐ 1. ₹45,380
 - ☐ 2. ₹45,235
 - ☐ 3. ₹46,310
 - ☒ 4. ₹46,800

Q.10 The numbers 12, x, 27, and 81 are in proportion. What is the value of x?

- Ans**
- ☒ 1. 36
 - ☐ 2. 24
 - ☐ 3. 21
 - ☐ 4. 15

Q.11 A train, 200 meters long, crosses a platform, 280 meters long, in 16 seconds. What is the speed of the train?

- Ans**
- ☒ 1. 108 km/h
 - ☐ 2. 115 km/h
 - ☐ 3. 112 km/h
 - ☐ 4. 116 km/h

Q.12 A shop offers a 'Buy One, Get One Free' scheme on a chocolate box priced at ₹450 each. If someone takes home 6 boxes, what is the effective price per box?

- Ans**
- ☐ 1. ₹250
 - ☒ 2. ₹225
 - ☐ 3. ₹210
 - ☐ 4. ₹235

Q.13 Two trains, each 300 m long, run in opposite directions at 200 km/h and 160 km/h, respectively. How many seconds do they take to cross each other?

- Ans**
- ☐ 1. 8
 - ☐ 2. 5
 - ☒ 3. 6
 - ☐ 4. 7

Q.14 The profit made on a product is 90%. What is the loss percentage (rounded off to two decimal places) incurred on the sale if the figures of both cost price and selling price are interchanged?

- Ans
- ☐ 1. 50.67%
 - ☒ 2. 47.37%
 - ☐ 3. 47.85%
 - ☐ 4. 51.09%

Q.15 The dimensions of a closed cuboidal box are $8\text{ m} \times 400\text{ cm} \times 2.5\text{ m}$. Find the cost of painting its entire outer surface at the rate of ₹30 per m^2 .

- Ans
- ☒ 1. ₹3,720
 - ☐ 2. ₹3,702
 - ☐ 3. ₹3,270
 - ☐ 4. ₹3,207

Q.16 A can complete a job in 10 days and B can do it in 15 days. They both start working together, but A leaves after 4 days. What is the total number of days taken to complete the entire work?

- Ans
- ☐ 1. 12 days
 - ☐ 2. 11 days
 - ☐ 3. 10 days
 - ☒ 4. 9 days

Q.17 A shopkeeper offers a trade discount of 20% on an article whose marked price is ₹500. What is the price after discount?

- Ans
- ☐ 1. ₹300
 - ☒ 2. ₹400
 - ☐ 3. ₹100
 - ☐ 4. ₹200

Q.18 A can complete a job in 16 days, and B can complete the same job in 15 days. With the help of C, they completed the job in 3 days. Then, C alone can complete the job in:

- Ans
- ☒ 1. $4\frac{44}{49}$ days
 - ☐ 2. $11\frac{44}{49}$ days
 - ☐ 3. $14\frac{44}{49}$ days
 - ☐ 4. $9\frac{44}{49}$ days

Q.19 A solid metallic cylindrical rod of radius 28 cm and height 84 cm is melted and recast into hollow cylindrical pipes, each having an external radius of 9 cm, an internal radius of 6 cm and a height of 24 cm, respectively. During melting and recasting, 10% of the metal is wasted. How many complete hollow pipes can be formed?

