

GSSSB CCE 2026

Combined Competitive Examination · Advt 378 · CBRT 16–29 Sep 2026 · Quantitative Aptitude · Question Paper

English

All 27 Shifts (Sets) · Quantitative Aptitude Section · Official Answer Key

About this Compilation

This booklet contains all **27 shift papers** of the **GSSSB Combined Competitive Examination (Advt 378) 2026** examination in **English (Quantitative Aptitude section only)**, with the correct option marked as per the official answer key.

✓ Correct option (highlighted green)

167 of these 810 questions are shown in Gujarati. Candidates could switch language question by question, and no candidate whose response sheet we could reach viewed these in English, so the official Gujarati version is printed instead and marked with a **GUJARATI ONLY** chip. Nothing here is machine translated.

How to use

- Use the **Index** page to jump directly to any set (clickable).
- Questions appear section by section in the order of the paper, numbered 1 onward.
- Diagram and wide-table questions appear at full width at the end of their section.
- The correct answer is highlighted in green with a tick.

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Index — All Sets (click to open)

Set 1 16 Sep 2026 1:00 PM - 3:00 PM	Set 15 23 Sep 2026 9:00 AM - 11:00 AM
Set 2 16 Sep 2026 9:00 AM - 11:00 AM	Set 16 25 Sep 2026 5:00 PM - 7:00 PM
Set 3 18 Sep 2026 1:00 PM - 3:00 PM	Set 17 26 Sep 2026 1:00 PM - 3:00 PM
Set 4 18 Sep 2026 5:00 PM - 7:00 PM	Set 18 26 Sep 2026 5:00 PM - 7:00 PM
Set 5 19 Sep 2026 1:00 PM - 3:00 PM	Set 19 26 Sep 2026 9:00 AM - 11:00 AM
Set 6 19 Sep 2026 5:00 PM - 7:00 PM	Set 20 27 Sep 2026 1:00 PM - 3:00 PM
Set 7 19 Sep 2026 9:00 AM - 11:00 AM	Set 21 27 Sep 2026 5:00 PM - 7:00 PM
Set 8 20 Sep 2026 5:00 PM - 7:00 PM	Set 22 28 Sep 2026 1:00 PM - 3:00 PM
Set 9 20 Sep 2026 9:00 AM - 11:00 AM	Set 23 28 Sep 2026 9:00 AM - 11:00 AM
Set 10 21 Sep 2026 1:00 PM - 3:00 PM	Set 24 29 Sep 2026 1:00 PM - 3:00 PM
Set 11 21 Sep 2026 5:00 PM - 7:00 PM	Set 25 29 Sep 2026 9:00 AM - 11:00 AM
Set 12 22 Sep 2026 1:00 PM - 3:00 PM	Set 26 20 Sep 2026 1:00 PM - 3:00 PM
Set 13 22 Sep 2026 5:00 PM - 7:00 PM	Set 27 29 Sep 2026 5:00 PM - 7:00 PM
Set 14 23 Sep 2026 5:00 PM - 7:00 PM	

Quantitative Aptitude

30 Questions • Answer Key

Q1 Quantitative Aptitude

Given the following discrete frequency distribution of marks scored by students, what is the arithmetic mean using the direct method?

Marks (x)	Frequency (f)
10	3
20	5
30	4
40	8

A. 24.5

B. 31

C. 28.5



D. 25

Q2 Quantitative Aptitude

A trader buys 500 apples at ₹24 per apple. During storage, 10% of the apples get spoiled. He sells 60% of the remaining apples at a profit of 20% and the rest at a profit of 50%. Find his overall profit percentage.

A. 18.8%



B. 22%

C. 21%

D. 19.8%

Q3 Quantitative Aptitude

An article is sold for ₹1620 after giving a 10% loss. At what price should it be sold to earn a 20% profit?

A. ₹2160



B. ₹1980

C. ₹2040

D. ₹2225

Q4 Quantitative Aptitude

A rectangular garden has a length that is 4 meters more than its width. If the area of the garden is 60 square meters, what is the width of the garden?

A. 10 meters

B. 5 meters

C. 8 meters

D. 6 meters



Q5 Quantitative Aptitude

A person travels from City A to City B at 60 km/h. On the return journey, due to heavy traffic, he covers half of the distance at 30 km/h and the remaining half at 45 km/h. What is his average speed (in km/h) for the entire round trip?

A. 42

B. 52

C. 48

D. 45



Q6 Quantitative Aptitude

A car travels 50% of a journey at a speed of 30 km/h, 50% of the remaining journey at 45 km/h, and the remaining journey at 90 km/h. What is the average speed (in km/h) of the car for the entire journey?

A. 46

B. 40



C. 44

D. 42

Q7 Quantitative Aptitude

If the ratio of the price of a book to that of a pen is 5:2 and the ratio of the price of the pen to that of a pencil is 3:1, what is the ratio of the price of the book to that of the pencil?

A. 2:15

B. 15:2



C. 5:3

D. 10:3



Q8 Quantitative Aptitude

Using assumed mean 25, find the mean of 18, 22, 24, 28, 35.

A. 25.4



B. 27.4

C. 26.4

D. 24.4

Q9 Quantitative Aptitude

The sum of the present ages of a father and his son is 60 years. Five years ago, the father's age was 4 times the age of his son. What is the present age of the son?

A. 10 years

B. 25 years

C. 20 years

D. 15 years

**Q10 Quantitative Aptitude**

Rahul spends 90% of his ₹12,000 salary and saves the rest. How much (in ₹) does he save?

A. 2,400

B. 1,200



C. 3,600

D. 4,800

Q11 Quantitative Aptitude

From a point on the ground, the angle of elevation of the top of a tower is 45° . If the point is 230 m away from the foot of the tower, find the height of the tower.

A. 630 m

B. 230 m



C. 460 m

D. 115 m

Q12 Quantitative Aptitude

A shopkeeper buys a bicycle for ₹9,000 and sells it for ₹12,600. What is the percentage profit?

A. 40%



B. 30%

C. 45%

D. 50%

Q13 Quantitative Aptitude

A person travels 84 km at 42 km/h and another 84 km at 21 km/h. What is his average speed?

A. 27.5 km/h

B. 30 km/h

C. 28 km/h



D. 31 km/h

Q14 Quantitative Aptitude

Pipe A can fill a tank in 12 hours and Pipe B can fill it in 18 hours. Pipe C can empty the full tank in 24 hours. All three pipes are opened together. After 4 hours, Pipe C is closed. In how many more hours will the tank be completely filled?

A. 4 hours 36 minutes

B. 5 hours 24 minutes

C. 4 hours 24 minutes



D. 4 hours 48 minutes

Q15 Quantitative Aptitude

A solid metallic sphere of radius 9 cm is melted and recast into identical cones each of radius 3 cm and height 12 cm. How many cones are formed?

A. 27



B. 36

C. 18

D. 9

Q16 Quantitative Aptitude

A contractor employs 24 workers to complete a project in 15 days. If all workers work at the same efficiency, how many workers are required to complete the same project in 10 days?

A. 42

B. 36



C. 30

D. 24

Q17 Quantitative Aptitude

A sum of ₹2,00,000 is invested at an annual rate of 20% compound interest for 1 year. If the interest is compounded half-yearly, what will be the amount at the end of the year?

A. ₹2,45,000

B. ₹2,40,000

C. ₹2,30,000

D. ₹2,42,000



Q18 Quantitative Aptitude

If $7 : x = 21 : 9$, what is the value of x ?

- A. 7
- B. 3
- C. 27
- D. 9

Q19 Quantitative Aptitude

A shopkeeper increases the price of a bag by 20%, then offers a discount of 10% on the new price, and finally increases the resulting price by 5%. If the final price is ₹2097.90, what was the original price of the bag?

- A. ₹1900
- B. ₹1750
- C. ₹1800
- D. ₹1850

Q20 Quantitative Aptitude

If the roots of a quadratic equation are -2 and -8 , which of the following equations is formed?

- A. $x^2 - 10x + 16 = 0$
- B. $x^2 + 10x + 20 = 0$
- C. $x^2 + 8x + 16 = 0$
- D. $x^2 + 10x + 16 = 0$

Q21 Quantitative Aptitude

Pipe A can fill a tank in 8 hours, while Pipe B can fill the same tank in 24 hours. If both pipes are opened together, in how many hours will the tank be filled?

- A. 6
- B. 12
- C. 4
- D. 8

Q22 Quantitative Aptitude

In which quadrant of the Cartesian plane does the point $(6, -5)$ lie?

- A. Third Quadrant
- B. Fourth Quadrant
- C. First Quadrant
- D. Second Quadrant

Q23 Quantitative Aptitude

Which of the following numbers is divisible by 4?

- A. 3263
- B. 3248
- C. 3238
- D. 3254

Q24 Quantitative Aptitude

Pipe A fills a tank in 12 hours while Pipe B fills it in 6 hours. If both are opened together, in how many hours will the tank be filled?

- A. 6 hours
- B. 4 hours
- C. 5 hours
- D. 3 hours

Q25 Quantitative Aptitude

A town's population is 5,20,000. It decreases by 5% in the first year and increases by 4% in the second year. What is the population after two years?

- A. 5,20,000
- B. 5,40,800
- C. 5,13,760
- D. 4,98,000

Q26 Quantitative Aptitude

A person borrows ₹15,000 at simple interest. If the rate of interest is 8% per annum, what will be the simple interest earned in 3 years?

- A. ₹3,000
- B. ₹4,200
- C. ₹4,800
- D. ₹3,600



Q27 Quantitative Aptitude

A metallic sphere has surface area 2464 cm^2 . It is melted and recast into solid cones of radius 3.5 cm and height 7 cm . How many cones are formed? **(Take $\pi = \frac{22}{7}$)**

A. 144

B. 112

C. 96

D. 128 **Q28 Quantitative Aptitude**

A light house is 80 m high. The angle of elevation of its top from a point 80 m away from its foot along the same horizontal line is:

A. 1. 30° B. 2. 45° C. 3. 60° D. 4. 15° **Q29 Quantitative Aptitude**

Express $0.43\overline{6}$ as a regular fraction.

A. 1. $\frac{130}{300}$ B. 2. $\frac{132}{300}$ C. 3. $\frac{131}{300}$ D. 4. $\frac{129}{300}$ **Q30 Quantitative Aptitude**

A cone has a curved surface area of 550 cm^2 and a slant height of 25 cm . What is its volume (in cm^3)? (Use $\pi = \frac{22}{7}$)

A. 1236

B. 1234

C. 1232 

D. 1238



Quantitative Aptitude

30 Questions • Answer Key

Q1 Quantitative Aptitude

A pipe fills a tank in 15 hours, while a leak empties it in 30 hours. If both of them operate together, how long will it take to fill the tank?

- A. 20 hours
- B. 25 hours
- C. 30 hours
- D. 45 hours



Q2 Quantitative Aptitude

A sum of money earns a simple interest of ₹2,250 in 5 years at the rate of 9% per annum. What is the principal?

- A. ₹10,000
- B. ₹5,000
- C. ₹8,000
- D. ₹4,000



Q3 Quantitative Aptitude

A man's expenditure is 80% of his income. If his income decreases by 10% and his expenditure decreases by 5%, what is the percentage decrease in his savings?

- A. 30%
- B. 25%
- C. 40%
- D. 20%



Q4 Quantitative Aptitude

The cost price of 120 notebooks is equal to the selling price of 96 notebooks. Find the profit percentage.

- A. 35%
- B. 45%
- C. 30%
- D. 25%



Q5 Quantitative Aptitude

Consider the system of linear equations: $2x + 3y = 7$ and $4x + 6y = 15$. Which of the following best describes the nature of the solution of this system?

- A. The system has a unique solution.
- B. The system has no solution.
- C. The system has infinitely many solutions.
- D. The system has exactly two solutions.



Q6 Quantitative Aptitude

Find the mean proportional between 45 and 245.

- A. 95
- B. 115
- C. 105
- D. 85



Q7 Quantitative Aptitude

A map is drawn to a scale of 1 : 50,000. The distance between two towns on the map is 8.4 cm. Find the actual distance between the towns (in km).

- A. 4.8 km
- B. 5.2 km
- C. 4.6 km
- D. 4.2 km



Q8 Quantitative Aptitude

A vehicle covers 90 km at 45 km/h, 120 km at 60 km/h, and 150 km at 75 km/h. What is the average speed of the journey?

- A. 55 km/h
- B. 60 km/h
- C. 52 km/h
- D. 67 km/h



Q9 Quantitative Aptitude

A person reduces his speed by 20 km/h and takes 1 hour more to cover 240 km. What was his original speed?

- A. 90 km/h
- B. 60 km/h
- C. 80 km/h
- D. 70 km/h

Q10 Quantitative Aptitude

A shopkeeper sold a bicycle for ₹6000 and gained 20%. How much would he have gained or lost if he had sold it for ₹5000?

- A. 5% Profit
- B. No Profit No Loss
- C. 10% Loss
- D. 5% Loss

Q11 Quantitative Aptitude

The vertices of a park are located at points A (2, 3) and B (8, 11) on a coordinate plane. What is the distance (in units) between the two points?

- A. 11
- B. 12
- C. 10
- D. 8

Q12 Quantitative Aptitude

The difference between the compound interest (compounded annually) and simple interest on a sum of money for 2 years at 8% per annum is ₹128. Find the principal.

- A. ₹24,000
- B. ₹20,000
- C. ₹32,000
- D. ₹28,000

Q13 Quantitative Aptitude

A person spends 75% of his income. If his monthly income is ₹8,000, how much does he save in a month?

- A. ₹2,000
- B. ₹3,000
- C. ₹1,500
- D. ₹2,500

Q14 Quantitative Aptitude

The mean of 12, 16, 20, 24 and 28 is:

- A. 20
- B. 21
- C. 18
- D. 19

Q15 Quantitative Aptitude

Two inlet pipes A and B can fill a tank in 20 hours and 30 hours, respectively. An outlet pipe C can empty the full tank in 60 hours. All three pipes are opened together. After 8 hours, Pipe B is closed, while Pipes A and C continue to operate. How much additional time will be required to fill the remaining part of the tank?

- A. 16 hours
- B. 14 hours
- C. 12 hours
- D. 10 hours

Q16 Quantitative Aptitude

A dataset arranged in ascending order is given as 12, 15, 18, $2x - 3$, $2x + 1$, 30, 35, 40. If the median of this dataset is 23, what is the value of x ?

- A. 12
- B. 10
- C. 13
- D. 11

Q17 Quantitative Aptitude

Find the mean proportional between 27 and 75.

- A. 55
- B. 35
- C. 65
- D. 45

Q18 Quantitative Aptitude

Evaluate: $[72 \div \{3 \times (5 + 1)\}] + 18 - 4 \times (9 - 7)$

- A. 10
- B. 22
- C. 14
- D. 18



Q19 Quantitative Aptitude

A motorcyclist travels 144 km in 360 minutes. What is his speed in km/h?

A. 24 km/h



B. 20 km/h

C. 22 km/h

D. 26 km/h

Q20 Quantitative Aptitude

The population of a town is 50,000. It increases at the rate of 8% per annum. What will be the population after 2 years?

A. 57,320

B. 59,320

C. 58,320



D. 60,320

Q21 Quantitative Aptitude

Given roots 6 and 7, what is the quadratic equation formed?

A. 1. $x^2 - 15x + 56 = 0$

B. 2. $x^2 - 13x + 42 = 0$



C. 3. $x^2 - 10x + 21 = 0$

D. 4. $x^2 - 11x + 24 = 0$

Q22 Quantitative Aptitude

Three traffic lights blink at intervals of 15 seconds, 20 seconds, and 30 seconds respectively. After how many seconds will they blink together again?

A. 30

B. 60



C. 90

D. 5

Q23 Quantitative Aptitude

A tent consists of a cylindrical portion surmounted by a hemispherical top. If the radius of both the cylinder and the hemisphere is 7 m and the height of the cylindrical portion is 6 m, find the total surface area of the tent, excluding the base.

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

A. 1. 572 m²



B. 2. 580 m²

C. 3. 527 m²

D. 4. 520 m²

Q24 Quantitative Aptitude

A shopkeeper claims to sell sugar at its cost price. However, he uses a faulty weight of 900 g as 1 kg while selling. What is his profit percentage?

A. 1. 11%

B. 2. $11\frac{1}{9}\%$



C. 3. $11\frac{1}{3}\%$

D. 4. $11\frac{2}{9}\%$



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Q25 Quantitative Aptitude

A circle of radius 7 cm is inscribed in a square whose side measures 14 cm, touching all four sides. Find the area enclosed by the square but lying outside the circle. $\left(\text{Use } \pi = \frac{22}{7} \right)$

A. 1. 44 cm^2

B. 2. 40 cm^2

C. 3. 38 cm^2

D. 4. 42 cm^2 ✓

Q26 Quantitative Aptitude

If a pole 6 m high casts a shadow $2\sqrt{3}$ m long on the ground, then the sun's elevation is

A. 1. 90°

B. 2. 30°

C. 3. 60° ✓

D. 4. 45°

Q27 Quantitative Aptitude

A pipe can fill a tank in 8 hours. How much of the tank does it fill in 1 hour?

A. 1. $\frac{1}{10}$

B. 2. $\frac{1}{4}$

C. 3. $\frac{1}{6}$

D. 4. $\frac{1}{8}$ ✓

Q28 Quantitative Aptitude

If the product of the roots of a quadratic equation $x^2 + bx + 12 = 0$ is 12, which value of b gives the sum of the roots as -7?

A. -7

B. 12

C. 7 ✓

D. -12



Q29 Quantitative Aptitude

If $\tan A = \frac{7}{24}$, then the value of $2 \cos A - \sin A$ is:

A. 1. $\frac{47}{25}$

B. 2. $\frac{37}{25}$

C. 3. $\frac{41}{25}$



D. 4. $\frac{43}{25}$

Q30 Quantitative Aptitude

A solid right circular cone has a height of 24 cm and a base radius of 7 cm. It is sliced by a plane parallel to the base, passing through the midpoint of its height. Find the volume of the smaller cone formed above the cutting plane. (Use $\pi = \frac{22}{7}$)

A. 462 cubic centimeters

B. 154 cubic centimeters



C. 616 cubic centimeters

D. 308 cubic centimeters



Quantitative Aptitude

30 Questions • Answer Key

Q1 Quantitative Aptitude

Two pipes can fill a tank in 24 minutes and 36 minutes, respectively. If both are opened together, after how much time (in minutes) should the first pipe be closed so that the tank is filled in exactly 18 minutes?

A. 12



B. 6

C. 9

D. 15

Q2 Quantitative Aptitude

If the sum is ₹2,000, the rate is 5% per annum, and the time is 3 years, what is the simple interest?

A. ₹250

B. ₹600

C. ₹150

D. ₹300



Q3 Quantitative Aptitude

A fruit seller buys oranges for ₹150 and sells them at a loss of 12%. What is his loss amount?

A. ₹18



B. ₹25

C. ₹15

D. ₹12

Q4 Quantitative Aptitude

A working professional spends exactly 60% of his monthly income on household expenses and savings combined, while the remaining portion is spent on personal entertainment. Over the next year, his monthly income increases by 25% and his expenditure on personal entertainment increases by 10%. What is the percentage increase in his expenditure on household expenses and savings combined?

A. 35%



B. 20%

C. 25%

D. 30%

Q5 Quantitative Aptitude

A number is multiplied by 7 and the result is 455. Which of these must be a prime factor of the original number?

A. 7

B. 17

C. 13



D. 29

Q6 Quantitative Aptitude

A tank has a capacity of 100 litres. If a pipe can fill 20 litres in 2 hours, how many hours are required to fill the tank?

A. 8 hours

B. 15 hours

C. 10 hours



D. 12 hours

Q7 Quantitative Aptitude

Using Heron's formula, find the area of a triangle with sides 18 cm, 20.5 cm, and 23.5 cm (rounded off to the nearest integer value).

A. 172 square cm

B. 178 square cm



C. 174 square cm

D. 176 square cm

Q8 Quantitative Aptitude

Which transaction results in a higher gain: (A) Paying for 12 notebooks and receiving 13 notebooks, or (B) Paying for 20 notebooks and receiving 21 notebooks?

A. Neither results in a gain

B. Transaction A



C. Transaction B

D. Both result in equal gain

Q9 Quantitative Aptitude

Find the mode of the following data: 3, 5, 7, 5, 9, 5, 11.

A. 3

B. 9

C. 7

D. 5



Q10 Quantitative Aptitude

If $13\sin A = 5$ and A is an acute angle, what is the value of $12\tan A$?

A. 5



B. 6

C. 15

D. 12

Q11 Quantitative Aptitude

A container contains juice and water in the ratio 9:5. If 24 liters of water is added to the mixture, the ratio of juice to water becomes 9:8. What was the original quantity of water in the container?

A. 40 liters



B. 50 liters

C. 35 liters

D. 45 liters

Q12 Quantitative Aptitude

For what value of the negative integer (k) does the quadratic equation $3x^2 + kx + 12 = 0$ have equal real roots?

A. -9

B. -12



C. -8

D. -14

Q13 Quantitative Aptitude

Find the fourth proportional to 9, 15, and 18.

A. 15

B. 20

C. 30



D. 12

Q14 Quantitative Aptitude

Pipe A fills a tank in 8 hours. After 2 hours, Pipe B is opened and together they fill the remaining tank in 3 hours. How much time will Pipe B alone take to fill the tank?

A. 6 hours

B. 10 hours

C. 8 hours



D. 12 hours

Q15 Quantitative Aptitude

Which of the following points lies on the x-axis in the Cartesian coordinate system?

A. (0, -3)

B. (0, 4)

C. (3, 2)

D. (5, 0)

**Q16 Quantitative Aptitude**

A student walks to school at 4 km/h and returns home by cycling at 12 km/h. If the total distance between home and school is 9 km, what is the average speed for the whole journey?

A. 6 km/h



B. 8 km/h

C. 7 km/h

D. 9 km/h

Q17 Quantitative Aptitude

A water vessel in the shape of an inverted cone has radius 3 m and height 8 m and is completely filled with water. Four identical solid spheres are immersed, causing one-fourth of the water to overflow. What is the volume of each sphere?

A. $1.5\pi \text{ m}^3$



B. $4.3\pi \text{ m}^3$

C. $2.5\pi \text{ m}^3$

D. $8\pi \text{ m}^3$

Q18 Quantitative Aptitude

Meera buys two calculators for ₹200 and ₹300, respectively. She sells the first at a 20% profit and the second at a 10% loss. What is her overall profit or loss in the transaction?

A. ₹30 profit

B. ₹10 profit



C. ₹40 loss

D. No profit, no loss

Q19 Quantitative Aptitude

Determine the nature of the roots of the quadratic equation $3x^2 + 4x + 5 = 0$.

A. One real root and other not real

B. No real roots



C. Real and distinct roots

D. Real and equal roots



Q20 Quantitative Aptitude

The present age of a mother is three times that of her daughter. In six years from now, the mother's age will be twice that of her daughter. What is the daughter's present age?

- A. 10 years
- B. 12 years
- C. 6 years
- D. 8 years

Q21 Quantitative Aptitude

A student deposits ₹20,000 in a fixed deposit plan that offers a compound interest rate of 10% per annum compounded annually. What is the total compound interest earned by the student at the end of 2 years?

- A. ₹3,800
- B. ₹4,200
- C. ₹2,000
- D. ₹4,000

Q22 Quantitative Aptitude

A car travels at 40 km/h for 2 hours and then at 60 km/h for 1 hour. What is the total distance covered?

- A. 120 km
- B. 140 km
- C. 100 km
- D. 180 km

Q23 Quantitative Aptitude

The population of a town increased from 20,000 to 24,000 in one year. What was the percentage increase in the population?

- A. 18%
- B. 25%
- C. 15%
- D. 20%

Q24 Quantitative Aptitude

The difference between compound interest (compounded annually) and simple interest on a sum for 2 years at 10% per annum is ₹36. What is the principal sum?

- A. ₹3,600
- B. ₹4,600
- C. ₹4,000
- D. ₹3,000

Q25 Quantitative Aptitude

A recipe requires 5 cups of flour to make 10 cookies. How many cups of flour are needed to make 25 cookies, using the same recipe?

- A. 12.5 cups
- B. 7.5 cups
- C. 10 cups
- D. 15 cups

Q26 Quantitative Aptitude

Two coprime numbers have a product of 323. What are these numbers?

- A. 15 and 21
- B. 17 and 19
- C. 17 and 18
- D. 16 and 20

Q27 Quantitative Aptitude

A runner completes 3 laps of a 400 meter track in 6 minutes. What is the average speed of the runner?

- A. 24 km/h
- B. 6 km/h
- C. 2 km/h
- D. 12 km/h

Q28 Quantitative Aptitude

A data set has a mean of 20 and a mode of 14. What is the median based on the empirical relation?

- A. 22
- B. 18
- C. 20
- D. 16



Q29 Quantitative Aptitude

An ice cream cone has a radius of 7 cm and a height of 12 cm. What is the volume of the cone in cubic centimeters?

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

A. 308

B. 672

C. 616



D. 1848

Q30 Quantitative Aptitude

A vertical tower casts a shadow that is 40 meters longer when the sun's altitude is 30° compared to when it is 60° . What is the height of the tower?

A. 1. $40\sqrt{3}$ m

B. 2. $20\sqrt{3}$ m



C. 3. 20 m

D. 4. 40 m



Quantitative Aptitude

30 Questions • Answer Key

Q1 Quantitative Aptitude

The population of a town increases by 15% in the first year and decreases by 10% in the second year. If the population after two years is 1,03,500, what was the original population?

- A. 1,01,000
- B. 1,02,500
- C. 1,00,000
- D. 99,500



Q2 Quantitative Aptitude

In a frequency distribution of student marks, the difference between the mode is greater than the median by 14. What is the difference between the median and the mean for this distribution? (Use the empirical formula)

- A. 7
- B. 6
- C. 8
- D. 4



Q3 Quantitative Aptitude

A water storage tank at a manufacturing unit has a rectangular base measuring 80 cm × 60 cm. A solid metal block in the shape of a cuboid with dimensions 40 cm × 20 cm × 10 cm is completely submerged in the tank. By how many centimeters (rounded off to two decimal places) does the water level in the tank rise?

- A. 0.56 centimeters
- B. 3.33 centimeters
- C. 2.25 centimeters
- D. 1.67 centimeters



Q4 Quantitative Aptitude

Given the equations $2x^2 + 5x + 3 = 0$ and $4x^2 + 7x + k = 0$, if they have exactly one root in common, what is the value of k ; k is a positive integer?

- A. 6
- B. 5
- C. 4
- D. 3



Q5 Quantitative Aptitude

If the principal is doubled in a simple interest calculation, what happens to the simple interest for the same rate and time?

- A. It also doubles
- B. It does not change
- C. It becomes half
- D. It becomes zero



Q6 Quantitative Aptitude

A sum of money earns a difference of ₹90 between compound interest (compounded annually) and simple interest at 12% per annum for 2 years. What will be the difference between compound interest and simple interest for the same principal and time period if the rate of interest is changed to 24% per annum?

- A. ₹160
- B. ₹360
- C. ₹180
- D. ₹450



Q7 Quantitative Aptitude

A triangle has an area of 24 cm^2 and a base of length 6 cm. What is its height?

- A. 4 cm
- B. 8 cm
- C. 6 cm
- D. 12 cm



Q8 Quantitative Aptitude

In the step-deviation method, if class mark $x = 45$, assumed mean $A = 30$, and class width $h = 5$, then the value of u is:

- A. 4
- B. 3
- C. 5
- D. 2



Q9 Quantitative Aptitude

Which number below is divisible by 9?

A. 5,49,436

B. 6,32,745



C. 4,56,812

D. 2,34,523

Q10 Quantitative Aptitude

If a ship's speed in still water is 20 km/h and the tidal current is 4 km/h, what is the ship's effective speed against the current?

A. 24 km/h

B. 16 km/h



C. 20 km/h

D. 4 km/h

Q11 Quantitative Aptitude

A person starts running from point A at 8:00 AM at 8 km/h. Another person starts from the same point at 8:30 AM at 10 km/h in the same direction. At what time will the second person catch up?

A. 10:30 AM



B. 11:30 AM

C. 12:00 PM

D. 1:00 PM

Q12 Quantitative Aptitude

A map uses a scale where 1 cm represents 5 km. If two cities are 4 cm apart on the map, what is the actual distance between them?

A. 15 km

B. 20 km



C. 22 km

D. 25 km

Q13 Quantitative Aptitude

A manufacturer sells a television set to a wholesale dealer at a profit of 10%. The wholesale dealer then sells it to a retailer at a profit of 20%. If the retailer pays ₹26,400 for the television set, how much profit did the wholesale dealer make alone?

A. ₹4,000

B. ₹4,200

C. ₹4,400



D. ₹4,600

Q14 Quantitative Aptitude

Simplify: $(2x + 5)(2x - 5)$

A. $1. 2x^2 - 25$

B. $2. 4x^2 - 25$



C. $3. 4x^2 + 25$

D. $4. 2x^2 + 25$

Q15 Quantitative Aptitude

The midpoint of a segment has coordinates (7, 1). If one endpoint is (3, -3), what are the coordinates of the other endpoint?

A. (13, 7)

B. (10, 2)

C. (11, 5)



D. (8, 4)

Q16 Quantitative Aptitude

A person invests ₹10,000 for 1 year at an interest rate of 8% per annum compounded half-yearly. What is the total compound interest earned at the end of the year?

A. ₹916

B. ₹1,016

C. ₹1,216

D. ₹816

**Q17 Quantitative Aptitude**

A recipe uses flour and sugar in the proportion 3:2. If you have 9 cups of flour, how many cups of sugar are needed to maintain the same proportion?

A. 9 cups

B. 4.5 cups

C. 3 cups

D. 6 cups

**Q18 Quantitative Aptitude**

The ratio of three numbers is 4:7:9. If 6 is added to each number, the new ratio becomes 5:8:10. Find the sum of the original three numbers.

A. 120



B. 130

C. 140

D. 100



Q19 Quantitative Aptitude

A shopkeeper buys a smartphone for ₹8,000 and sells it, making a net profit of ₹2,000. What percentage of the selling price is the cost price of the smartphone?

A. 80%



B. 50%

C. 60%

D. 30%

Q20 Quantitative Aptitude

Two points, A and B, lie on the same straight line with the base of a tower. Point B is 50 m farther from the tower than point A. The angle of elevation of the top of the tower is 60° from point A and 30° from point B. Find the height of the tower and the distance of point A from the base of the tower.

A. Height = $50\sqrt{3}$ m, Distance = 50 m

B. Height = 25 m, Distance = $25\sqrt{3}$ m

C. Height = $25\sqrt{3}$ m, Distance = 25 m



D. Height = $25\sqrt{3}$ m, Distance = $25\sqrt{3}$ m

Q21 Quantitative Aptitude

If Ritu spends ₹4,000 out of her ₹5,000 income, what percentage of her income does she spend?

A. 80%



B. 60%

C. 75%

D. 25%

Q22 Quantitative Aptitude

A vendor buys an item at a certain cost price and sells it for 1.25 times its cost price. What is the percentage profit earned on the sale?

A. 15%

B. 20%

C. 30%

D. 25%

**Q23 Quantitative Aptitude**

A can finish a job in 8 days and B can finish it in 24 days. If they work together, in how many days will they complete the work?

A. 12 days

B. 10 days

C. 8 days

D. 6 days

**Q24 Quantitative Aptitude**

A train covers a distance of 315 km in 4.5 hours. Find its speed (in km/h).

A. 65

B. 75

C. 70



D. 80

Q25 Quantitative Aptitude

A can complete a work in 12 days, B in 18 days, and C in 36 days. A and B work together for 3 days, after which C joins them. How many more days are required to complete the remaining work?

A. 3 days

B. 3.5 days



C. 4 days

D. 4.5 days

Q26 Quantitative Aptitude

If two quadratic equations $ax^2 + bx + c = 0$ and $px^2 + qx + r = 0$ have exactly one root in common, which condition must be satisfied?

A. 1. $(ar - cp) = (bq - cq)(aq - br)$

B. 2. $(ar - cp)^3 = (br - cq)(aq - bp)^2$

C. 3. $(ar - cp)^2 = (br - cq)(aq - bp)$



D. 4. $(ar - cp) = (br - cq)^2(aq - bp)$



Q27 Quantitative Aptitude

A can complete a work in 18 days and B in 9 days. They work together for 3 days. What fraction of the work is remaining?

A. 1. $\frac{1}{4}$

B. 2. $\frac{1}{2}$ ✓

C. 3. $\frac{1}{6}$

D. 4. $\frac{2}{3}$

Q28 Quantitative Aptitude

A vertical electric pole stands on level ground. From a point 30 meters away from the base of the pole, the angle of elevation to the top is 30° . What is the height of the pole?

A. 1. $15\sqrt{3}$ m

B. 2. $10\sqrt{3}$ m ✓

C. 3. $12\sqrt{3}$ m

D. 4. $18\sqrt{3}$ m

Q29 Quantitative Aptitude

A cone with a base radius of 7 cm and slant height of 25 cm is fixed on top of a cylinder having the same base radius and height 20 cm. Find the combined curved surface area of the solid (Use $\pi = \frac{22}{7}$).

A. 1430 square cm ✓

B. 1540 square cm

C. 1386 square cm

D. 1232 square cm

Q30 Quantitative Aptitude

What is the simplified value of $7^3 \times 14^2 \div 49^2$?

A. 14

B. 7

C. 4

D. 28 ✓



Quantitative Aptitude

30 Questions • Answer Key

Q1 Quantitative Aptitude

A kite is flying at a height of 80 m above the ground. The string makes an angle of 53° with the horizontal. Find the length of the string. (take $\sin 53^\circ = 0.8$)

- A. 150 m
B. 120 m
C. 90 m
D. 100 m



Q2 Quantitative Aptitude

Pipe F can fill a tank in 4 hours, while a leak can empty the same tank in 8 hours. If both the pipe and the leak are open simultaneously, how long will it take to fill the tank completely?

- A. 4 hours
B. 8 hours
C. 12 hours
D. 6 hours



Q3 Quantitative Aptitude

Two trains of lengths 360 m and 540 m are moving in opposite directions at speeds of 36 km/h and 54 km/h, respectively. How much time will they take to completely cross each other?

- A. 18 seconds
B. 36 seconds
C. 54 seconds
D. 72 seconds



Q4 Quantitative Aptitude

A rectangle measures 12 cm by 8 cm. It is divided vertically into two equal rectangles, each measuring 6 cm by 8 cm. In one half, a square of side 6 cm is inscribed, and the remaining area is shaded. What is the area of the shaded region in square centimeters?

- A. 1. 12 cm^2
B. 2. 11 cm^2
C. 3. 14 cm^2
D. 4. 10 cm^2



Q5 Quantitative Aptitude

A trapezium has parallel sides of lengths 14 cm and 22 cm, and the distance between them is 8 cm. What is the area of the trapezium?

- A. $1. 142 \text{ cm}^2$
B. 2. 144 cm^2
C. 3. 148 cm^2
D. 4. 146 cm^2



Q6 Quantitative Aptitude

What is the sum of the roots of the quadratic equation $x^2 - 8x + 15 = 0$?

- A. 8
B. -8
C. 7
D. 15



Q7 Quantitative Aptitude

A manufacturer sells a smartphone to a wholesale distributor at a profit of 12%. The distributor then sells it to a retailer at a profit of 15%. If the retailer pays ₹25,760 for the smartphone, what was the initial manufacturing cost?

- A. ₹20,000
B. ₹22,500
C. ₹23,500
D. ₹21,000

Q8 Quantitative Aptitude **GUJARATI ONLY**

જો બે સંખ્યાઓનો ગુ.સા.અ. (HCF) 24 હોય અને લ.સા.અ. (LCM) 864 હોય, અને એક સંખ્યા એ બીજી સંખ્યા કરતાં 120 વધારે હોય, તો મોટી સંખ્યા કઈ હશે?

- A. 192
B. 180
C. 216
D. 240



Q9 Quantitative Aptitude **GUJARATI ONLY**

અમનની ઉંમર અને ભરતની ઉંમરનો ગુણોત્તર 4:5 છે અને ભરતની ઉંમર અને ચરણની ઉંમરનો ગુણોત્તર 6:7 છે. તો અમનની ઉંમર અને ચરણની ઉંમરનો ગુણોત્તર કેટલો છે?

A. 24 : 35



B. 12 : 35

C. 8 : 35

D. 36 : 35

Q10 Quantitative Aptitude

A pipe fills a tank in 9 hours but due to a leak, it takes 12 hours. How long will the leak alone take to empty the full tank?

A. 40 hours

B. 36 hours



C. 24 hours

D. 30 hours

Q11 Quantitative Aptitude

To create a special shade, a painter mixes blue and green paint in the ratio 7 : 5. If she uses 28 liters of blue paint, how many liters of green paint should she use to maintain the same shade?

A. 35 liters

B. 15 liters

C. 25 liters

D. 20 liters

**Q12 Quantitative Aptitude**

In an election, 800 people voted. Candidate B received 25% of the votes. How many votes did Candidate B receive?

A. 200



B. 150

C. 300

D. 250

Q13 Quantitative Aptitude

A sum of money invested at simple interest triples itself in 16 years. What is the annual rate of interest?

A. 2.75%

B. 5.5%

C. 12.5%



D. 6.25%

Q14 Quantitative Aptitude

What is the value of the expression 97×103 ?

A. 9551

B. 9791

C. 9991



D. 9471

Q15 Quantitative Aptitude

If the difference between compound interest and simple interest for 2 years at 10% rate of interest per annum is ₹500, what is the value of the principal?

A. ₹48,000

B. ₹50,000



C. ₹45,000

D. ₹40,000

Q16 Quantitative Aptitude

A vendor buys a shirt for ₹25 and sells it to a customer for ₹35, who later sells it to another person for ₹45. What is the combined profit made by both sellers?

A. ₹10

B. ₹15

C. ₹25

D. ₹20

**Q17 Quantitative Aptitude**

A solid wooden cuboid with dimensions 10 cm × 8 cm × 6 cm is completely painted on all its outer surfaces and then cut into cubes of edge 2 cm each. How many small cubes will have paint on exactly two faces?

A. 24



B. 20

C. 28

D. 16

Q18 Quantitative Aptitude

A car travels 120 km at 40 km/h and then another 180 km at 60 km/h. What is the average speed of the car for the whole journey?

A. 48 km/h

B. 50 km/h



C. 52 km/h

D. 56 km/h



Q19 Quantitative Aptitude

A student claims the median of the dataset 10, 15, 13, 18, 12, 16 is 15. Is this correct?

A. No, because the correct median is 14



B. Yes, because 15 is the central value

C. Yes, because 15 is the largest value

D. No, because the correct median is 13

Q20 Quantitative Aptitude

A, B, and C can complete a piece of work in 20 days, 30 days, and 60 days, respectively. They start working together. After 5 days, A leaves the work. B and C continue for another 6 days, after which C also leaves. In how many more days will B alone complete the remaining work?

A. 9

B. 6



C. 12

D. 3

Q21 Quantitative Aptitude

A frequency table for the number of books read by a group of students is shown:

Books read	Number of Students
2	5
3	7
4	8
5	7

What is the median number of books read?

A. 4



B. 3

C. 3.5

D. 4.5

Q22 Quantitative Aptitude

A train travels 960 km in 12 hours. To cover the same distance in 10 hours, by how much must its speed increase?

A. 22 km/h

B. 12 km/h

C. 16 km/h



D. 20 km/h

Q23 Quantitative Aptitude GUJARATI ONLY

બે ઉમેદવારો વચ્ચેની એક ચૂંટણીમાં, મતદાર યાદી (electoral roll) માંના 10% મતદારોએ તેમના મત આપ્યા ન હતા, અને 300 મત અમાન્ય જાહેર કરવામાં આવ્યા હતા. વિજેતા ઉમેદવારને કુલ નોંધાયેલા મતદારોના 46% મત મળ્યા અને તે 500 મતોની માર્જિનથી જીત્યો. તો મતદાર યાદીમાં નોંધાયેલા મતદારોની કુલ સંખ્યા કેટલી હતી?