- Ans
- ☐ 1. 48
 - ☐ 2. 51
 - ☒ 3. 54
 - ☐ 4. 55

Section : Arithmetical and Numerical Ability

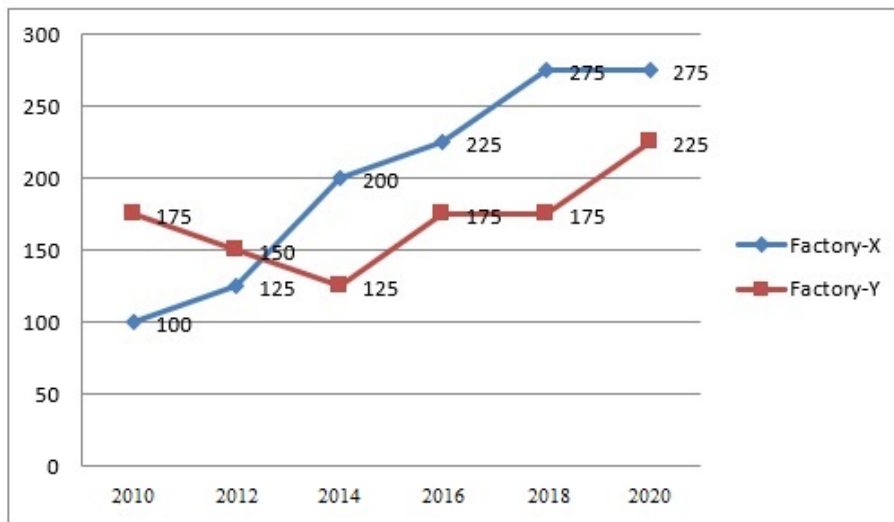
Q.1 A sum of ₹10,000 is invested at 13% per annum compound interest, compounded annually. If the amount becomes ₹12,769, what is the time of the investment?

- Ans**
- ☒ 1. 2.5 years
 - ☒ 2. 2 years
 - ☒ 3. 1.5 years
 - ☒ 4. 1 year

Q.2 How long (in years) will it take for an amount of ₹5,000 to grow to ₹6,655 at 10% per annum, compounded annually?

- Ans**
- ☒ 1. 3
 - ☒ 2. 2.5
 - ☒ 3. 2
 - ☒ 4. 1

Q.3 The line graph represents the number of vehicles (in thousands) produced by two factories X and Y in different years, 2010, 2012, 2014, 2016, 2018 and 2020 in the respective manner from left to right.



What is the percentage of increase in the vehicles manufactured by factory Y for 2014 and 2020?

- Ans**
- ☒ 1. 100%
 - ☒ 2. 80%
 - ☒ 3. 40%
 - ☒ 4. 60%

Q.4 The average of 8 numbers is 35. If each number is decreased by 7, what will the new average be?

- Ans**
- ☒ 1. 35
 - ☒ 2. 28
 - ☒ 3. 8
 - ☒ 4. 21

Q.5 A manufacturer sells a product to a wholesaler at a profit of 20%. The wholesaler, in turn, sells it to a retailer at a profit of 60%, and the retailer sells it to a customer at a profit of 25%. If the customer pays ₹408, find the cost price (in ₹) for the manufacturer.

Ans ☒ 1. 170

☐ 2. 167

☐ 3. 171

☐ 4. 172

Q.6 7% of a number is what percentage of 14% of the same number?

Ans ☒ 1. 50%

☐ 2. 45%

☐ 3. 20%

☐ 4. 33%

Q.7 A factory produces 2400 units in 8 days. How many units will it produce in 15 days at the same rate of production?

Ans ☐ 1. 3600

☐ 2. 3000

☒ 3. 4500

☐ 4. 3500

Q.8 A manufacturer sells a product to a wholesaler at a profit of 12%. The wholesaler, in turn, sells it to a retailer at a profit of 50%, and the retailer sells it to a customer at a profit of 25%. If the customer pays ₹168, find the cost price (in ₹) for the manufacturer.

Ans ☐ 1. 83

☐ 2. 79

☒ 3. 80

☐ 4. 77

Q.9 The average of first 9 natural numbers is:

Ans ☐ 1. 5.5

☐ 2. 6

☒ 3. 5

☐ 4. 4.5

Q.10 A fruit vendor sells two types of apples: Type A at ₹100/kg and Type B at ₹160/kg. If he mixes them and sells the mixture at ₹140/kg, in what ratio should he mix Type A and Type B so that there is no profit or loss?

Ans ☒ 1. 1 : 2

☐ 2. 3 : 1

☐ 3. 2 : 1

☐ 4. 5 : 3

Q.11 Simplify $15 \times (6 \times (4^2)) \div 5 + 20 - 93$

Ans ☐ 1. 211

☐ 2. 220

☐ 3. 219

☒ 4. 215

Q.12 Two students appeared in an examination. One of them secured 5 marks more than the other, and his marks were 56% of the sum of their marks. The sum of the marks obtained by them (rounded off to two decimal places) was:4539

- Ans**
- ☐ 1. 36.67
 - ☐ 2. 42.67
 - ☐ 3. 46.67
 - ☒ 4. 41.67

Q.13 The average of the first 95 natural numbers is:

- Ans**
- ☐ 1. 48.5
 - ☐ 2. 49
 - ☒ 3. 48
 - ☐ 4. 47.5

Q.14 Which of the following numbers is NOT divisible by 8?