A. 12,000

B. 10,000



C. 15,000

D. 8000

Q24 Quantitative Aptitude

A sum of ₹5,000 is invested at 10% per annum compounded annually for 1 year. What is the amount at the end of 1 year?

A. ₹5,600

B. ₹5,250

C. ₹5,500



D. ₹5,400

Q25 Quantitative Aptitude

What is the distance between the points (2, 3) and (5, 7)?

A. 8 units

B. 5 units



C. 6 units

D. 7 units

Q26 Quantitative Aptitude GUJARATI ONLY

8 : 12 ના ગુણોત્તરના બંને પદોમાં કઈ સંખ્યા ઉમેરવી જોઈએ જેથી મળતો નવો ગુણોત્તર 3 : 4 થાય?

A. 4



B. 1

C. 2

D. 3

Q27 Quantitative Aptitude

If α is a root common to both equations $x^2 + px + q = 0$ and $x^2 + rx + s = 0$, what must be true about α ?

A. α only satisfies the second equation

B. α only satisfies the first equation

C. α must be zero

D. α satisfies both equations when substituted



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Q28 Quantitative Aptitude

The cost of 5 tennis balls is the same as the selling price of 4 tennis balls. Find the profit percentage earned by the merchant.

A. 15%

B. 18%

C. 20%

D. 25%

**Q29 Quantitative Aptitude**

A painter can complete $\frac{3}{5}$ of a wall in 29 hours. How many hours are needed to complete the entire wall? (Rounded off to two decimal places)

A. 49.33 hours

B. 48.33 hours

C. 50.33 hours

D. 47.33 hours

**Q30 Quantitative Aptitude**

A flagpole stands on top of a building 80 m high. From a point on the ground, the angle of elevation to the top of the building is 45° , and the angle of elevation to the top of the flagpole is 60° . What is the height of the flagpole?

A. 1. $80(\sqrt{3} + 3)$ m

B. 2. $80(\sqrt{3} - 1)$ m

C. 3. $80(\sqrt{3} + 1)$ m

D. 4. $80\sqrt{3}$ m



Quantitative Aptitude

30 Questions • Answer Key

Q1 Quantitative Aptitude

What is the value of $(2^3 \times 2^2) \div 2^4$?

A. 8

B. 2



C. 4

D. 1

Q2 Quantitative Aptitude

Given that both roots are common for the equations $x^2 + px + 6 = 0$ and $2x^2 - 10x + 12 = 0$, what is the value of p ?

A. -3

B. 6

C. -5



D. 5

Q3 Quantitative Aptitude

A rectangular plot has dimensions of 56 m $\times$ 42 m. A path of width 3 m surrounds it. The outer perimeter of the path is:

A. 230 m

B. 240 m

C. 220 m



D. 210 m

Q4 Quantitative Aptitude

A manufacturer sells a bicycle to a wholesale dealer at a profit of 10%. The dealer then sells it to a retail customer at a profit of 20%. If the manufacturing cost of the bicycle is ₹5,000, what price does the retail customer finally pay?

A. ₹6,000

B. ₹6,600



C. ₹5,500

D. ₹5,800

Q5 Quantitative Aptitude

What is the fourth proportional to 7, 14, and 21?

A. 49

B. 42



C. 35

D. 28

Q6 Quantitative Aptitude

If the equations $10x^2 + 5x + 15 = 0$ and $8x^2 + px + 12 = 0$ have both roots common, what is the value of p ?

A. 6

B. 7

C. 5

D. 4



Q7 Quantitative Aptitude

A student invests ₹10,000 at 8% per year for 3 years. Which of the following statements is true regarding the interest earned under simple interest and compound interest?

A. Both simple and compound interests will yield equal amounts after 3 years.

B. The compound interest earned will be greater than simple interest earned over 3 years.



C. The difference between simple and compound interest remains constant over time.

D. The simple interest earned will be greater than compound interest earned over 3 years.

Q8 Quantitative Aptitude

A vendor spends ₹1,200 on apples and ₹200 on transportation. If he sells the apples for ₹1,750, find the ratio of his profit to his total investment.

A. 1:7

B. 1:4



C. 1:3

D. 1:5

Q9 Quantitative Aptitude

In a student council election, Candidate X received 60 percent of the votes, and Candidate Y received the rest. If there were 500 total votes, how many votes did Candidate Y get?

A. 100

B. 200



C. 300

D. 250



Q10 Quantitative Aptitude

A contractor employs 12 workers to complete a project in 30 days. After 10 days, 3 workers leave the project. Five days later, 8 new workers join, each of whom is only 75% as efficient as the original workers. In how many days from the beginning of the project will the work be completed?

A. 30

B. 28



C. 26

D. 25

Q11 Quantitative Aptitude

A motorist travels from one city to another. He covers the first one-third of the total distance at 30 km/h and the second one-third at 40 km/h. If his average speed for the entire journey is 40 km/h, what is his speed during the final one-third of the journey?

A. 60 km/h



B. 65 km/h

C. 55 km/h

D. 50 km/h

Q12 Quantitative Aptitude

If ₹12,000 is lent at a simple interest rate of 7% per annum for 4 years, what is the total interest earned?

A. ₹4800

B. ₹3860

C. ₹4200

D. ₹3360

**Q13 Quantitative Aptitude**

What is the curved surface area of a cone with a radius of 7 cm and a slant height of 10 cm?

A. $80\pi \text{ cm}^2$

B. $90\pi \text{ cm}^2$

C. $70\pi \text{ cm}^2$



D. $77\pi \text{ cm}^2$

Q14 Quantitative Aptitude

Two inlet pipes, M and N, are attached to an empty storage tank. Pipe M alone can fill the tank in 20 hours, and Pipe N alone can fill it in 30 hours. If both pipes are opened together, how much time will it take to fill the tank?

A. 10 hours

B. 12 hours



C. 15 hours

D. 25 hours

Q15 Quantitative Aptitude

Find the mean of the following data:

Class interval	Frequency
0-10	5
10-20	7
20-30	6
30-40	2

A. 18.5

B. 16.5

C. 19.5

D. 17.5

**Q16 Quantitative Aptitude**

A recipe requires 250 grams of sugar to make 5 cakes. How much sugar is needed to make 35 cakes, assuming the amount is directly proportional?

A. 1650 grams

B. 1550 grams

C. 1600 grams

D. 1750 grams

**Q17 Quantitative Aptitude**

A car travels at a speed of 60 km/h for 3 hours. What distance does it cover?

A. 180 km



B. 120 km

C. 210 km

D. 150 km



Q18 Quantitative Aptitude

If the fourth proportional to 2^x , 4^x and 8^x is 65,536, what is the value of 5^x ?

- A. 25
- B. 625
- C. 3125
- D. 125

**Q19 Quantitative Aptitude**

The point P divides the line segment joining the points A (2, 4) and B (8, 10) externally in the ratio 1:2. Find the coordinates of point P.

- A. (-4, -2)
- B. (-4, 2)
- C. (-6, -2)
- D. (-4, -1)

**Q20 Quantitative Aptitude**

A person walks 96 km in 12 hours. What is his speed?

- A. 9 km/h
- B. 7 km/h
- C. 6 km/h
- D. 8 km/h

**Q21 Quantitative Aptitude**

A shopkeeper bought 60 identical pens for ₹2,400. He sold all the pens at the same price and made a total profit equal to the cost price of 12 pens. What was the selling price of each pen?

- A. ₹48
- B. ₹42
- C. ₹45
- D. ₹52

**Q22 Quantitative Aptitude**

If the number 8432A is divisible by both 4 and 3, what is the value of A?

- A. 1
- B. 6
- C. 7
- D. 4

**Q23 Quantitative Aptitude**

Given the following table of daily wages for factory workers, find the mode (Round off to nearest integer value).

Daily Wages	Number of Workers
40-50	6
50-60	10
60-70	18
70-80	12
80-90	4

- A. 68
- B. 62
- C. 60
- D. 66

**Q24 Quantitative Aptitude**

A mother is 25 years older than her daughter. If the daughter's age is 15 years, what is the mother's age?

- A. 35 years
- B. 42 years
- C. 40 years
- D. 38 years

**Q25 Quantitative Aptitude**

A cube of side 8 cm is cut into two equal cuboids along a plane parallel to one face. What is the volume of each cuboid?

- A. 256 cm³
- B. 128 cm³
- C. 512 cm³
- D. 384 cm³

**Q26 Quantitative Aptitude**

A sum of ₹1,000 is invested at an annual interest rate of 10% for 2 years. If the interest is compounded annually, what is the difference between the compound interest and the simple interest earned over the 2-year period?

- A. ₹20
- B. ₹10
- C. ₹15
- D. ₹5



Q27 Quantitative Aptitude

A salaried professional spends 75% of her monthly income on expenses and saves the rest. The next year, her income increases by 20%, and she increases her monthly savings by 50%. By what percentage has her monthly expenditure increased compared to the previous year?

A. 5%

B. 10% ☒

C. 8%

D. 12%

Q28 Quantitative Aptitude

A pipe can fill a tank in 8 hours. How much of the tank will it fill in 2 hours?

A. 1. $\frac{3}{4}$ B. 2. $\frac{1}{2}$ C. 3. $\frac{1}{4}$ ☒D. 4. $\frac{1}{3}$ **Q29** Quantitative Aptitude

From the top of a mountain, a rope is stretched to the ground. The rope makes an angle of 45° with the ground. If the height of the mountain is 50 m, find the length (in m) of the rope.

A. 1. 50

B. 2. $50\sqrt{2}$ ☒C. 3. $100\sqrt{2}$

D. 4. 100

Q30 Quantitative Aptitude

Simplify: $\sin^2\theta + \cos^2\theta + \tan^2\theta - \sec^2\theta$

A. 2

B. 0 ☒

C. -1

D. 1



Quantitative Aptitude

30 Questions • Answer Key

Q1 Quantitative Aptitude

A basket has apples and oranges. The total number of fruits is 20. If there are 8 more apples than oranges, how many apples are in the basket?

A. 10

B. 14



C. 16

D. 12

Q2 Quantitative Aptitude

Two students, Arun and Beena, can paint a fence together in 6 hours. If Arun alone can paint it in 10 hours, how long would Beena alone take to paint the fence?

A. 15 hours



B. 9 hours

C. 12 hours

D. 6 hours

Q3 Quantitative Aptitude

If Mean = 30 and Median = 28, then the value of Mode is:

A. 22

B. 24



C. 28

D. 26

Q4 Quantitative Aptitude

If the simple interest earned on a certain sum in 5 years at 6% per annum is ₹300, what was the sum?

A. ₹500

B. ₹2,000

C. ₹1,500

D. ₹1,000



Q5 Quantitative Aptitude

What is the nature of the roots of the quadratic equation $3x^2 - 10x + 3 = 0$?

A. Two distinct real roots



B. Two imaginary roots

C. No real roots

D. Two real and equal roots

Q6 Quantitative Aptitude

Which of the following ratios is different from the others: 6:9, 8:12, 10:15, 7:9?

A. 10:15

B. 8:12

C. 6:9

D. 7:9



Q7 Quantitative Aptitude

If Sunil's monthly income is ₹8,000 and his expenditure is 60% of his income, what is his expenditure?

A. ₹4,000

B. ₹5,600

C. ₹3,200

D. ₹4,800



Q8 Quantitative Aptitude

Meera buys a lamp for ₹1,200 and sells it to Amit at a loss of 10%. Amit then repairs it for ₹100 and sells it to Sneha for ₹1,400. What is Amit's profit or loss percentage on his transaction? (Rounded off to two decimal places)

A. 18.64% loss

B. 10% profit

C. 20% profit

D. 18.64% profit



Q9 Quantitative Aptitude

A man rows a boat 30 km downstream in 2 hours and returns upstream in 5 hours. What is the speed of the boat in still water?

A. 18.5 km/h

B. 12.5 km/h

C. 16.5 km/h

D. 10.5 km/h



Q10 Quantitative Aptitude

A newly built apartment currently valued at ₹50,00,000 depreciates at a steady rate of 6% per annum due to market fluctuations. What will be the value of the apartment after 2 years?

A. ₹44,18,000 ✓

B. ₹44,32,000

C. ₹44,25,000

D. ₹44,00,000

Q11 Quantitative Aptitude

The point P divides the line segment joining the points A (2,5) and B (8,14) internally in the ratio 2:1. What are the coordinates of point P?

A. (6, -11)

B. (-6, -11)

C. (-6, 11)

D. (6, 11) ✓

Q12 Quantitative Aptitude

A person covers the first 30 km of a journey at 30 km/h, the next 30 km at 15 km/h, and the last 40 km at 20 km/h. What is his average speed for the entire journey?

A. 18 km/h

B. 20 km/h ✓

C. 25 km/h

D. 22 km/h

Q13 Quantitative Aptitude

Ravi bought a toy car for ₹150 and sold it for ₹180. Find the percentage profit on the transaction.

A. 18%

B. 20% ✓

C. 15%

D. 25%

Q14 Quantitative Aptitude

A can complete a piece of work in 10 days. B can complete the same work in 15 days. If they work together, in how many days will they complete the work?

A. 6 days ✓

B. 5 days

C. 10 days

D. 8 days

Q15 Quantitative Aptitude

Using step-deviation method, find the mean of the following data.

Class interval	Frequency
0-10	3
10-20	5
20-30	7
30-40	5

A. 24

B. 23

C. 22 ✓

D. 21

Q16 Quantitative Aptitude

Riya bought a set of pens for ₹80 and sold them to her friend for ₹100. Her friend later sold the same set for ₹120. What is the total profit (in ₹) made over both transactions?

A. 20

B. 40 ✓

C. 60

D. 80

Q17 Quantitative Aptitude

Which of the following ratios is the largest? 7:10, 2:3, 4:6, 8:15

A. 8:15

B. 2:3

C. 7:10 ✓

D. 4:6

Q18 Quantitative Aptitude

A student's math score increased by 30% from Term 1 to Term 2 and then decreased by 22% from Term 2 to Term 3, resulting in a final score of 76.05. Find the original score in Term 1.

A. 90

B. 75 ✓

C. 80

D. 60



Q19 Quantitative Aptitude

What is the value of $\sin^2 30^\circ + \cos^2 30^\circ$?

A. 2

B. 1



C. 0.5

D. 0

Q20 Quantitative Aptitude

A hemisphere has its volume increased by a factor of 8 by increasing its radius. If the original radius was 5 cm, what is the new radius?

A. 13 cm

B. 14 cm

C. 10 cm



D. 12 cm

Q21 Quantitative Aptitude

A sum of ₹8,000 is invested at 5% per annum compounded annually for 2 years. What is the compound interest earned?

A. ₹860

B. ₹880

C. ₹820



D. ₹840

Q22 Quantitative Aptitude

If the quadratic equations $x^2 - 7x + 12 = 0$ and $px^2 - qx + 24 = 0$ have both roots in common, what is the value of $(p - q)$?

A. -5

B. 7

C. 12

D. -12

**Q27 Quantitative Aptitude**

A can complete a work in 15 days, B in 20 days, and C in 30 days. If all three work together, how many days will they take to complete the work?

A. 1. 5 days

B. 2. 6 days

C. 3. $6\frac{2}{3}$ days



D. 4. $7\frac{1}{2}$ days

Q23 Quantitative Aptitude

Given two numbers $8k$ and $12k$, where k is their HCF, find their LCM in terms of k .

A. $48k$

B. $96k$

C. $24k$



D. $12k$

Q24 Quantitative Aptitude

Nine identical cubes, each with edge 1 cm, are joined end to end in a straight line. What is the total surface area of the resulting solid?

A. 38 cm^2



B. 40 cm^2

C. 42 cm^2

D. 36 cm^2

Q25 Quantitative Aptitude

A cyclist moves at 20 kilometers per hour for 2 hours. What distance does the cyclist cover?

A. 40 km



B. 20 km

C. 30 km

D. 50 km

Q26 Quantitative Aptitude

A solution contains 30 litres of acid and water in the ratio 1 : 2. How much water (in litres) should be added to make the ratio 1 : 3?

A. 7

B. 15

C. 10



D. 5



Q28 Quantitative Aptitude

If $\cos A = \frac{4}{5}$, then the value of $\cot A$ is:

A. 1. $\frac{3}{5}$

B. 2. $\frac{3}{4}$

C. 3. $\frac{5}{3}$

D. 4. $\frac{4}{3}$

**Q29** Quantitative Aptitude

A decorative lamp post is made by placing a solid hemisphere of radius 7 cm on top of a solid cylinder of radius 7 cm and height 21 cm. The cylinder is fixed centrally on the top face of a solid cuboid base of dimensions 21 cm × 14 cm × 7 cm.

The circular face of the hemisphere in contact with the cylinder and the circular region of the cuboid's top face covered by the cylinder are not exposed. Also, the bottom face of the cuboid is not painted.

If the cost of painting the exposed outer surface of the lamp post is ₹4 per cm², find the total cost of painting one lamp post.

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

A. ₹6,970

B. ₹6,658

C. ₹7,448

D. ₹6,895

**Q30** Quantitative Aptitude

Express $1.\overline{5}$ as a regular fraction.

A. 35/99

B. 8/5

C. 14/9

D. 7/6



Quantitative Aptitude

30 Questions • Answer Key

Q1 Quantitative Aptitude

If interest is compounded half-yearly for 3 years, how many times will it be added to the principal?

- A. Three times
- B. Six times
- C. Five times
- D. Four times



Q2 Quantitative Aptitude

A shopkeeper buys a pen for ₹40 and wants to earn a profit of 30%. At what price should he sell the pen?

- A. ₹54
- B. ₹56
- C. ₹50
- D. ₹52



Q3 Quantitative Aptitude

In an election, 20% of the voters did not vote. Candidate A received 60% of the valid votes and got 4,800 votes. How many voters were registered in total?

- A. 9,000
- B. 8,000
- C. 12,000
- D. 10,000



Q4 Quantitative Aptitude

A train covers two equal distances, first at 30 km/h and then at 60 km/h. What is the average speed of the train for the whole journey?

- A. 36 km/h
- B. 42 km/h
- C. 40 km/h
- D. 46 km/h



Q5 Quantitative Aptitude

A logistics startup designs a compact storage unit in the shape of a cuboid with dimensions 19 cm × 6 cm × 8 cm. What is its total surface area?

- A. 604 square cm
- B. 616 square cm
- C. 628 square cm
- D. 642 square cm



Q6 Quantitative Aptitude

A pipe fills a tank in 10 hours while a waste pipe empties it in 30 hours. If both pipes are opened together, how long will it take to fill the tank?

- A. 18 hours
- B. 21 hours
- C. 15 hours
- D. 12 hours



Q7 Quantitative Aptitude

In the equation $x^2 - 18x + 77 = 0$, the value of the sum and the product of the roots are:

- A. Sum = -18, Product = 77
- B. Sum = -18, Product = -77
- C. Sum = 18, Product = -77
- D. Sum = 18, Product = 77



Q8 Quantitative Aptitude

If ₹432 is paid for 12 mangoes, how much will be paid for 1 mango?

- A. ₹36
- B. ₹24
- C. ₹144
- D. ₹48



Q9 Quantitative Aptitude

If 3, x, and 12 are in continued proportion, what is the value of x?

A. 6



B. 9

C. 8

D. 4

Q10 Quantitative Aptitude

A sum of ₹20,000 is invested for 2 years at 10% compound interest per annum. How much additional interest is earned if the interest is compounded half-yearly instead of annually? (Round off to the nearest integer)

A. ₹110



B. ₹150

C. ₹100

D. ₹130

Q11 Quantitative Aptitude

A train covers a distance of 150 km in 3 hours. Which expression correctly represents the speed of the train (in km/h)?

A. $150 - 3$

B. $150 \div 3$



C. $150 + 3$

D. 150×3

Q12 Quantitative Aptitude

A retailer buys 5 identical calculators at a total price of ₹2000. He sells three of them at a 20% profit and the remaining two at a 10% loss. What is his overall percentage profit or loss?

A. 12% profit

B. 8% profit



C. 4% profit

D. 2% loss

Q13 Quantitative Aptitude

A sum amounts to ₹18,400 in 4 years at simple interest and to ₹19,600 in 6 years at the same rate. What is the principal?

A. ₹15,000

B. ₹16,500

C. ₹15,500

D. ₹16,000

**Q14 Quantitative Aptitude**

A shop records sales for 10 days as: 30, 35, 35, 40, 40, 45, 45, 45, 50, 55. If the sale of 50 is changed to 45, what is the mode of the new data set?

A. 47

B. 46

C. 45



D. 48

Q15 Quantitative Aptitude

Two pipes fill a tank together in 4 hours. If one pipe alone fills the tank in 8 hours, how many hours would the second pipe take to fill the tank alone?

A. 12 hours

B. 6 hours

C. 8 hours



D. 10 hours

Q16 Quantitative Aptitude

Determine the quadrant in which the point (7, -4) is located on the Cartesian plane.

A. Third quadrant

B. Fourth quadrant



C. Second quadrant

D. First quadrant

Q17 Quantitative Aptitude

A study on learning habits recorded the weekly self-study hours of eleven students as: 12, 15, 10, 18, 16, 14, 11, 17, 13, 19, 20. Which of the following represents the median weekly study time (in hours) for the group?

A. 17

B. 16

C. 14

D. 15



Q18 Quantitative Aptitude

A delivery truck travels from Town M to Town N, which are 480 km apart. It covers the first 200 km at a speed of 100 km/h and the remaining distance at a speed of 80 km/h. Find the total time (in hours) taken by the truck to travel from Town M to Town N.

A. 5.5



B. 5.2

C. 4.5

D. 6.5

Q19 Quantitative Aptitude

If $4 : x = 8 : 20$, what is the value of x ?

A. 8

B. 12

C. 10



D. 16

Q20 Quantitative Aptitude

Pipe A can fill a tank in 20 hours, while Pipe B can empty the same tank in 30 hours. If both pipes are opened at the same time, what fraction of the tank will be filled after 12 hours?

A. $\frac{4}{5}$

B. $\frac{2}{5}$

C. $\frac{3}{5}$

D. $\frac{1}{5}$

**Q21 Quantitative Aptitude**

A fruit seller purchases 120 oranges for ₹960. During transportation, 20 oranges get spoiled. At what price per orange should he sell the remaining oranges to earn a profit of 25%?

A. ₹16

B. ₹15

C. ₹18

D. ₹12

**Q22 Quantitative Aptitude**

A parallelogram has a base of 16 cm and a height of 12 cm. If a rectangle has the same area as this parallelogram and a length of 24 cm, what is the width of the rectangle?

A. 8 cm



B. 6 cm

C. 7 cm

D. 9 cm

Q23 Quantitative Aptitude

What is the fourth proportional to the numbers 0.8, 1.6, and 2?

A. 4



B. 2

C. 3.2

D. 2.4

Q24 Quantitative Aptitude

In an election with 2500 voters, Candidate D received 40% of the total votes. How many votes did Candidate D receive?

A. 1000



B. 1500

C. 1200

D. 800

Q25 Quantitative Aptitude

What is the value of $\frac{2^4 \times 5^2 \times 3 \times 2}{2^5 \times 5^5 \times 15^{-3}}$?

A. 27

B. 18

C. 9

D. 81



Q26 Quantitative Aptitude

If $\tan\theta + \sec\theta = 5$, then find the value of $\sec\theta - \tan\theta$.

A. 1. $\frac{1}{5}$



B. 2. $\frac{2}{5}$

C. 3. $\frac{3}{5}$

D. 4. $\frac{4}{5}$

Q27 Quantitative Aptitude

Simplify: $(5x - 2)^2 - (25x^2 + 4)$

A. $20x$

B. $-10x$

C. $-20x$



D. $10x$

Q28 Quantitative Aptitude

A cone has a base radius of 7 cm and a slant height of 25 cm. What is the total surface area of the cone? (Use $\pi = \frac{22}{7}$)

A. 616 square cm

B. 770 square cm

C. 550 square cm

D. 704 square cm

**Q29** Quantitative Aptitude

From a point A on the ground, the angle of elevation to the top of a tower is 45° . After moving 10 meters away from the tower to point B, the angle of elevation becomes 30° . What is the height (rounded off to 2 decimal places) of the tower in meters?

(Given $\sqrt{3} = 1.73$)

A. 16.65 m

B. 14.32 m

C. 13.70 m



D. 15.23 m



Q30 Quantitative Aptitude

For what value of m will $mx^2 + 8x + 14 = 0$ have real and equal roots?

A. 1. $\frac{7}{6}$

B. 2. $\frac{9}{8}$

C. 3. $\frac{8}{7}$



D. 4. $\frac{9}{7}$



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Quantitative Aptitude

30 Questions • Answer Key

Q1 Quantitative Aptitude

A cyclist covers a certain distance in 4 hours at a speed of 25 km/h. Another cyclist covers the same distance in 2 hours. What is the speed of the second cyclist?

- A. 30 km/h
- B. 50 km/h
- C. 25 km/h
- D. 40 km/h



Q2 Quantitative Aptitude

A student pays for 24 notebooks but receives only 21 notebooks. What is his gain or loss?

- A. Gain, 12.5%
- B. Loss, 12.5%
- C. Loss, 15%
- D. Gain, 15%



Q3 Quantitative Aptitude

A sum of ₹5,000 is invested at a compound interest rate of 8% per annum for 2 years, with interest compounded annually. What will be the total amount at the end of 2 years?

- A. ₹5,932
- B. ₹6,032
- C. ₹5,732
- D. ₹5,832



Q4 Quantitative Aptitude

If A and B together can do a piece of work in 10 hours, and A alone can do it in 15 hours, how many hours will B alone take?

- A. 15 hours
- B. 25 hours
- C. 20 hours
- D. 30 hours



Q5 Quantitative Aptitude

What is the fourth proportional to 8, 16, and 20?

- A. 32
- B. 24
- C. 40
- D. 48



Q6 Quantitative Aptitude

A student claims that reducing the radius of a cylinder by 25% and increasing its height by 25% keeps the volume constant. Is this claim correct? (Round off the percentage change to the nearest integer)

- A. No, the volume decreases by 24%
- B. No, the volume decreases by 30%
- C. No, the volume decreases by 26%
- D. Yes, the volume remains unchanged



Q7 Quantitative Aptitude

A car travels 60 km at 30 km/h and another 60 km at 60 km/h. What is its average speed for the entire journey?

- A. 50 km/h
- B. 45 km/h
- C. 40 km/h
- D. 35 km/h



Q8 Quantitative Aptitude

A cylindrical pillar has a radius of 4 m and a height of 10 m. The cost of painting its curved surface is ₹14 per m². Find the total cost of painting the pillar. (Use $\pi = 22/7$)

- A. ₹3410
- B. ₹3520
- C. ₹3620
- D. ₹3320



Q9 Quantitative Aptitude

A shopkeeper reduces the price of a shirt from ₹80 to ₹64. By what percentage was the price decreased?

A. 12%

B. 20% ✓

C. 25%

D. 16%

Q10 Quantitative Aptitude

A fruit vendor buys mangoes at a rate where the cost of 25 mangoes is equal to the selling price of 20 mangoes. What percentage profit does the vendor make?

A. 30%

B. 25% ✓

C. 15%

D. 20%

Q11 Quantitative Aptitude

A and B started a business by investing ₹48,000 and ₹60,000, respectively. After 8 months, A withdrew ₹12,000 from his investment, while B continued with the same investment for the entire year. If the total profit at the end of the year was ₹1,45,600, what was B's share of the profit?

A. ₹96,000

B. ₹84,000 ✓

C. ₹80,000

D. ₹1,08,000

Q12 Quantitative Aptitude

Which value of k makes $x^2 + 6x + k = 0$ have exactly one real solution?

A. $k = 12$

B. $k = 9$ ✓

C. $k = 8$

D. $k = 6$

Q13 Quantitative Aptitude GUJARATI ONLY

એક વાહન કુલ 240 km અંતર કાપે છે. તે મુસાફરીનો એક-ચતુર્થાંશ ભાગ 15 km/h ની ઝડપે, મુસાફરીનો અડધો ભાગ 20 km/h ની ઝડપે અને બચેલો એક-ચતુર્થાંશ ભાગ 30 km/h ની ઝડપે કાપે છે. સમગ્ર મુસાફરી માટે વાહનની સરેરાશ ઝડપ કેટલી છે?

A. 20 km/h ✓

B. 24 km/h

C. 18 km/h

D. 22 km/h

Q14 Quantitative Aptitude

If the seven-digit number $543 \times 61y$ is divisible by 72, what is the value of $5x - 3y$?

A. -8 ✓

B. -7

C. 8

D. 7

Q15 Quantitative Aptitude

A city had an original population of 1,20,000. Due to migration, the population decreased by 22% in the first year. In the following year, the population increased and reached 1,12,320. What was the percentage increase during the second year?

A. 15%

B. 22%

C. 18%

D. 20% ✓

Q16 Quantitative Aptitude GUJARATI ONLY

આપેલી સંખ્યાઓ 21, 25, 21, 23, 24, 21, 22 માટે બહુલક કેટલો છે?

A. 23

B. 24

C. 21 ✓

D. 22

Q17 Quantitative Aptitude

The ratio of red marbles to blue marbles is 5:7, and the ratio of blue marbles to green marbles is 7:2. Which color has the smallest representation?

A. Red marbles

B. Blue marbles

C. All colors are represented equally

D. Green marbles ✓



Q18 Quantitative Aptitude

Consider the following grouped data for the number of books read by students in a month.

Class Interval	Frequency
0-5	4
5-10	x
10-15	18
15-20	7
20-25	1

If the mode is known to be 12, what is the value of x? (Round off to the nearest integer)

A. 9

B. 11

C. 16

D. 13

Q19 Quantitative Aptitude

Given the identity $1 + 2 \sin^2 A \cos^2 A = \sin^4 A + \cos^4 A + k \sin^2 A \cos^2 A$ for all acute angles A, what is the value of the constant k?

A. 3

B. 6

C. 4

D. 2

Q20 Quantitative Aptitude

A sum invested at simple interest doubles itself in 20 years. In how much time will it become three times of itself?

A. 35 years

B. 45 years

C. 40 years

D. 30 years

Q21 Quantitative Aptitude

A cone has a radius of 14 cm and a height of 21 cm. A second cone has the same height, but its volume is four times that of the first cone. Find the radius of the second cone.

A. 18 cm

B. 24 cm

C. 28 cm

D. 20 cm

Q22 Quantitative Aptitude

If a shirt is sold for ₹165 with a profit of 10%, what was its cost price (in ₹)?

A. 150

B. 140

C. 155

D. 145

Q23 Quantitative Aptitude

A point P divides the line joining A(2, 2) and B(8, 2) externally in the ratio 1 : 2. What are the coordinates of P?

A. (-2, 2)

B. (12, 2)

C. (-4, 2)

D. (10, 2)

Q24 Quantitative Aptitude

A store sells pencils and erasers. If 2 pencils and 3 erasers cost ₹13, and 4 pencils and 1 eraser cost ₹11, which system of linear equations represents this situation (₹x is cost of 1 pencil and ₹y is cost of 1 eraser)?

A. $2x + y = 13$ and $3x + 4y = 11$ B. $x + 3y = 13$ and $2x + y = 11$ C. $3x + 2y = 13$ and $x + 4y = 11$ D. $2x + 3y = 13$ and $4x + y = 11$ **Q25 Quantitative Aptitude**

A person deposits ₹16,000 in a fixed deposit scheme that offers a compound interest rate of 10% per annum, compounded half-yearly. What is the total amount received at the end of 1 year?

A. ₹17,640

B. ₹20,640

C. ₹18,640

D. ₹19,640



Q26 Quantitative Aptitude

Lina can clean a hall in 9 hours, and Priya can clean it in 18 hours. If they work together for 4 hours, what fraction of the hall is still left to clean?

A. 1. $\frac{1}{2}$

B. 2. $\frac{1}{6}$

C. 3. $\frac{1}{4}$

D. 4. $\frac{1}{3}$ ✓

Q27 Quantitative Aptitude

Determine the roots for the quadratic equation $7x^2 - 18x + 8 = 0$ using the quadratic formula.

A. 1. 2 and $\frac{4}{7}$ ✓

B. 2. 2 and $-\frac{4}{7}$

C. 3. -2 and $\frac{4}{7}$

D. 4. -2 and $-\frac{4}{7}$

Q28 Quantitative Aptitude

Pipe B can fill a tank in 8 hours, and Pipe C can fill the same tank in 16 hours. How much of the tank can both pipes fill together in one hour?

A. 1. $\frac{5}{16}$

B. 2. $\frac{3}{16}$ ✓

C. 3. $\frac{1}{16}$

D. 4. $\frac{7}{16}$



Q29 Quantitative Aptitude

Convert the recurring decimal 0.23333... into a fraction in its lowest terms.

A. 1. $\frac{7}{30}$



B. 2. $\frac{23}{99}$

C. 3. $\frac{7}{33}$

D. 4. $\frac{2}{9}$

Q30 Quantitative Aptitude

What will be the value of $\cot \theta$, when the value of $\tan \theta$ is $7/9$?

A. 1. $\frac{9}{7}$



B. 2. $\frac{3}{5}$

C. 3. $\frac{7}{9}$

D. 4. $\frac{5}{3}$



Quantitative Aptitude

30 Questions • Answer Key

Q1 Quantitative Aptitude

Five students scored 12, 18, 22, 26, and 32 marks in a mathematics test. What is the mean of their marks?

A. 24

B. 23

C. 22



D. 26

Q2 Quantitative Aptitude

A car travels equal distances at speeds of 48 km/h, 60 km/h, and 80 km/h. What is the average speed for the entire trip?

A. 62 km/h

B. 60 km/h



C. 54 km/h

D. 64 km/h

Q3 Quantitative Aptitude

For what value of p will both equations $x^2 - px + 6 = 0$ and $x^2 - 6x + p = 0$ have both roots common?

A. 6



B. 2

C. 4

D. 8

Q4 Quantitative Aptitude

A shopkeeper purchases a toy for ₹150 and spends ₹20 on its packaging. If he sells the toy for ₹153, what is his percentage loss?

A. 8%

B. 9%

C. 10%



D. 7%

Q5 Quantitative Aptitude

If the midpoint of a segment joining $(x, 6)$ and $(8, 2)$ is $(5, 4)$, what is the value of x ?

A. 6

B. 4

C. 12

D. 2



Q6 Quantitative Aptitude

Pipe A can fill a tank in 4 hours and Pipe B can fill the same tank in 12 hours. How long will it take to fill the tank if both pipes are opened together?

A. 4 hours

B. 3 hours



C. 2 hours

D. 6 hours

Q7 Quantitative Aptitude

A sum of ₹5,000 is invested at 10% per annum, compounded annually. What will be the total amount after 2 years?

A. ₹6,100

B. ₹6,000

C. ₹6,050



D. ₹6,150

Q8 Quantitative Aptitude

A movie ticket and a snack together cost \$15. The movie ticket costs \$3 more than the snack. Find the cost of the movie ticket in dollars.

A. 8 dollars

B. 9 dollars



C. 6 dollars

D. 7 dollars



Q9 Quantitative Aptitude

The HCF and LCM of two numbers are 5 and 175, respectively. If the sum of the two numbers is 60, what is the difference between the two numbers?

- A. 20
- B. 25
- C. 35
- D. 10

**Q10 Quantitative Aptitude**

Two trains, Train A and Train B, are moving in opposite directions. Train A is 240 m long and travels at a speed of 72 km/h. Train B is 360 m long. If the trains completely cross each other in 20 seconds, what is the speed (in km/h) of Train B?

- A. 72
- B. 18
- C. 54
- D. 36

**Q11 Quantitative Aptitude**

If the cost price of a book is ₹400 and it is sold at a loss of 10%, what is the selling price of the book?

- A. ₹360
- B. ₹320
- C. ₹380
- D. ₹340

**Q12 Quantitative Aptitude**

If the ratio of the number of boys to girls in a class is 2:3 and there are 12 boys, how many girls are there?

- A. 20
- B. 24
- C. 18
- D. 15

**Q13 Quantitative Aptitude**

A sum of ₹4,000 is invested at 5% simple interest per annum for 3 years. What is the simple interest?

- A. ₹600
- B. ₹650
- C. ₹550
- D. ₹500

**Q14 Quantitative Aptitude**

A rectangular garden has an area of 196 square meters. If the length of the garden is twice its mean proportional with the width, what is the length of the garden in meters?

- A. 20
- B. 28
- C. 10
- D. 14

**Q15 Quantitative Aptitude**

Find the fourth proportional to 12, 18, and 45.

- A. 65.5
- B. 63.5
- C. 67.5
- D. 69.5

**Q16 Quantitative Aptitude**

What is the difference between compound interest and simple interest on ₹5,000 for 2 years at 10% per annum?

- A. ₹500
- B. ₹100
- C. ₹200
- D. ₹50

**Q17 Quantitative Aptitude**

The mean of a set of 9 numbers is 45, and the median is 48. Using the empirical formula, find the mode of the data set.

- A. 51
- B. 46
- C. 42
- D. 54

**Q18 Quantitative Aptitude**

A cylindrical swimming pool has an internal diameter of 14 m and a depth of 3 m. The inside curved surface and the base are to be painted at ₹25 per m². The pool is then filled completely with water at a cost of ₹4 per 1000 liters. Find the total cost incurred (in ₹). (Take $\pi = 22/7$)

- A. ₹8,998
- B. ₹9,998
- C. ₹7,998
- D. ₹6,998



Q19 Quantitative Aptitude

The marked price of a laptop is ₹75,000. A customer receives a 20% discount followed by an additional 15% discount on the discounted price. If the shopkeeper still earns a 2% profit, what is the cost price of the laptop?

A. ₹50,000



B. ₹49,000

C. ₹51,000

D. ₹52,000

Q20 Quantitative Aptitude

If three students can arrange chairs in 9 minutes, how long will it take six students working at the same rate to complete the task?

A. 9 minutes

B. 6 minutes 20 seconds

C. 4 minutes 30 seconds



D. 3 minutes

Q21 Quantitative Aptitude

If a shopkeeper buys a pen for ₹50 and sells it for ₹60, what is the percentage profit?

A. 20%



B. 12%

C. 15%

D. 10%

Q22 Quantitative Aptitude

Two numbers are in the ratio 3:4, and their Least Common Multiple (LCM) is 120. What is the sum of these two numbers?

A. 50

B. 90

C. 120

D. 70

**Q23 Quantitative Aptitude**

Pipe X can fill a tank in 8 hours, and Pipe Y can fill the same tank in 24 hours. If both pipes are opened together, how much of the tank will be filled after 1.5 hours?

A. 0.1

B. 0.75

C. 0.25



D. 0.45

Q24 Quantitative Aptitude

Find the nature of roots of the quadratic equation, $3x^2 + 2x + 5 = 0$.

A. One imaginary root and one real root

B. Two distinct real roots

C. Two equal real roots

D. No real roots

**Q25 Quantitative Aptitude**

A bus covers a distance of 180 metres in 20 seconds. Calculate its speed in km per hour.

A. 27.5

B. 36

C. 30

D. 32.4

**Q26 Quantitative Aptitude**

In a school election, Candidate A received 2,400 votes, and Candidate B received 2,100 votes. What was Candidate A's winning margin?

A. 500

B. 350

C. 300



D. 250



Q27 Quantitative Aptitude

If $\frac{\sin\theta}{(1 + \cos\theta)} = \frac{3}{4}$, where $0^\circ < \theta < 90^\circ$, find the value of $\cos\theta$.

A. 1. $\frac{7}{25}$



B. 2. $\frac{6}{25}$

C. 3. $\frac{9}{25}$

D. 4. $\frac{8}{25}$

Q28 Quantitative Aptitude

If a cone has a volume of 462 cubic centimeters and a height of 14 cm, what is the radius of its base (Up to two decimal places)?