- Ans**
- ☐ 1. 316792
 - ☒ 2. 254826
 - ☐ 3. 315784
 - ☐ 4. 285544

Q.15 Ananda's salary is increased by 10%, and then further increased by 12%, resulting in a final salary of ₹43,120. What was his salary before these increases?

- Ans**
- ☒ 1. ₹35,000
 - ☐ 2. ₹35,500
 - ☐ 3. ₹34,000
 - ☐ 4. ₹33,500

Q.16 If the length of a rectangle increases by 20% and the breadth decreases by 20%, then find the percentage changes in the area of the rectangle.

- Ans**
- ☒ 1. 4% decrease
 - ☐ 2. 6% decrease
 - ☐ 3. 4% increase
 - ☐ 4. 6% increase

Q.17 What sum of money (in ₹) will amount to ₹3840 at 4% per annum simple interest in 5 years?6962

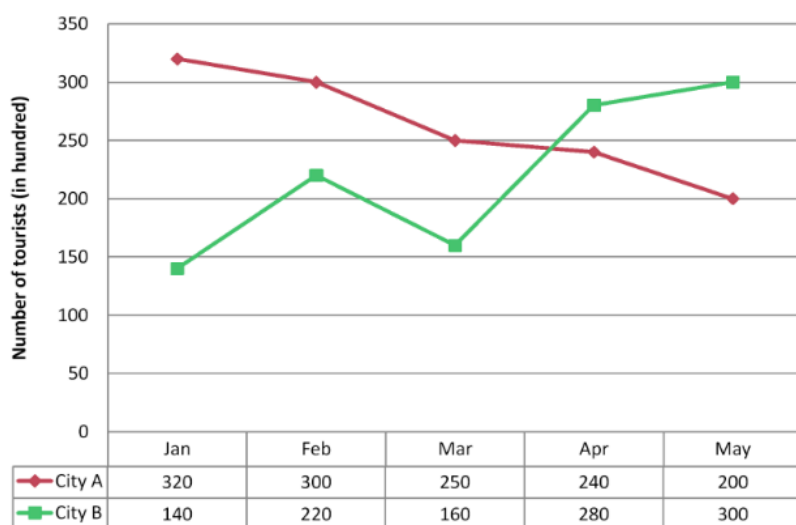
- Ans**
- ☐ 1. 3250
 - ☐ 2. 19200
 - ☒ 3. 3200
 - ☐ 4. 3150

Q.18 A 5-digit number $32x5y$ is divisible by 9. Find the smallest possible value of $x + y$.

- Ans**
- ☐ 1. 9
 - ☐ 2. 7
 - ☐ 3. 6
 - ☒ 4. 8

Q.19 The given line graph shows the number of tourists (in hundreds) in two different cities, A and B, over five different months of the year 2018.

Study the line graph carefully and answer the question that follows.



What is the ratio of the total number of tourists in City A in January and February together to the number of tourists in City B in the same months?

- Ans**
- ☐ 1. 28 : 15
 - ☐ 2. 30 : 19
 - ☐ 3. 29 : 17
 - ☒ 4. 31 : 18

Q.20 A sum of ₹5,40,000 is invested for a year at 6% per annum, compounded half yearly. What is the compound interest earned at the end of the year?

- Ans**
- ☐ 1. ₹33,491
 - ☒ 2. ₹32,886
 - ☐ 3. ₹31,139
 - ☐ 4. ₹31,749

Section : Arithmetical and Numerical Ability1

Q.1 A man covers a distance of 180 km in 6 hours on a bike. If he rides a bicycle at one-sixth speed of the bike, how much distance (in km) will he cover in 6 hours?

- Ans**
- ☐ 1. 40
 - ☐ 2. 20
 - ☒ 3. 30
 - ☐ 4. 25

Q.2 Two men A and B start a journey from the same place on their bikes at speeds of 46.5 kmph and 59.75 kmph, respectively. If they move in the same direction, then what is the distance between them after five hours?