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

A. 6.31 centimeters

B. 3.51 centimeters

C. 4.31 centimeters

D. 5.61 centimeters

**Q29** Quantitative Aptitude

If a right circular cone has a base radius of 3 cm and a height of 9 cm, which expression correctly represents its volume?

A. 1. $\frac{1}{3} \times \pi \times 3^2 \times 9 \text{ cm}^3$



B. 2. $\pi \times 3^2 \times 9 \text{ cm}^3$

C. 3. $\frac{1}{2} \times \pi \times 3^2 \times 9 \text{ cm}^3$

D. 4. $\frac{1}{3} \times \pi \times 9^2 \times 3 \text{ cm}^3$

Q30 Quantitative Aptitude

If $\sin \theta = \frac{3}{5}$, what is the value of $4\cos^2 \theta$?

A. 1. $\frac{36}{25}$

B. 2. $\frac{49}{25}$

C. 3. $\frac{20}{25}$

D. 4. $\frac{64}{25}$



Quantitative Aptitude

30 Questions • Answer Key

Q1 Quantitative Aptitude

If the median of a data set is 12 and one value is changed from 15 to 20, which of the following is most likely true about the median?

- A. Becomes the average of the new values
- B. Decreases
- C. Increases
- D. Remains the same



Q2 Quantitative Aptitude

A business takes a ₹12,000 loan at 15% per annum for 2 years. What is the difference between compound interest and simple interest for this period?

- A. ₹280
- B. ₹290
- C. ₹300
- D. ₹270



Q3 Quantitative Aptitude

A recipe uses sugar and flour in the ratio 3:5. If 18 cups of sugar are used, how many cups of flour are needed?

- A. 36 cups
- B. 27 cups
- C. 24 cups
- D. 30 cups



Q4 Quantitative Aptitude GUJARATI ONLY

4 : 5 અને a : 3 ના અનુરૂપ પદો (corresponding terms) નો ગુણાકાર ક્રમવાચી મળતો ગુણોત્તર 8 : 5 છે. તો a નું મૂલ્ય શોધો.

- A. 5
- B. 2
- C. 6
- D. 4



Q5 Quantitative Aptitude

A candidate secured 45% of the total votes cast, which equals 18,000 votes. What was the total number of votes cast?

- A. 45,000
- B. 36,000
- C. 40,000
- D. 50,000



Q6 Quantitative Aptitude

Find the common root of the quadratic equations $x^2 - 7x + 12 = 0$ and $x^2 - 5x + 6 = 0$.

- A. 2
- B. 3
- C. 6
- D. 4



Q7 Quantitative Aptitude

If a cyclist covers a certain distance in 4 hours at a speed of 25 km/h, how long would it take to cover the same distance at a speed of 20 km/h?

- A. 5 hours
- B. 4 hours
- C. 7 hours
- D. 6 hours



Q8 Quantitative Aptitude

In a village election contested by two candidates, 10% of the registered voters did not vote and 10% of the votes cast were invalid. The winner received 60% of the valid votes and defeated the other candidate by 3,240 votes. What is the total number of registered voters?

- A. 20,000
- B. 25,000
- C. 18,000
- D. 15,000



Q9 Quantitative Aptitude

A book is sold by A to B for ₹300. B sells it to C for ₹360. How much profit does B earn (in ₹)?

A. 60



B. 80

C. 70

D. 90

Q10 Quantitative Aptitude GUJARATI ONLY

જો 7, 13, અને x નો મધ્યક 10 હોય, તો x નું મૂલ્ય કેટલું થશે?

A. 10



B. 15

C. 7

D. 5

Q11 Quantitative Aptitude

A van travels at 80 km/hr for 45 minutes and at 60 km/hr for 15 minutes. What is the van's average speed for the journey?

A. 72 km/hr

B. 78 km/hr

C. 75 km/hr



D. 70 km/hr

Q12 Quantitative Aptitude

If ₹8,000 is invested at 10% per annum for 2 years, compounded annually, what is the total compound interest earned at the end of 2 years?

A. ₹1,680



B. ₹1,600

C. ₹1,720

D. ₹1,800

Q13 Quantitative Aptitude

If a cuboid with dimensions 7 cm by 2 cm by 3 cm is joined with another cuboid with dimensions 5 cm by 2 cm by 3 cm, what is the volume of the newly formed solid?

A. 1. 60 cm³

B. 2. 72 cm³



C. 3. 64 cm³

D. 4. 84 cm³

Q14 Quantitative Aptitude

A sum of ₹6,000 is invested at 10% simple interest per annum for 4 years. What is the simple interest?

A. ₹2,400



B. ₹2,600

C. ₹2,800

D. ₹2,200

Q15 Quantitative Aptitude

What is the distance (in units) between the points (1, 2) and (4, 6)?

A. 5



B. 4

C. 6

D. 3

Q16 Quantitative Aptitude

A milkman mixes milk and water in the ratio 11 : 2. If he has 66 litres of milk, how much water should he add to maintain the same ratio in the mixture?

A. 6 litres

B. 15 litres

C. 22 litres

D. 12 litres

**Q17 Quantitative Aptitude**

The HCF and LCM of two positive integers are 16 and 480, respectively. If one of the integers is 64, find the absolute difference between the two integers.

A. 56



B. 86

C. 76

D. 36

Q18 Quantitative Aptitude

If $\sin A + \cos A = 1$, what is the value of $\sin A \times \cos A$?

A. 0



B. 1

C. 0.5

D. 0.25



Q19 Quantitative Aptitude

A trader sells 10 notebooks at the price he paid for 12 notebooks. What is his profit percentage?

A. 20%



B. 10%

C. 5%

D. 15%

Q20 Quantitative Aptitude

A sculptor melts a solid cone of base radius 7 cm and height 21 cm together with a smaller solid cone of base radius 7 cm and height 14 cm. Both cones are made of the same material. The mixture is recast into a single solid cone with base radius 7 cm. What is the height of the new cone?

A. 35 cm



B. 20 cm

C. 30 cm

D. 25 cm

Q21 Quantitative Aptitude

A shopkeeper buys a pen for ₹20 and sells it for ₹25. What is the profit percentage?

A. 30%

B. 15%

C. 25%



D. 20%

Q22 Quantitative Aptitude

Evaluate the expression obtained by subtracting the cube root of 216 from the cube of 5.

A. 115

B. 112

C. 107

D. 119

**Q23 Quantitative Aptitude**

A car travels the first 40% of a journey at 25 km/h, the next 30% at 50 km/h, and the last 30% at 75 km/h. What is the car's average speed for the entire journey? (Round off to the nearest integer)

A. 33 km/h

B. 36 km/h

C. 40 km/h

D. 38 km/h

**Q24 Quantitative Aptitude**

For what values of a and b will the equations $x^2 - bx + 8 = 0$ and $x^2 - 6x + a = 0$ have both roots in common?

A. $a = 4, b = 8$

B. $a = 8, b = 6$



C. $a = 6, b = 8$

D. $a = 8, b = 4$

Q25 Quantitative Aptitude

If an inlet pipe fills $\frac{1}{4}$ of a tank in 1 minute, how much of the tank will it fill in 2 minutes?

A. $\frac{1}{2}$ of the tank



B. $\frac{1}{4}$ of the tank

C. $\frac{2}{3}$ of the tank

D. $\frac{2}{5}$ of the tank

Q26 Quantitative Aptitude

If $s + t = 7$ and $st = 10$, then what is the value of $s^2 + t^2$?

A. 19

B. 39

C. 49

D. 29



Q27 Quantitative Aptitude

A and B together can complete a task in 12 days. B and C together can complete the same task in 16 days. A and C together can complete the task in 24 days. How many days will A, B, and C working together take to complete the task?

A. 12 days

B. 8 days

C. 3. $10\frac{2}{3}$ days



D. 4. $11\frac{1}{3}$ days

Q28 Quantitative Aptitude

A rope in square form has an area of 484 cm^2 . It is bent into a circle, then the radius of the circle is:

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

A. 16 cm

B. 18 cm

C. 14 cm



D. 12 cm

Q29 Quantitative Aptitude

A cistern is filled by Pipe M in 12 hours and by Pipe N in 18 hours. If both pipes are operated together for 6 hours, what part of the cistern remains unfilled?

A. 1. $\frac{1}{3}$

B. 2. $\frac{1}{2}$

C. 3. $\frac{1}{6}$



D. 4. $\frac{1}{4}$

Q30 Quantitative Aptitude

If $\tan\theta + \cot\theta = \frac{17}{4}$, then $\sin\theta\cos\theta$ is equal to:

A. 1. $\frac{4}{17}$



B. 2. $\frac{1}{17}$

C. 3. $\frac{17}{4}$

D. 4. $\frac{8}{17}$



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Quantitative Aptitude

30 Questions • Answer Key

Q1 Quantitative Aptitude

The mean of the data 8, 12, 15, 20, x is 15. Find x .

A. 20



B. 18

C. 22

D. 16

Q2 Quantitative Aptitude

If a merchant sells an item for ₹4,600 and gains ₹600, what is the percentage profit?

A. 18%

B. 15%



C. 12%

D. 10%

Q3 Quantitative Aptitude

If a sum of money becomes 16 times its original value in 8 years at compound interest, how many years will it take to become 256 times its original value at the same rate of interest?

A. 12 years

B. 32 years

C. 16 years



D. 24 years

Q4 Quantitative Aptitude

Manisha bought a set of chairs and sold them for ₹4,400, incurring a loss of 12%. What was the original cost price of the same set of chairs?

A. ₹4,900

B. ₹5,000



C. ₹5,100

D. ₹5,200

Q5 Quantitative Aptitude

A cyclist travels 24 km at a speed of 12 km/h and then another 24 km at a speed of 24 km/h. What is the average speed for the entire journey?

A. 14 km/h

B. 18 km/h

C. 16 km/h



D. 20 km/h

Q6 Quantitative Aptitude

A trader buys an article for ₹640 and sells it at a gain of 25%. What is the selling price?

A. ₹720

B. ₹900

C. ₹800



D. ₹860

Q7 Quantitative Aptitude

If you borrow ₹2,00,000 at 6% per annum simple interest for 5 years, what will be the total simple interest payable?

A. ₹6,000

B. ₹20,000

C. ₹12,000

D. ₹60,000



Q8 Quantitative Aptitude

A car completes a journey by covering the first one-third at 40 km/h, the next one-third at 60 km/h, and the final one-third at 120 km/h. What is the car's average speed for the entire journey?

A. 80 km/h

B. 56 km/h

C. 72 km/h

D. 60 km/h



Q9 Quantitative Aptitude

A group of 50 corporate interns receive daily allowances distributed as follows: 8 interns receive between ₹200-₹400, 12 receive between ₹400-₹600, 15 receive between ₹600-₹800, 10 receive between ₹800-₹1000, and 5 receive between ₹1000-₹1200. What is the exact mean daily allowance for the group?

A. ₹634

B. ₹616

C. ₹668



D. ₹648

Q10 Quantitative Aptitude

Which of the following ratios has the greatest value?

1 : 2, 2 : 3, 7 : 5, or 3 : 4

A. 1 : 2

B. 2 : 3

C. 7 : 5



D. 3 : 4

Q11 Quantitative Aptitude

If 12 printers can print 3,600 pages in one hour, how many pages can 18 printers print in one hour?

A. 5,400



B. 6,000

C. 2,400

D. 4,800

Q12 Quantitative Aptitude

If Pipe A fills a tank in 10 hours, what fraction of the tank does it fill in 1 hour?

A. One-twentieth

B. One-fifth

C. One-quarter

D. One-tenth

**Q13 Quantitative Aptitude**

Find all possible values of m such that the equations $x^2 + 3x + m = 0$ and $x^2 + 6x + 5 = 0$ have exactly one common root.

A. $m = -2$ or $m = 8$

B. $m = -2$ or $m = 10$

C. $m = 2$ or $m = -8$

D. $m = 2$ or $m = -10$

**Q14 Quantitative Aptitude**

A cylindrical pipe is to be covered only on its curved surface with a waterproof sheet costing ₹15 per square cm. If the pipe has a length of 50 cm and a diameter of 14 cm, what is the total cost of covering it?

A. ₹28,000

B. ₹31,500

C. ₹33,000



D. ₹36,000

Q15 Quantitative Aptitude

Find the coordinates of the point that divides the line segment joining the points (3, 7) and (9, 1) internally in the ratio 2:1.

A. (7, 3)



B. (8, 2)

C. (6, 4)

D. (5, 5)

Q16 Quantitative Aptitude

An automobile manufacturing plant's monthly production output decreases by 20% due to a shortage of raw materials. By what percentage must the reduced output now be increased to return to its original operational level?

A. 15%

B. 20%

C. 25%



D. 18%

Q17 Quantitative Aptitude

A person runs 70 km in 14 hours and then walks 48 km in 12 hours. Find the person's average speed for the entire journey, rounded off to two decimal places.

A. 4.14 km/h

B. 4.54 km/h



C. 4.74 km/h

D. 4.34 km/h

Q18 Quantitative Aptitude

If the difference between the roots of the equation $x^2 - 12x + k = 0$ is 8, what is the value of k ?

A. 16

B. 28

C. 20



D. 24



Q19 Quantitative Aptitude

Which of the following is the result when $(2x - 5)(2x + 5)$ is simplified?

- A. $4x - 25$
- B. $4x^2 + 25$
- C. $2x^2 - 25$
- D. $4x^2 - 25$ ✓

Q20 Quantitative Aptitude

If a parallelogram has a base of 8 cm and a corresponding height of 5 cm, what is its area?

- A. 1. 16 cm^2
- B. 2. 80 cm^2
- C. 3. 40 cm^2 ✓
- D. 4. 13 cm^2

Q21 Quantitative Aptitude

A salaried employee earns a fixed monthly income and spends exactly 80% of it on household expenses. If the employee saves ₹6,000 every month, what is the monthly income?

- A. ₹24,000
- B. ₹27,000
- C. ₹30,000 ✓
- D. ₹25,000

Q22 Quantitative Aptitude

A pipe can fill a tank in 10 hours, but with a leakage, it fills the tank in 15 hours. How much time does the leakage alone take to empty the full tank?

- A. 20 hours
- B. 35 hours
- C. 30 hours ✓
- D. 25 hours

Q23 Quantitative Aptitude

If p and q are two distinct prime numbers, what is the highest common factor of the numbers obtained by adding 3 to their product and adding 4 to their product?

- A. 5
- B. 2
- C. 3
- D. 1 ✓

Q24 Quantitative Aptitude

A sum invested at a rate of 10% per annum compound interest, compounded annually, amounts to ₹12,100 in 2 years, find the principal.

- A. ₹10,000 ✓
- B. ₹11,000
- C. ₹10,500
- D. ₹11,100

Q25 Quantitative Aptitude

A pipe fills a reservoir in 12 hours, while a leak at the bottom can empty the completely filled reservoir in 24 hours. If both are open together, how much time will it take to fill the empty reservoir?

- A. 18 hours
- B. 24 hours ✓
- C. 8 hours
- D. 16 hours



Q26 Quantitative Aptitude

What is the fourth proportional to $\frac{1}{2}$, $\frac{3}{4}$, and $\frac{5}{6}$?

A. 1. $\frac{9}{8}$

B. 2. $\frac{5}{4}$ ✓

C. 3. $\frac{1}{4}$

D. 4. $\frac{3}{8}$

Q27 Quantitative Aptitude

Simplify: $7 + 3 \times 2$

A. 14

B. 12

C. 13 ✓

D. 15

Q28 Quantitative Aptitude

A ladder is placed against a wall, making an angle of 60° with the ground.

If the base of the ladder is 4 meters away from the wall, what is the length of the ladder?

A. 10 meters

B. 6 meters

C. 5 meters

D. 8 meters ✓

Q29 Quantitative Aptitude

A conical tent has a volume of 1232 m^3 . If the radius of the base is 7 m, find the height of the tent.

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

A. 24 m ✓

B. 20 m

C. 18 m

D. 21 m



Q30 Quantitative Aptitude

Given $\sec \theta - \tan \theta = \frac{1}{2}$, what is the value of $\sec \theta + \tan \theta$?

A. 4

B. 2



C. 1

D. 3



Quantitative Aptitude

30 Questions • Answer Key

Q1 Quantitative Aptitude

If the equation $4x^2 + px + 1 = 0$ has real and equal roots, what must be the value of p , where $p > 0$?

A. $p = 8$ B. $p = 6$ C. $p = 4$ ✓D. $p = 16$

Q2 Quantitative Aptitude

If a sum becomes 1.6 times of itself in 8 years at compound interest, how many years will it take to become 2.56 times of itself?

A. 8 years

B. 16 years ✓

C. 24 years

D. 12 years

Q3 Quantitative Aptitude

If the mean proportional between two numbers is 64 and one of the numbers is 32, what is the other number?

A. 128 ✓

B. 16

C. 256

D. 96

Q4 Quantitative Aptitude

What is the difference between the LCM and HCF of 4 and 6?

A. 8

B. 6

C. 14

D. 10 ✓

Q5 Quantitative Aptitude

A trader buys a notebook for ₹80 and sells it to a retailer for ₹100. The retailer then sells the notebook to a student for ₹130. What is the total profit made by the trader and the retailer combined?

A. ₹60

B. ₹30

C. ₹50 ✓

D. ₹20

Q6 Quantitative Aptitude

The locations of two towns on a coordinate plane are represented by the points $(2, -8)$ and $(7, 4)$. Find the distance between the two points.

A. 14 units

B. 12 units

C. 15 units

D. 13 units ✓

Q7 Quantitative Aptitude

The angle of elevation of the top of a vertical tower from a point on the straight path leading to the base of the tower is 45° . After moving 20 meters toward the base of the tower along the same path, the angle of elevation becomes 60° . Find the height of the tower.

A. $20\sqrt{3}$ m

B. 40 m

C. 30 m

D. $10(3 + \sqrt{3})$ m ✓

Q8 Quantitative Aptitude

If a toy is sold at ₹180 with a profit of 20%, what was its cost price?

A. ₹160

B. ₹140

C. ₹130

D. ₹150 ✓



Q9 Quantitative Aptitude

A trader buys 40 pens for ₹1,200 and sells all of them for ₹1,470. What is his profit percentage?

- A. 25.5%
- B. 19.5%
- C. 22.5%
- D. 24.5%

**Q10 Quantitative Aptitude**

A farmer mixes corn and oats in the ratio 5 : 7 to make 36 kg of animal feed. How many kilograms of corn does he use?

- A. 12 kg
- B. 18 kg
- C. 15 kg
- D. 21 kg

**Q11 Quantitative Aptitude**

A cone has a radius of 8 cm and a height of 15 cm. What is the length of its slant height?

- A. 23 cm
- B. 20 cm
- C. 12 cm
- D. 17 cm

**Q12 Quantitative Aptitude**

What is the average of the data set: 7, 12, 15, 10, and 6?

- A. 10
- B. 12
- C. 13
- D. 11

**Q13 Quantitative Aptitude**

A logistics company analyzes the daily travel distances of its delivery fleet over 100 days to optimize maintenance schedules. The distances are grouped into class intervals with a uniform class size (h) of 50 km. The fleet manager selects an assumed mean A of 250 km. Using the step-deviation method, where $U_i = (x_i - A)/h$, the manager finds that the total frequency $\sum f_i = 100$ and the sum of the products of frequencies and step-deviations $\sum f_i u_i = -32$. What is the actual mean daily travel distance of the fleet?

- A. 234 km
- B. 324 km
- C. 266 km
- D. 284 km

**Q14 Quantitative Aptitude**

If the length and width of a cuboid are 6 cm and 5 cm, respectively, and its height is h cm, which equation correctly represents the volume of the cuboid?

- A. 1. Volume of cuboid = $(6 + 5 + h) \text{ cm}^3$
- B. 2. Volume of cuboid = $(6 \times 5 \times h) \text{ cm}^3$
- C. 3. Volume of cuboid = $(5 \times 5 \times h) \text{ cm}^3$
- D. 4. Volume of cuboid = $(6 \times 5 + h) \text{ cm}^3$

**Q15 Quantitative Aptitude**

A printing press produces 420 books in 7 hours using 3 machines. At the same rate, how many books can 5 machines produce in 6 hours?

- A. 540
- B. 580
- C. 600
- D. 630

**Q16 Quantitative Aptitude**

A sum of money earns simple interest equal to its principal in 8 years. What is the annual rate of simple interest?

- A. 15%
- B. 7.5%
- C. 10%
- D. 12.5%

**Q17 Quantitative Aptitude**

A bus moves 18 km at 36 km/h and then another 18 km at 54 km/h. What is the average speed for the entire journey?

- A. 43.2 km/h
- B. 45 km/h
- C. 48 km/h
- D. 40.5 km/h

**Q18 Quantitative Aptitude**

The initial price of a sports bicycle is ₹5,000. Due to higher manufacturing costs, the company raises its price by 25%. What percentage of the final selling price is the absolute price increase?

- A. 15%
- B. 12%
- C. 18%
- D. 20%



Q19 Quantitative Aptitude

A shopkeeper mixes 90 kg of rice with 150 kg of wheat. To maintain the same ratio, how much wheat should be mixed with 180 kg of rice?

A. 300 kg



B. 360 kg

C. 225 kg

D. 270 kg

Q20 Quantitative Aptitude

If the angle of elevation to the top of a tree increases while the horizontal distance from the tree remains the same, what happens to the height of the tree?

A. The calculated height first increases and then decreases

B. The calculated height increases



C. The calculated height remains unchanged

D. The calculated height decreases

Q21 Quantitative Aptitude

A delivery van travels 90 km at 45 km/h and then 60 km at 30 km/h. What is its average speed for the entire trip?

A. 33 km/h

B. 36.7 km/h

C. 40 km/h

D. 37.5 km/h

**Q25 Quantitative Aptitude**

A closed cylindrical water tank has a diameter of 2 m and a height of 3.5 m. What is the approximate total surface area to be painted? (Use $\pi = \frac{22}{7}$)

A. 38.5 m²

B. 44 m²

C. 22 m²

D. 28.29 m²

**Q22 Quantitative Aptitude**

Two trains of lengths 120 m and 180 m are moving in the same direction at 30 m/s and 20 m/s respectively. How much time (in seconds) will the faster train take to completely cross the slower train?

A. 35

B. 30



C. 20

D. 25

Q23 Quantitative Aptitude

A factory owner faces a 40% increase in the price of a key raw material. To ensure that the total expenditure on this material rises by only 12%, by approximately what percentage should the owner reduce the consumption of the material?

A. 20%



B. 18%

C. 12%

D. 30%

Q24 Quantitative Aptitude

The amount of an investment becomes ₹12,100 after 2 years when compounded annually at an interest rate of 10% per annum. What was the original investment?

A. ₹11,000

B. ₹12,000

C. ₹10,000



D. ₹9,000



Q26 Quantitative Aptitude

Pipe A can fill a tank in 7 hours. How much of the tank will be filled in 4.5 hours?

A. 1. $\frac{11}{14}$ of the tank

B. 2. $\frac{9}{14}$ of the tank 

C. 3. $\frac{7}{12}$ of the tank

D. 4. $\frac{6}{11}$ of the tank

Q27 Quantitative Aptitude

Pipes M, N, and O can fill a tank in 9 hours, 18 hours, and 27 hours, respectively. If only Pipe M is opened for the first hour, and then all three pipes are opened for the next 2 hours, what fraction of the tank will be filled?

A. 1. $\frac{14}{27}$ 

B. 2. $\frac{5}{9}$

C. 3. $\frac{8}{15}$

D. 4. $\frac{11}{15}$

Q28 Quantitative Aptitude

If $y = 5$, what is the value of $(2y + 1)^2$?

A. 121 

B. 36

C. 25

D. 100

Q29 Quantitative Aptitude

A can complete a task in 15 days, B in 30 days, and C in 10 days. If all three work together for 2 days, what fraction of the work is left?

A. 1. $\frac{2}{5}$

B. 2. $\frac{1}{5}$

C. 3. $\frac{3}{5}$ 

D. 4. $\frac{4}{5}$



Q30 Quantitative Aptitude

If α and β are roots of the equation $3x^2 - 7x + 2 = 0$, what is the value of $\alpha\beta$?

A. 1. $\frac{3}{2}$

B. 2. $\frac{2}{3}$



C. 3. $\frac{7}{2}$

D. 4. $\frac{7}{3}$



Quantitative Aptitude

30 Questions • Answer Key

Q1 Quantitative Aptitude

If 2:5 is the same as $x:20$, what is the value of x ?

A. 8



B. 10

C. 6

D. 9

Q2 Quantitative Aptitude

Pipe A fills a tank in 6 hours and Pipe B fills it in 8 hours. They are opened together, but after 2 hours Pipe A is closed. How long will Pipe B take to finish the remaining work?

A. 3 hours 10 minutes

B. 3 hours 30 minutes

C. 3 hours 15 minutes

D. 3 hours 20 minutes



Q3 Quantitative Aptitude

Three friends, P, Q, and R, invest in a partnership in the ratio 2:3:5. If the profit is ₹25,000, how much does Q receive (in ₹)?

A. 4000

B. 6000

C. 5000

D. 7500



Q4 Quantitative Aptitude

A painting is purchased for ₹12,500 and sold at a loss of 25%. What is the selling price of the painting?

A. ₹9,375



B. ₹9,750

C. ₹10,000

D. ₹9,500

Q5 Quantitative Aptitude

If the roots of a quadratic equation are 2 and 5, which equation represents this quadratic?

A. $x^2 - 10x + 7 = 0$ B. $x^2 + 10x + 7 = 0$ C. $x^2 - 7x + 10 = 0$ D. $x^2 + 7x + 10 = 0$

Q6 Quantitative Aptitude

Two pipes, Pipe A and Pipe B, can fill a tank in 12 hours and 18 hours respectively. How long will it take both pipes, working together, to fill the tank?

A. 7 hours 40 minutes

B. 7 hours 50 minutes

C. 7 hours 12 minutes



D. 7 hours 30 minutes

Q7 Quantitative Aptitude

A student has test scores of 72, 85, 90, 68, and 75. What is the median score?

A. 75



B. 85

C. 90

D. 72

Q8 Quantitative Aptitude

A point P divides the line segment joining A(4, 8) and B(10, 18) externally in the ratio 2:3 and lies beyond A. What are the coordinates of P?

A. (6, 10)

B. (-8, -12)



C. (0, 2)

D. (22, 38)



Q9 Quantitative Aptitude

What number should be added to each of the numbers 6, 15, 20, and 43 so that the resulting numbers are in proportion?

A. 2

B. 4

C. 3



D. 5

Q10 Quantitative Aptitude

A sum of ₹5,000 is invested at 8% per annum for 2 years, compounded annually. Find the compound interest earned.

A. ₹852

B. ₹922

C. ₹832



D. ₹802

Q11 Quantitative Aptitude

The speed of a boat in still water is 18 km/h and the speed of the stream is 4 km/h. Find the downstream speed.

A. 20 km/h

B. 23 km/h

C. 21 km/h

D. 22 km/h

**Q12 Quantitative Aptitude**

A boat can go 40 km downstream in 4 hours and the same distance upstream in 8 hours. If the speed of the stream increases by 50%, how long will it take to travel 40 km upstream?

A. 6 hours 40 minutes

B. 8 hours 40 minutes

C. 10 hours 40 minutes



D. 7 hours 40 minutes

Q13 Quantitative Aptitude

In a school election, 300 votes were cast. If 90% of the votes were valid, how many valid votes were counted?

A. 240

B. 270



C. 330

D. 300

Q14 Quantitative Aptitude

If a boat takes 1 hour less to travel 24 km downstream than upstream, and the stream speed is 2 km/h, what is the speed of the boat in still water?

A. 12 km/h

B. 8 km/h

C. 14 km/h

D. 10 km/h

**Q15 Quantitative Aptitude**

Rahul sold a book for ₹640 at a 20% loss. At what price should he have sold it to gain a profit of 20%?

A. ₹850

B. ₹960



C. ₹840

D. ₹780

Q16 Quantitative Aptitude

In a right triangle with sides 5, x , and 13 units, where 13 is the largest side of the triangle, what is the value of $\tan \theta$ if θ is the angle opposite the side of length x ?

A. 13/12

B. 12/13

C. 12/5



D. 5/12

Q17 Quantitative Aptitude

The total surface area of a closed cylinder is 440 cm^2 . If its radius is 5 cm, find the height of the cylinder (in cm). (Use $\pi = 22/7$)

A. 8 cm

B. 9 cm



C. 12 cm

D. 10 cm

Q18 Quantitative Aptitude

The value of a machine depreciates by 20% in the first year, then again depreciates by 15% in the second year, and then appreciates by 25% in the third year. If its final value is ₹1,70,000, what was its original value?

A. ₹1,90,000

B. ₹1,80,000

C. ₹2,10,000

D. ₹2,00,000



Q19 Quantitative Aptitude

A cuboid-shaped box without a lid has a length of 12 cm, a width of 8 cm, and a height of 5 cm. What is its outer surface area?

A. 1. 296 cm²



B. 2. 352 cm²

C. 3. 480 cm²

D. 4. 400 cm²

Q20 Quantitative Aptitude

If a student deposits ₹5,000 at 4% per annum simple interest for 3 years, what is the simple interest earned?

A. ₹1,200

B. ₹200

C. ₹400

D. ₹600

**Q21 Quantitative Aptitude**

What is the greatest number that can completely divide both 84 and 105 without leaving any remainder?

A. 14

B. 7

C. 21



D. 42

Q22 Quantitative Aptitude

A shopkeeper exchanges 6 pens, each valued at ₹120, for 8 notebooks, each valued at ₹90. What is the profit or loss percentage in this exchange?

A. Profit of 10%

B. Loss of 10%

C. Loss of 20%

D. No profit, no loss

**Q23 Quantitative Aptitude**

A sum of ₹5,000 is invested at an interest rate of 8% per annum for 2 years. What is the difference between the compound interest (compounded annually) and the simple interest earned during this period?

A. ₹24

B. ₹16

C. ₹32



D. ₹40

Q24 Quantitative Aptitude

A pole is 10 meters tall and stands on level ground. If the angle of elevation to the top of the pole from a point on the ground is 45 degrees, how far is the point from the base of the pole?

A. 7.1 meters

B. 14.1 meters

C. 10.0 meters



D. 5.0 meters

Q25 Quantitative Aptitude

If the ratio of the coefficients of x and y is equal, but not equal to the ratio of constants, what type of solution does the system have?

A. No solution



B. Unique solution

C. Infinite solutions

D. No real solution



Q26 Quantitative Aptitude

A large irrigation pipe fills a canal in 8 hours. If three identical pipes are used together, how long (in hours) will they take to fill the canal?

A. 1. $\frac{8}{3}$



B. 2. $\frac{1}{3}$

C. 3. $\frac{3}{8}$

D. 4. $\frac{1}{8}$

Q27 Quantitative Aptitude

If the quadratic equation $x^2 - px + 5 = 0$ has roots α and β , and if $\frac{\alpha}{\beta} + \frac{\beta}{\alpha} = 3$, what is the value of p ?

A. 8 or -8

B. 4 or -4

C. 6 or -6

D. 5 or -5

**Q28 Quantitative Aptitude**

Find the mean of the following data:

Class Intervals	10-20	20-30	30-40	40-50
Frequency	3	5	7	5

A. 28

B. 30

C. 32



D. 34

Q29 Quantitative Aptitude

Simplify: $\frac{47}{12} + \frac{2}{3} - \left(\frac{3}{4} + \frac{8}{3}\right)$

A. 1. $\frac{2}{3}$

B. 2. $\frac{5}{6}$

C. 3. $\frac{7}{6}$



D. 4. $\frac{1}{3}$



Q30 Quantitative Aptitude

A decorative tower consists of a conical roof with slant height 13 cm mounted on top of a cylindrical pillar of height 12 cm. Both have the same base radius of 5 cm.

What is the total surface area of the structure, excluding the common circular surface

where the cone and cylinder are joined $\left(\text{use } \pi = \frac{22}{7}\right)$?

A. 660 square centimeters



B. 550 square centimeters

C. 720 square centimeters

D. 600 square centimeters



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Quantitative Aptitude

30 Questions • Answer Key

Q1 Quantitative Aptitude

Find the area of the quadrilateral formed by joining the points (1.5, 1), (5.5, 1), (1.5, 3.5), and (5.5, 3.5).

- A. 7.5 square units
- B. 12 square units
- C. 9 square units
- D. 10 square units



Q2 Quantitative Aptitude

Given the quadratic equation $x^2 + 4x + 3 = 0$, if α and β are its roots, what is the value of $\alpha^2\beta + \alpha\beta^2$?

- A. -7
- B. -12
- C. 12
- D. 7



Q3 Quantitative Aptitude

An irrigation channel can be filled by three pipes: Pipe A in 18 hours, Pipe B in 27 hours, and Pipe C in 54 hours. If all three pipes are opened together, how long will it take to fill the channel?

- A. 9 hours
- B. 6 hours
- C. 8 hours
- D. 7 hours



Q4 Quantitative Aptitude

A rectangular box has dimensions 2.5 m by 2 m by 1 m. What is its volume in litres when completely filled?

- A. 50 litres
- B. 5000 litres
- C. 500 litres
- D. 50000 litres



Q5 Quantitative Aptitude

Two trains, each 180 meters long, are running in the same direction on parallel tracks. The faster train overtakes the slower train in 36 seconds. What is the speed difference between the two trains?

- A. 36 km/hr
- B. 24 km/hr
- C. 40 km/hr
- D. 30 km/hr



Q6 Quantitative Aptitude

A metal cylindrical rod of radius 7 cm and height 40 cm is melted and recast into identical solid spheres, each having a radius of 3.5 cm. How many such complete spheres can be formed?

- A. 34
- B. 32
- C. 36
- D. 35



Q7 Quantitative Aptitude

A recipe uses 2 cups of rice for every 5 cups of water. How many cups of water are needed for 6 cups of rice?

- A. 15
- B. 12
- C. 10
- D. 18



Q8 Quantitative Aptitude

In a school election, there are 1200 students. If 60% of the students voted and the rest did not vote, how many students did not vote?

- A. 400
- B. 480
- C. 420
- D. 410



Q9 Quantitative Aptitude

A rectangular park measures 120 m by 80 m. Inside this park, there is a path 2.5 m wide running all around the edge. What is the area of the path?

- A. 1. 970 m²
- B. 2. 980 m²
- C. 3. 985 m²
- D. 4. 975 m² ✓

Q10 Quantitative Aptitude

What is the simplified value of the expression $\{(2x + 8)^2 - (2x - 8)^2\} \div 16$?

- A. 2x
- B. x
- C. 4x ✓
- D. 8x

Q11 Quantitative Aptitude

What is the mean proportional between 16 and 64?

- A. 24
- B. 40
- C. 32 ✓
- D. 48

Q12 Quantitative Aptitude

A fruit seller buys 3 boxes of apples for ₹180 each. He sells 2 boxes for ₹210 each and the remaining box for ₹195. What is his total profit?

- A. ₹52
- B. ₹65
- C. ₹75 ✓
- D. ₹18

Q13 Quantitative Aptitude

The daily wages of 20 factory workers are distributed as follows: 4 workers each earn ₹200 per day, 6 workers each earn ₹250 per day, 7 workers each earn ₹300 per day, and 3 workers each earn ₹350 per day. What is the mean of their daily wages?

- A. ₹270.50
- B. ₹275.50
- C. ₹277.50
- D. ₹272.50 ✓

Q14 Quantitative Aptitude

Three workers, X, Y, and Z, can complete a job in 8, 12, and 24 days respectively. How long will it take them to complete the job together?

- A. 4 days ✓
- B. 6 days
- C. 3 days
- D. 5 days

Q15 Quantitative Aptitude

In a council election, there were 5000 registered voters. Of these, 75% cast their votes. If 8% of the votes cast were declared invalid and Candidate X received 60% of the valid votes, how many votes did Candidate X receive?

- A. 2300
- B. 2250
- C. 2070 ✓
- D. 2760

Q16 Quantitative Aptitude

Let p and q be two distinct prime numbers such that their sum is 24. If the product of p and q is coprime to 35, what is the positive difference between p and q?

- A. 18
- B. 14
- C. 2 ✓
- D. 5

Q17 Quantitative Aptitude

A vehicle travels four equal distances at speeds of 12 km/h, 12 km/h, 36 km/h, and 36 km/h. The total distance covered is 288 km. Find the average speed for the entire journey.

- A. 18 km/h ✓
- B. 15 km/h
- C. 16 km/h
- D. 20 km/h

Q18 Quantitative Aptitude

If the discriminant of the quadratic equation $3x^2 + 12x + k = 0$ is zero, what is the value of k?

- A. k = 8
- B. k = 12 ✓
- C. k = 10
- D. k = 16



Q19 Quantitative Aptitude

A population of 25,000 grows by 4% in one year. What will be the new population?

- A. 26,500
- B. 25,800
- C. 25,900
- D. 26,000

**Q20 Quantitative Aptitude**

If Pipe A fills a tank in 4 hours and Pipe B fills the same tank in 8 hours, how much of the tank will both fill together in 1 hour?

- A. One-half of the tank
- B. Three-eighths of the tank
- C. One-fifth of the tank
- D. One-third of the tank

**Q21 Quantitative Aptitude**

A shopkeeper buys a notebook for ₹80 and sells it for ₹92. What is his profit percentage?

- A. 18%
- B. 12%
- C. 15%
- D. 20%

**Q22 Quantitative Aptitude**

A trader marks an article at ₹18,000. He offers a 10% discount and still makes a 20% profit. The cost price of the article is:

- A. ₹13,500
- B. ₹14,000
- C. ₹14,500
- D. ₹13,000

**Q23 Quantitative Aptitude**

If a bus travels at 45 km/h for the first hour and 55 km/h for the second hour, what is the average speed of the bus for the two hours?

- A. 55 km/h
- B. 45 km/h
- C. 49 km/h
- D. 50 km/h

**Q24 Quantitative Aptitude**

The mean of the numbers 121, 154, 187, 216 and 242 is:

- A. 186
- B. 184
- C. 188
- D. 185

**Q25 Quantitative Aptitude**

A city's population in 2010 was 125,000. It increased by 3% in 2011 and by another 4% in 2012. In 2013, the population decreased by 2%. What was the population at the end of 2013?

- A. 128,266
- B. 129,340
- C. 131,222
- D. 130,450

**Q26 Quantitative Aptitude**

Rahul, Samir, and Tushar invest in a startup and decide to share the annual profit in the ratio 4 : 5 : 7. If Tushar's share is ₹12,000 more than Rahul's, what is the total annual profit earned by the startup?

- A. ₹64,000
- B. ₹84,000
- C. ₹96,000
- D. ₹48,000

**Q27 Quantitative Aptitude**

If the principal is ₹5,000, rate of interest is 6% per annum, and time is 3 years, what is the simple interest?

- A. ₹800
- B. ₹700
- C. ₹900
- D. ₹950

**Q28 Quantitative Aptitude**

From a point, the angle of elevation to the top of the building is 60° . The horizontal distance of the point from the building is 240 m. The height of the building is: (Use $\sqrt{3} = 1.732$)

- A. 419.18 m
- B. 423.18 m
- C. 415.68 m
- D. 411.68 m



Q29 Quantitative Aptitude

If $\cot \alpha = 2$ and α is an acute angle, what is the value of $\sin \alpha$ using standard identities?

A. 1. $\frac{1}{\sqrt{5}}$



B. 2. $\frac{1}{2}$

C. 3. $\frac{2}{\sqrt{5}}$

D. 4. $\frac{2}{3}$

Q30 Quantitative Aptitude

The value of $\left(\frac{1}{3} + \frac{1}{6}\right) - \frac{1}{2}$ is:

A. 1. 0



B. 2. $\frac{1}{3}$

C. 3. 1

D. 4. $\frac{1}{6}$



Quantitative Aptitude

30 Questions • Answer Key

Q1 Quantitative Aptitude

A person buys a watch for ₹500, sells it to a friend at a profit of ₹100, and the friend sells it to another person at a loss of ₹50. What is the final selling price?