- Ans**
- ☐ 1. 40.625 km
 - ☐ 2. 20.750 km
 - ☐ 3. 39.750 km
 - ☒ 4. 66.250 km

Q.3 Three friends, A, B and C, started a business by investing a sum of money in the ratio 6 : 2 : 3. After 6 months, B withdraws half of his capital. If the sum invested by A is ₹72,000, out of a total annual profit of ₹63,000 find the share of B in the profit.

- Ans
- ☐ 1. ₹9,885
 - ☐ 2. ₹7,885
 - ☐ 3. ₹9,900
 - ☒ 4. ₹9,000

Q.4 A person travelled a distance of 100 km. He covered the first 20 km with a speed of 8 km/hr, then 50 km in x hours, and the remaining distance in y hours. If the ratio of the second speed to the third speed is 2:1 and y is 30 minutes more than x, then find his average speed for the entire journey.

- Ans
- ☐ 1. 13.6 km/hr
 - ☐ 2. 11.8 km/hr
 - ☒ 3. 12.5 km/hr
 - ☐ 4. 9.5 km/hr

Q.5 A shopkeeper makes a gain of 20% on selling a chair at 15% discount on the marked price. Find the ratio of the marked price to the cost price of the chair.

- Ans
- ☒ 1. 24:17
 - ☐ 2. 24:11
 - ☐ 3. 24:19
 - ☐ 4. 24:13

Q.6 Parul can build a wall in 20 days and Preet can build the same wall in 30 days. If they work on alternate days with Parul starting the job on the first day and so on, then in how many days will the wall be built for the first time?

- Ans
- ☐ 1. 30
 - ☒ 2. 24
 - ☐ 3. 18
 - ☐ 4. 12

Q.7 A can do a job in 17 days and B can do the same job in 15 days. With the help of C, they did the job in 5 days. Then, C alone can do the job in:

- Ans
- ☐ 1. $15\frac{8}{19}$ days
 - ☐ 2. $17\frac{8}{19}$ days
 - ☒ 3. $13\frac{8}{19}$ days
 - ☐ 4. $20\frac{8}{19}$ days

Q.8 A hemispherical container of internal radius 9 cm is full of liquid. The liquid is transferred into cylindrical bottles of diameter 3 cm and height 4 cm each. Find the number of bottles needed to contain all the liquid.

- Ans
- ☐ 1. 27
 - ☒ 2. 54
 - ☐ 3. 48
 - ☐ 4. 36

Q.9 The volume (in m^3) of a cuboidal tank, whose dimensions are given as $20 \text{ m} \times 32 \text{ m} \times 13 \text{ m}$, is:

- Ans
- ☐ 1. 8355
 - ☒ 2. 8320
 - ☐ 3. 8299
 - ☐ 4. 8326

Q.10 A solid copper sphere of diameter 18 cm is melted and is drawn into a long wire of uniform circular cross-section. If the length of the wire is 108 m, find the diameter (in cm) of the wire.

- Ans
- ☐ 1. 0.3
 - ☒ 2. 0.6
 - ☐ 3. 0.5
 - ☐ 4. 0.8

Q.11 The marked price of an article is ₹16,280. It is sold at a discount of 8%. Find its selling price.

- Ans
- ☒ 1. ₹14,977.60
 - ☐ 2. ₹14,966.50
 - ☐ 3. ₹15,966.50
 - ☐ 4. ₹15,077.60

Q.12 215 m long train A is running at a speed of 35 m/s and 225 m long train B is running at a speed of 45 m/s in the opposite direction. In how many seconds will train B completely cross train A?

- Ans
- ☐ 1. 3.5
 - ☐ 2. 6.5
 - ☒ 3. 5.5
 - ☐ 4. 4.5

Q.13 The profit made on a product is 44%. What is the loss percentage (correct to two decimal places) incurred on the sale if the figures of both cost price and selling price are interchanged?

- Ans
- ☐ 1. 29.68%
 - ☐ 2. 31.70%
 - ☐ 3. 31.61%
 - ☒ 4. 30.56%

Q.14 Divide ₹3,640 into three parts in such a way that half of the first part, one-fourth of the second part and one-eighth of the third part are equal. What is the value of the first part (in ₹)?

- Ans
- ☒ 1. 520
 - ☐ 2. 620
 - ☐ 3. 720
 - ☐ 4. 420