- A. ₹650
- B. ₹500
- C. ₹550
- D. ₹600



Q2 Quantitative Aptitude

If two linear equations represent distinct parallel lines, how many solutions does the system have?

- A. Unique solution
- B. Infinite solutions
- C. Two solutions
- D. No solution



Q3 Quantitative Aptitude

A and B can complete a task in 10 days working together. If A alone can finish the task in 15 days, how many days will B alone take to finish the task?

- A. 10
- B. 30
- C. 20
- D. 40



Q4 Quantitative Aptitude

A train of 200 meters long passes a man, running in the same direction at 10 km/h, in 18 seconds. What is the speed of the train?

- A. 50 km/h
- B. 48 km/h
- C. 36 km/h
- D. 32 km/h



Q5 Quantitative Aptitude

If a sum is invested for 2 years at 7 percent per annum and the difference between compound interest and simple interest is ₹98, find the sum.

- A. ₹12,000
- B. ₹8,000
- C. ₹20,000
- D. ₹7,000



Q6 Quantitative Aptitude GUJARATI ONLY

એક વેપારીએ ₹5,000 માં માલ ખરીદ્યો અને તેના પર ₹500 નો વધારાનો ખર્ચ કર્યો. જો તેણે તે માલ ₹6,000 માં વેચ્યો હોય, તો તેનો નફો કેટલા ટકા થયો ગણાય? (તમારો જવાબ દશાંશ ચિહ્ન પછી 2 અંક સુધી દર્શાવો)

- A. 10.50%
- B. 9.09%
- C. 8.33%
- D. 11.20%



Q7 Quantitative Aptitude

A trader buys a bag for ₹800 and sells it to another trader at a loss of 5%. The second trader then sells it at a profit of 12%. What is the price at which the second trader sells the bag?

- A. ₹880
- B. ₹846.30
- C. ₹851.20
- D. ₹896



Q8 Quantitative Aptitude

Three business partners, Amit, Biju, and Chirag, share an annual profit of ₹60,000 in the ratio 3 : 4 : 5. What amount does Biju receive?

- A. ₹16,000
- B. ₹12,000
- C. ₹20,000
- D. ₹10,000



Q9 Quantitative Aptitude

A hemispherical bowl has a radius of 10 cm and is completely filled with milk. The milk is poured into cylindrical glasses, each with a radius of 5 cm and a height of 8 cm. How many such cylindrical glasses can be filled completely?

A. 2

B. 3



C. 4

D. 5

Q10 Quantitative Aptitude

Three classes have students in the ratio 4 : 5 : 7. If 36 students are moved from the largest class to the smallest, the ratio changes to 7 : 5 : 4. How many students were there originally in the largest class?

A. 98

B. 84



C. 91

D. 77

Q11 Quantitative Aptitude

A premium leather wallet was originally priced at ₹2,000. During a clearance sale, the price is reduced by 15%. What is the new selling price of the wallet?

A. ₹1,900

B. ₹1,750

C. ₹1,700



D. ₹1,850

Q12 Quantitative Aptitude

A boat moves in still water at 10 km/h. What will be its speed downstream if the speed of the stream is 2 km/h?

A. 10 km/h

B. 16 km/h

C. 12 km/h



D. 14 km/h

Q13 Quantitative Aptitude

If $7^{(x-3.5)} = 343$, then the value of $3^{(x-2.5)}$ is:

A. 1.3^2

B. 2.3^4



C. 3.3^3

D. 4.3^1

Q14 Quantitative Aptitude

Three numbers are in the ratio 4 : 5 : 6 and their HCF is 18. What is the sum of the squares of the smallest and largest numbers?

A. 16,848



B. 17,848

C. 15,848

D. 16,488

Q15 Quantitative Aptitude

A solid metallic cube of side 6 cm is melted and recast into a cuboid of length 9 cm and breadth 8 cm. What is the height of the cuboid so formed?

A. 5 cm

B. 3 cm



C. 4 cm

D. 2 cm

Q16 Quantitative Aptitude

An amount invested in an education fund grows to ₹10,800 in 2 years at a compound interest rate of 20% per annum, compounded annually. What was the original amount invested?

A. ₹9,000

B. ₹7,500



C. ₹8,000

D. ₹9,600

Q17 Quantitative Aptitude

Given the scores of 50 trainees distributed as follows: 8 scored 40–50, 12 scored 50–60, 10 scored 60–70, 14 scored 70–80, and 6 scored 80–90, what is the median score group?

A. 60–70



B. 70–80

C. 40–50

D. 50–60



Q18 Quantitative Aptitude

An irrigation tank can be filled by pipe X in 30 hours. Pipe Y is 50% more efficient than pipe X. If pipe X works alone for 10 hours and then pipe Y joins, how many more hours will it take to fill the tank?

A. 10

B. 6

C. 8



D. 12

Q19 Quantitative Aptitude

A ship's speed in still water is 16 km/h. If the speed of the current is 2 km/h, what is the ship's speed downstream?

A. 12 km/h

B. 14 km/h

C. 16 km/h

D. 18 km/h

**Q20 Quantitative Aptitude**

A frequency distribution has the values 15, 25, 35, 45, and 55 with corresponding frequencies 6, 8, 12, 10, and 4. What is the mean of the distribution?

A. 34.5



B. 33.5

C. 34.0

D. 35.0

Q21 Quantitative Aptitude

Which of the following equation is a quadratic equation?

A. $x^2 - 5x + 6 = 0$



B. $4x + 7 = 0$

C. $x^3 - 2x + 1 = 0$

D. $x^4 + 1 = 0$

Q22 Quantitative Aptitude

A family spends 70% of its income. If its income is increased by 25% and expenditure remains unchanged, what percentage of the new income is saved?

A. 48%

B. 44%



C. 52%

D. 40%

Q23 Quantitative Aptitude

Find the coordinates of the midpoint of the line segment joining the points (4, 8) and (12, 2).

A. (8, 5)



B. (6, 10)

C. (16, 10)

D. (4, 5)

Q24 Quantitative Aptitude

Solve the equation $8x^2 - 40 = 32x$.

A. $x = 4, x = -5$

B. $x = 5, x = -1$



C. $x = -1, x = -5$

D. $x = 5, x = 1$

Q25 Quantitative Aptitude

If the length of the space diagonal of a cube is $8\sqrt{3}$ cm, what is the length of each edge of the cube?

A. 8 cm



B. 12 cm

C. 16 cm

D. 4 cm

Q26 Quantitative Aptitude

The ascending order of the ratios 2:3, 3:5, and 5:8, is:

A. $5:8 < 3:5 < 2:3$

B. $3:5 < 5:8 < 2:3$



C. $3:5 < 2:3 < 5:8$

D. $2:3 < 3:5 < 5:8$



Q27 Quantitative Aptitude

Ravi can finish a piece of work in 8 days, while Sohan can finish the same work in 12 days. If both work together for 3 days, what fraction of the work will be completed?

A. 1. $\frac{1}{4}$

B. 2. $\frac{3}{4}$

C. 3. $\frac{5}{8}$ ✓

D. 4. $\frac{1}{2}$

Q28 Quantitative Aptitude

Find the value of $\cos^2 A$ when the value of $\sin^2 A$ is $\frac{1}{2}$.

A. 1. $\frac{1}{4}$

B. 2. $\frac{4}{5}$

C. 3. $\frac{3}{4}$

D. 4. $\frac{1}{2}$ ✓

Q29 Quantitative Aptitude

A sum becomes $\frac{11}{10}$ of itself in 5 years at a certain rate of simple interest. What is the rate per annum?

A. 4%

B. 3%

C. 2% ✓

D. 5%

Q30 Quantitative Aptitude

If $\sin\theta + \cos\theta = \frac{\sqrt{5}}{2}$, then what is the value of $\sin^4\theta + \cos^4\theta$?

A. 1. $\frac{19}{32}$

B. 2. $\frac{21}{32}$

C. 3. $\frac{31}{32}$ ✓

D. 4. $\frac{17}{32}$



Quantitative Aptitude

30 Questions • Answer Key

Q1 Quantitative Aptitude

What is the distance (in units) between the points (2, 3) and (6, 3)?

- A. 2
B. 6
C. 3
D. 4



Q2 Quantitative Aptitude

A toy is bought for ₹150 and sold at a loss of 20%. What is the selling price of the toy?

- A. ₹110
B. ₹120
C. ₹130
D. ₹140



Q3 Quantitative Aptitude

Which of the following pairs are coprime to each other?

- A. 121 and 143
B. 147 and 189
C. 138 and 293
D. 169 and 182



Q4 Quantitative Aptitude

Asha earns ₹2000 per month and spends ₹1800 in a month. What is her savings as a percentage of her income in that month?

- A. 15%
B. 10%
C. 20%
D. 90%



Q5 Quantitative Aptitude

The ratio of $(x - 3)$ to $(x + 2)$ is $5 : 7$. Find the fourth proportional to $(x - 3)$, $(x + 2)$, and 10.

- A. 12
B. 16
C. 10
D. 14



Q6 Quantitative Aptitude

A, B, and C invest in a business with shares in the ratio 4:6:10. If C's share of the profit is ₹20,000, what is the total profit?

- A. ₹30,000
B. ₹40,000
C. ₹35,000
D. ₹20,000



Q7 Quantitative Aptitude

The marks obtained by 8 students in a test are: 24, 28, 32, 36, 40, 44, 48, 52. Using the assumed mean method with an assumed mean of 36, find the actual mean.

- A. 36
B. 40
C. 38
D. 34



Q8 Quantitative Aptitude

A pipe fills a cistern in 8 hours. What fraction of the cistern is filled in 2 hours?

- A. One-fourth of the cistern
B. One-third of the cistern
C. One-half of the cistern
D. One-sixth of the cistern



Q9 Quantitative Aptitude

A cyclist travels 138 km in 6 hours. What is his average speed?

- A. 21 km/h
B. 23 km/h
C. 24 km/h
D. 22 km/h



Q10 Quantitative Aptitude

A solid hemisphere of radius 4 cm is melted and recast into solid spheres of radius 2 cm each. How many such spheres can be made?

A. 4



B. 7

C. 5

D. 6

Q11 Quantitative Aptitude

What does a positive discriminant indicate about the roots of a quadratic equation?

A. The equation has two complex roots.

B. The equation has two identical real roots.

C. The equation has two distinct real roots.



D. The equation has no roots.

Q12 Quantitative Aptitude

From a point on level ground, the angle of elevation to the top of a building is 30° . The horizontal distance from the point to the base of the building is 240 m. Find the horizontal distance from another point on the same level ground to the base of the building if the angle of elevation to the top of the building from that point is 60° .

A. 120 m

B. 240 m

C. 720 m

D. 80 m

**Q13 Quantitative Aptitude**

A student is comparing two savings accounts: one compounds interest annually, while the other compounds half-yearly. Both offer the same nominal annual interest rate. What should the student expect if the same amount is invested for the same duration in both accounts?

A. The half-yearly account will reduce the principal

B. The annual account will have a greater final amount

C. The half-yearly account will have a greater final amount



D. Both accounts will end with the same amount

Q14 Quantitative Aptitude

Simplify: $(2.5 \times 3.6 + 1.5 \times 2.4) \div (0.8 + 1.2)$

A. 6.7

B. 6.1

C. 6.5

D. 6.3

**Q15 Quantitative Aptitude**

A cuboid has length 5 cm, width 4 cm, and height 3 cm. Find its volume.

A. 1. 24 cm^3

B. 2. 15 cm^3

C. 3. 12 cm^3

D. 4. 60 cm^3

**Q16 Quantitative Aptitude**

The value of k for which the pair of linear equations $3x + 4y = 12$ and $(k + 1)x + 12y = 36$ has infinitely many solutions is:

A. 9

B. 5

C. 6

D. 8

**Q17 Quantitative Aptitude**

A train travels at 30 km/h for 2 hours, 60 km/h for 1 hour, and 90 km/h for 1 hour. What is the average speed for the entire journey?

A. 55 km/h

B. 52.5 km/h



C. 50 km/h

D. 40.5 km/h

Q18 Quantitative Aptitude

The compound interest (in ₹) on ₹9,000 at 4% per annum compounded yearly for 2 years is:

A. 754.60

B. 774.80

C. 734.40



D. 714.20



Q19 Quantitative Aptitude

A dealer bought chairs at ₹1,200 each and tables at ₹2,000 each. He sold an equal number of chairs and tables. If the profit on each chair is 10% and on each table is 20%, and his total profit is ₹27,040, how many tables did he sell?

A. 48

B. 80

C. 52

D. 64

Q20 Quantitative Aptitude

A solid cone with a base radius of 5 cm and height of 12 cm is completely melted and recast into a solid cylinder with the same base radius. What is the height of the resulting cylinder?

A. 5 cm

B. 15 cm

C. 12 cm

D. 4 cm

Q21 Quantitative Aptitude

Ramesh invests ₹1,20,000 in a bank that offers 7.5% simple interest per annum. What simple interest will he earn in 8 months?

A. ₹6,000

B. ₹7,500

C. ₹9,000

D. ₹10,500

Q22 Quantitative Aptitude

A municipal water reservoir is connected to an inlet pipe and a drainage pipe. The inlet pipe can fill the reservoir in 8 hours, while the drainage pipe can empty a full reservoir in 16 hours. If both pipes are opened simultaneously when the reservoir is empty, how long (in hours) will it take for the reservoir to become full?

A. 24

B. 8

C. 12

D. 16

Q23 Quantitative Aptitude

A person walks 6 km at 3 km per hour, cycles 18 km at 9 km per hour, and runs 12 km at 6 km per hour. What is the average speed for the complete trip?

A. 6 km per hour

B. 7 km per hour

C. 5 km per hour

D. 8 km per hour

Q24 Quantitative Aptitude

The discriminant of the equation $2x^2 - 15x + 46 = 0$ is:

A. -183

B. -163

C. -143

D. -123

Q25 Quantitative Aptitude

A person buys a book for ₹200 and sells it for ₹180, then he buys another book for ₹150 and sells it for ₹200. What is the overall profit or loss?

A. ₹10 loss

B. ₹30 profit

C. ₹20 profit

D. ₹30 loss

Q26 Quantitative Aptitude

Two numbers are in the ratio 5:8. If the larger number is 96, the smaller number is:

A. 40

B. 50

C. 72

D. 60

Q27 Quantitative Aptitude

A point on level ground is 30 meters from the base of a vertical tower. If the angle of elevation of the top of the tower from that point is 45° , find the height of the tower.

A. 75 meters

B. 30 meters

C. 60 meters

D. 45 meters



Q28 Quantitative Aptitude

Three pipes A, B, and C can fill a tank in 24 hours, 12 hours, and 8 hours respectively. If all three pipes are opened together, in how many hours will the tank be filled?

A. 5 hours

B. 4 hours



C. 6 hours

D. 3 hours

Q29 Quantitative Aptitude

The value of a property increased by 15% during the first year, decreased by 4% during the second year, and then increased by 10% during the third year. If the property's current value is ₹6,07,200, what was its value before these changes?

A. ₹5,25,000

B. ₹5,40,000

C. ₹5,60,000

D. ₹5,00,000

**Q30 Quantitative Aptitude**

A data set has a mean of 36 and a median of 34. Using the empirical relation, find the mode of the data set.

A. 34

B. 38

C. 30



D. 32



Quantitative Aptitude

30 Questions • Answer Key

Q1 Quantitative Aptitude

Akash and Bikram together can complete a painting task in 6 days. Akash alone can finish it in 10 days. If only Bikram works, how many days would he need to complete the task?

A. 24

B. 8

C. 15



D. 16

Q2 Quantitative Aptitude

Rahul is 5 years older than Amit. The sum of their ages is 25 years. What is Rahul's age?

A. 10 years

B. 18 years

C. 12 years

D. 15 years



Q3 Quantitative Aptitude GUJARATI ONLY

જો સ્થિર પાણીમાં એક હોડીની ઝડપ 12 km/h હોય અને પ્રવાહની ઝડપ 4 km/h હોય, તો પ્રવાહની વિરુદ્ધ દિશામાં ટ્રાવેલ કરતી વખતે હોડીની અસરકારક (effective) ઝડપ કેટલી હશે?

A. 10 km/h

B. 16 km/h

C. 8 km/h



D. 3 km/h

Q4 Quantitative Aptitude

A train 120 m long crosses a platform 180 m long in 15 seconds. What is the speed of the train?

A. 24 m/s

B. 15 m/s

C. 20 m/s



D. 18 m/s

Q5 Quantitative Aptitude

A solid consists of a cone and a hemisphere joined at their circular bases. Both have a radius of 6 cm, and the height of the cone is 8 cm. The solid is melted and recast into a cylinder of radius 4 cm. What is the height of the cylinder so formed?

A. 10 cm

B. 20 cm

C. 15 cm



D. 14 cm

Q6 Quantitative Aptitude

A purchases a mobile phone for ₹9,000 and sells it to B for ₹12,000. B then sells the phone to a third party, making a profit of ₹2,000. What is the combined profit earned by A and B?

A. ₹4,000

B. ₹6,000

C. ₹5,000



D. ₹7,000

Q7 Quantitative Aptitude GUJARATI ONLY

3 cm ત્રિજ્યા અને 16 cm ઊંચાઈવાળા એક ઘન નળાકાર સળિયાને ઓગાળી (મેલ્ટ કરી) ને 12 cm ની ઊંચાઈ ધરાવતા એક શંકુમાં રિકાસ્ટ કરવામાં આવે છે. તો આ રીતે બનતા શંકુની ત્રિજ્યા કેટલી હશે?

A. 5 cm

B. 7 cm

C. 6 cm



D. 4 cm

Q8 Quantitative Aptitude GUJARATI ONLY

નીચેનામાંથી કયું દ્વિઘાત સમીકરણ છે?

A. $(x + 12)(x - 13) = 0$ 

B. 2.

$$x(2x + 3) = 2x^2 - 2$$
C. $15x + 14 = 0$ D. $x^2 + 2x + 1 = (x + 1)^2$ 

Q9 Quantitative Aptitude

The population of a city is 40,000. It increases by 25% during the first year and then by 20% during the second year. What will be the population of the city at the end of the two years?

A. 55,000

B. 58,000

C. 60,000



D. 64,000

Q10 Quantitative Aptitude

A pipe can fill a tank in 5 hours. Due to a leak at the bottom, it takes 7.5 hours. How long would the leak take to empty the full tank?

A. 18 hours

B. 12 hours

C. 15 hours



D. 20 hours

Q11 Quantitative Aptitude

A and B start a business with investments of ₹40,000 and ₹60,000, respectively. After one year, they earn a profit of ₹55,000. What is B's share of the profit?

A. ₹34,000

B. ₹32,000

C. ₹31,000

D. ₹33,000

**Q12 Quantitative Aptitude**

If the principal is ₹8000, the simple interest earned in 4 years is ₹1600, what is the rate of interest?

A. 4% p.a.

B. 5% p.a.



C. 8% p.a.

D. 6% p.a.

Q13 Quantitative Aptitude

If the highest common factor (HCF) of two numbers is 8 and one number is 40, which of the following could be the other number?

A. 37

B. 50

C. 56



D. 45

Q14 Quantitative Aptitude GUJARATI ONLY

મધ્યવર્તી સ્થિતિમાનનું એવું કયું માપ છે જે એક જ ડેટા સેટમાં એક કરતાં વધુ મૂલ્યો ધરાવી શકે છે?

A. વિસ્તાર (Range)

B. મધ્યસ્થ (Median)

C. મધ્યક (Mean)

D. બહુલક (Mode)

**Q15 Quantitative Aptitude**

A and B invest ₹40,000 and ₹50,000 respectively in a business. If the total profit at the end of one year is ₹27,000, what is A's share of the profit?

A. ₹14,000

B. ₹13,000

C. ₹10,000

D. ₹12,000

**Q16 Quantitative Aptitude**

A point S(7, 28/5) divides the line segment joining (4, 2) and (x, 8) internally in the ratio 3:2. What is the value of x?

A. 9



B. 8

C. 7

D. 11

Q17 Quantitative Aptitude

A shopkeeper buys 10 notebooks for ₹100 and sells all 10 notebooks for ₹120. What is the profit percentage?

A. 15%

B. 25%

C. 10%

D. 20%

**Q18 Quantitative Aptitude**

In the equation $x^3 + 9x^2 - 11x + 27 = 0$, the value of the sum and the product of the roots are:

A. Sum = 9, Product = -27

B. Sum = 9, Product = 27

C. Sum = -9, Product = -27



D. Sum = -9, Product = 27



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Q19 Quantitative Aptitude

If $\tan A + \cot A = 6$, what is the value of $\tan^8 A + \cot^8 A$?

- A. 1,331,724
 B. 1,331,704
 C. 1,331,714 ✓
 D. 1,331,734

Q20 Quantitative Aptitude GUJARATI ONLY

નીચે આપેલો ડેટા એક મહિનામાં પાંચ વિદ્યાર્થીઓ દ્વારા વાંચવામાં આવતી પુસ્તકોની સંખ્યા દર્શાવે છે.
 3, 7, 5, 2 અને 9

જો સૌથી ઓછી પુસ્તકો વાંચતો વિદ્યાર્થી બે વધુ પુસ્તકો વાંચે છે, તો મધ્યસ્થ (median) કેવી રીતે બદલાય છે?

- A. વધીને 7 થાય છે.
 B. બદલાઈને 9 થાય છે.
 C. ઘટીને 4 થાય છે.
 D. સમાન (યથાવત) રહે છે. ✓

Q21 Quantitative Aptitude

The ratio of two numbers is 3 : 5. If the smaller number is 24, what is the larger number?

- A. 35
 B. 40 ✓
 C. 30
 D. 45

Q22 Quantitative Aptitude

What is the difference between the compound interest and simple interest on ₹2,000 at 10% per annum for 2 years?

- A. ₹15
 B. ₹25
 C. ₹20 ✓
 D. ₹30

Q23 Quantitative Aptitude

The price of a laptop increases by 20% in the first year and then decreases by 10% in the second year. If the original price was ₹50,000, what is the final price?

- A. ₹56,000
 B. ₹52,000
 C. ₹54,000 ✓
 D. ₹58,000

Q24 Quantitative Aptitude

if $\sec \theta - \tan \theta = 4$, what is the value of $\sec \theta + \tan \theta$?

- A. -0.5
 B. 0.25 ✓
 C. -1
 D. 0.5

Q25 Quantitative Aptitude

If the HCF of two numbers is 8 and one of the numbers is 40, which of the following cannot be the value of the other number?

- A. 32
 B. 24
 C. 16
 D. 18 ✓

Q26 Quantitative Aptitude

A trader buys 12 chairs for ₹3,600 and sells each chair for ₹350. What is the profit percentage? (Rounded off to two decimal places)

- A. 15.67%
 B. 14.67%
 C. 16.67% ✓
 D. 17.67%

Q27 Quantitative Aptitude

A city has an initial population of 80,000. The population increases by 6% each year, but 4,000 people migrate out of the city at the end of every year. What will be the population at the end of 2 years?

- A. 78,528
 B. 81,648 ✓
 C. 82,016
 D. 79,800



Q28 Quantitative Aptitude

A can do a work in 18 days and B in 9 days. How much work do they complete together in 2 days?

A. 1. $\frac{1}{2}$

B. 2. $\frac{4}{9}$

C. 3. $\frac{1}{3}$



D. 4. $\frac{2}{3}$

Q29 Quantitative Aptitude

Two trains, Train X and Train Y, are running in opposite directions. Train X completely crosses Train Y in 12 seconds. The ratio of the lengths of Train X and Train Y is 4:3. Train X crosses a pole in 16 seconds and completely crosses a 320 m long platform in 28 seconds. What is the difference between the speeds of the two trains (in m/s)?

A. 1. $\frac{50}{9}$ m/s

B. 2. $\frac{80}{9}$ m/s



C. 3. $\frac{40}{9}$ m/s

D. 4. $\frac{70}{9}$ m/s

Q30 Quantitative Aptitude GUJARATI ONLY

7 cm ની ત્રિજ્યા ધરાવતા એક નક્કર ગોળાને પૂર્ણ રીતે રંગવામાં આવે છે. જો રંગકામનો ખર્ચ એ ₹2 પ્રતિ cm^2 હોય, તો ગોળાને રંગવાનો કુલ ખર્ચ કેટલો થશે?

($\pi = \frac{22}{7}$ લો.)

A. ₹1232



B. ₹616

C. ₹1340

D. ₹770



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Quantitative Aptitude

30 Questions • Answer Key

Q1 Quantitative Aptitude

Pipe A can fill a tank in 18 hours and Pipe B can fill it in 12 hours. They are opened together, but Pipe B is closed after 4 hours. How much additional time will Pipe A take to fill the remaining tank?

A. 8 hours



B. 6 hours

C. 5 hours

D. 4 hours

Q2 Quantitative Aptitude

If 9 pens cost ₹162, how much will 12 pens cost (in ₹)?

A. 228

B. 240

C. 204

D. 216



Q3 Quantitative Aptitude

Find the mode of the given distribution.

Class Interval	Frequency
0-10	4
10-20	7
20-30	13
30-40	9
40-50	5

A. 24

B. 27

C. 25

D. 26



Q4 Quantitative Aptitude

A student's Mathematics score increases by 25% in one term and then decreases by 20% in the next term. If the initial score was 80, what is the student's final score?

A. 80



B. 84

C. 100

D. 96

Q5 Quantitative Aptitude

Which pair among (3, 4), (2, 6), (4, 8), and (5, 10) is coprime?

A. 3, 4



B. 2, 6

C. 4, 8

D. 5, 10

Q6 Quantitative Aptitude

A shopkeeper buys a bicycle for ₹10,000. He spends ₹500 on transportation and ₹500 on repairs. He then sells it for ₹12,000, but pays a ₹300 commission to the salesperson. What is his profit?

A. ₹700



B. ₹675

C. ₹750

D. ₹500

Q7 Quantitative Aptitude

A shopkeeper buys a water dispenser for ₹18,000. He spends ₹1,200 on transportation and ₹800 on installation. He then sells it for ₹23,500, but offers a ₹500 cashback to the customer. What is his profit percentage?

A. 12%

B. 15%



C. 10%

D. 8%

Q8 Quantitative Aptitude

A boat moves at 14 km/h in still water and the stream flows at 3 km/h. The downstream speed is:

A. 15 km/h

B. 17 km/h



C. 11 km/h

D. 10 km/h



Q9 Quantitative Aptitude

What is the midpoint of the line segment joining the points A (-3, 7) and B (5, -1)?

- A. (1, 2)
- B. (1, 3) ✓
- C. (2, 3)
- D. (2, 5)

Q10 Quantitative Aptitude

A hemisphere of radius 5 cm is mounted on the base of a right circular cone of the same radius. If the cone has a slant height of 12 cm, what is the total surface area of the resulting solid?

- A. $110\pi \text{ cm}^2$ ✓
- B. $85\pi \text{ cm}^2$
- C. $100\pi \text{ cm}^2$
- D. $75\pi \text{ cm}^2$

Q11 Quantitative Aptitude

Simplify: $(4.2 \times 2.5 + 3.6 \times 1.8) \div (0.6 + 2.4) + (1.4 \times 2.5)$

- A. 9.36
- B. 9.26
- C. 9.16 ✓
- D. 9.06

Q12 Quantitative Aptitude

Find the median of the following data:
7, 11, 13, 18, 21, 25, 29

- A. 13
- B. 16
- C. 21
- D. 18 ✓

Q13 Quantitative Aptitude

A boat travels 42 km downstream in 3 hours and the stream speed is 2 km/h. What is the speed of the boat in still water?

- A. 13 km/h
- B. 12 km/h ✓
- C. 15 km/h
- D. 14 km/h

Q14 Quantitative Aptitude

A person invests ₹4,00,000 at 10% per annum compound interest for 1.5 years. Find the difference between the amounts obtained when the interest is compounded half-yearly and annually.

- A. ₹950
- B. ₹1250
- C. ₹1150
- D. ₹1050 ✓

Q15 Quantitative Aptitude

A sum of ₹5000 amounts to ₹6200 in 4 years at simple interest. The rate of interest per annum is:

- A. 4%
- B. 8%
- C. 6% ✓
- D. 7%

Q16 Quantitative Aptitude

Two trains of lengths 120 m and 180 m move in opposite directions at speeds 54 km/h and 36 km/h. How much time will they take to cross each other?

- A. 10 seconds
- B. 8 seconds
- C. 16 seconds
- D. 12 seconds ✓

Q17 Quantitative Aptitude

A invested ₹60,000 for 12 months, while B invested ₹80,000 after 3 months from the start and remained invested for the rest of the year. If the total profit at the end of the year is ₹1,08,000, what is A's share?

- A. ₹64,800
- B. ₹48,000
- C. ₹54,000 ✓
- D. ₹60,000

Q18 Quantitative Aptitude

The difference between the total surface area and the curved surface area of a closed cylinder is 308 cm^2 . Find the radius of the cylinder. (Use $\pi = 22/7$)

- A. 7 cm ✓
- B. 8 cm
- C. 9 cm
- D. 6 cm



Q19 Quantitative Aptitude

The difference between the compound interest (compounded annually) and simple interest on a certain sum for 3 years at 10% per annum is ₹620. Find the principal.

A. ₹18,000

B. ₹25,000

C. ₹15,000

D. ₹20,000

**Q20 Quantitative Aptitude**

A trader buys a bag for ₹800. He spends ₹200 on repairs and then sells it for ₹1200. What is his profit percentage?

A. 15%

B. 20%



C. 25%

D. 10%

Q21 Quantitative Aptitude

A person's income increases by 25% while his expenditure increases by 20%. Initially, he saved 20% of his income. What percentage of his new income does he save?

A. 24.1%

B. 22.4%

C. 23.2%



D. 24.6%

Q22 Quantitative Aptitude

The sum of two numbers is 20. Their difference is 4. What is the larger number?

A. 14

B. 10

C. 12



D. 15

Q23 Quantitative Aptitude

Find the nature of the roots of the equation $x^2 + 6x + 9 = 0$.

A. Complex

B. Cannot be determined

C. Real and equal



D. Real and distinct

Q24 Quantitative Aptitude

The sum of the squares of two positive numbers is 85, and their difference is 7. What is the smaller positive number?

A. 2



B. 6

C. 7

D. 3

Q25 Quantitative Aptitude

A contractor employs 24 workers to complete a project in 15 days. If all workers work at the same efficiency, how many workers are required to complete the same project in 10 days?

A. 54

B. 48

C. 36



D. 42

Q26 Quantitative Aptitude

A completes a work in 12 days, while B completes it in 20 days. They start together, but B leaves after 4 days. What fraction of the work is remaining?

A. 1. $\frac{2}{5}$

B. 2. $\frac{8}{15}$

C. 3. $\frac{7}{15}$



D. 4. $\frac{1}{3}$



Q27 Quantitative Aptitude

$(\sec A + \tan A)(1 - \sin A)$ is equal to:

A. cosec A

B. cos A

C. sin A

D. sec A

**Q28** Quantitative Aptitude

If $\sec \theta - \tan \theta = k$, then the value of $\sec \theta + \tan \theta$ is:

A. 1. $1 - k$

B. 2. $1 - \frac{1}{k}$

C. 3. $1 + k$

D. 4. $\frac{1}{k}$

**Q29** Quantitative Aptitude

A pipe fills a tank in 10 hours. If it works for 5 hours, what fraction of the tank is filled?

A. 1. $\frac{1}{4}$

B. 2. $\frac{3}{5}$

C. 3. $\frac{2}{3}$

D. 4. $\frac{1}{2}$

**Q30** Quantitative Aptitude

A conical pile of salt has a radius of 14 m and a height of 6 m. What is the volume of the pile?

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

A. 1232 cubic m

B. 4928 cubic m

C. 1344 cubic m

D. 3696 cubic m



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Quantitative Aptitude

30 Questions • Answer Key

Q1 Quantitative Aptitude

If ₹500 is deposited for 2 years at 5% per annum, compounded annually, what is the compound interest earned?

A. ₹51.25



B. ₹50

C. ₹41.25

D. ₹25.50

Q2 Quantitative Aptitude

A shopkeeper buys an item for ₹200 and sells it for ₹250. What is the percentage profit?

A. 25%



B. 20%

C. 50%

D. 12%

Q3 Quantitative Aptitude

A shopkeeper's income increases by 20 percent to ₹3600 per month. What was his original income before the increase?

A. ₹3400

B. ₹3200

C. ₹2800

D. ₹3000



Q4 Quantitative Aptitude

E and F start a partnership with investments in the ratio 7:3. After a year, the business earns a profit of ₹40,000. How much more does E receive than F?

A. ₹14,000

B. ₹16,000



C. ₹12,000

D. ₹10,000

Q5 Quantitative Aptitude

A pipe fills a tank in 150 minutes, and a leak empties the full tank in 200 minutes. If both start working at the same time, find the time required to fill the tank.

A. 350 minutes

B. 175 minutes

C. 100 minutes

D. 600 minutes



Q6 Quantitative Aptitude

A 180 m train overtakes another 120 m train in 30 seconds while both are moving in the same direction. If the slower train moves at 30 km/h, what is the speed of the faster train?

A. 66 km/h



B. 48 km/h

C. 64 km/h

D. 38 km/h

Q7 Quantitative Aptitude

A total amount of ₹10,500 is divided among Amit, Binod, and Chetan. The ratio of Amit's share to Binod's share is 2:3, and the ratio of Binod's share to Chetan's share is 4:5. What is the difference between Chetan's share and Amit's share?

A. ₹1,800

B. ₹1,200

C. ₹1,500

D. ₹2,100



Q8 Quantitative Aptitude

A retailer bought 120 notebooks for ₹4,800 and sold each notebook for ₹46. What is the profit percentage?

A. 18%

B. 10%

C. 15%



D. 20%



Q9 Quantitative Aptitude

Using the empirical relation between mean, median, and mode, find the mode if the arithmetic mean is 72 and the mode is 12 greater than the median.

A. 78

B. 90

C. 66

D. 84

Q10 Quantitative Aptitude

A car travels the first half of a 120 km journey at 60 km/h and the second half at 40 km/h. What is the average speed of the car for the entire journey?

A. 45 km/h

B. 52 km/h

C. 48 km/h

D. 50 km/h

Q11 Quantitative Aptitude

Pipe X can fill a tank in 10 hours, pipe Y can fill it in 15 hours, and pipe Z can empty it in 30 hours. If all three pipes are opened together, what is the total time required to fill the tank?

A. 7.5 hours

B. 12.5 hours

C. 18 hours

D. 15 hours

Q12 Quantitative Aptitude

A salaried employee's monthly income is ₹40,000. He spends 60% of his income and saves the remainder. In the following month, his expenditure increases by 25% over its previous value, while his income remains unchanged. By what percentage do his monthly savings decrease compared to the previous month?

A. 40.8%

B. 25.7%

C. 37.5%

D. 30.5%

Q13 Quantitative Aptitude

Which quadrant does the point (4, -5) lie in on the Cartesian coordinate system?

A. Third quadrant

B. Fourth quadrant

C. First quadrant

D. Second quadrant

Q14 Quantitative Aptitude

Find the principal amount on which the difference between the compound interest, compounded annually and simple interest at 10% per annum for 3 years is ₹620.

A. ₹18,000

B. ₹25,000

C. ₹15,000

D. ₹20,000

Q15 Quantitative Aptitude

A cylindrical pipe has a height of 14 cm and a curved surface area of 616 cm^2 . Find its radius. (Take $\pi = 22/7$)

A. 9 cm

B. 6 cm

C. 8 cm

D. 7 cm

Q16 Quantitative Aptitude

Which of the following ratios is equivalent to 15:25?

A. 24:35

B. 15:24

C. 24:40

D. 15:30

Q17 Quantitative Aptitude

What is the arithmetic mean of the following incomes : ₹18,050, ₹22,070, ₹25,000, ₹28,500, ₹32,000, and ₹19,502?

A. ₹24,187

B. ₹23,620

C. ₹25,010

D. ₹22,980



Q18 Quantitative Aptitude

The HCF of two numbers is 24. If the numbers are in the ratio 7:18, find the two numbers.

A. 168 and 432



B. 210 and 432

C. 196 and 432

D. 144 and 504

Q19 Quantitative Aptitude

A sum of ₹1000 is lent at 5% per annum for the first year and 7% per annum for the second year. What is the total simple interest earned after two years?

A. ₹130

B. ₹120



C. ₹100

D. ₹110

Q20 Quantitative Aptitude

A rainwater tank has a base measuring 8 m by 4 m and collects all the rainwater from a roof measuring 16 m by 12 m. If 4 cm of rain falls, how much will the water level rise in the tank?

A. 0.12 cm

B. 24 cm



C. 0.24 cm

D. 1.2 cm

Q21 Quantitative Aptitude

If Pipe A fills a tank in 6 hours and Pipe B empties it in 12 hours, how long will it take to fill the empty tank if both pipes are opened together?

A. 6 hours

B. 8 hours

C. 12 hours



D. 18 hours

Q22 Quantitative Aptitude

A car moves at 60 km/h for 2 hours, then at 30 km/h for 1 hour, and finally at 90 km/h for 1 hour. What is the average speed of the car for the entire trip?

A. 45 km/h

B. 40 km/h

C. 60 km/h



D. 52 km/h

Q23 Quantitative Aptitude

What is the discriminant of the quadratic equation $x^2 - 2x + 1 = 0$?

A. 2

B. 0



C. 4

D. 1

Q24 Quantitative Aptitude

A carpenter buys wood for ₹4,560 and spends ₹1,440 on labour charges. If he sells the table for ₹6,900, what is the gain percentage (in %)?

A. 15%



B. 25%

C. 20%

D. 10%

Q25 Quantitative Aptitude

What is the value of the algebraic expression $\frac{x^2 + 6x + 9}{x + 3}$ at $x = 12$?

A. 15



B. 18

C. 12

D. 21



Q26 Quantitative Aptitude

A water tank in the shape of a cylinder has a height of 14 cm and a radius of 7 cm. What is the cost to paint the curved surface of the tank at the rate of ₹6 per cm^2 ? (If $\pi = \frac{22}{7}$)

A. ₹3366

B. ₹3696

C. ₹3966

D. ₹3996

**Q27 Quantitative Aptitude**

From the top of a bridge, the angle of depression of a boat on the river is 60° . If the horizontal distance between the boat and the foot of the bridge is 10 m, determine the height (in meters) of the bridge.

A. 1. $10\sqrt{3}$

B. 2. $\frac{10}{\sqrt{3}}$

C. 3. $5\sqrt{3}$

D. 4. $\frac{5}{\sqrt{3}}$

**Q28 Quantitative Aptitude**

You are designing a rectangular garden and need the length to satisfy $x^2 - 4x + 5 = 0$. Using the discriminant, what can you say about possible garden lengths?

A. Only positive real values of x will work

B. Only negative real values of x will work

C. All real values of x are possible

D. No real value of x will satisfy the equation

**Q29 Quantitative Aptitude**

What is the value of $\left(2.5 \times \frac{4}{5} + 1.2\right)$?

A. 4.2

B. 3.2

C. 2.4

D. 2.6



Q30 Quantitative Aptitude

From a point on the ground, the angle of elevation of the top of a tower is 45° . From another point on the same side of the tower, 17 m closer to it, the angle of elevation becomes 60° . Find the height of the tower.

A. 1. $\frac{17\sqrt{3}(\sqrt{3}-1)}{2}$ m

B. 2. $\frac{17\sqrt{3}(\sqrt{3}+1)}{2}$ m 

C. 3. $\frac{17(\sqrt{3}-1)}{2}$ m

D. 4. $\frac{17(\sqrt{3}-2)}{2}$ m



Quantitative Aptitude

30 Questions • Answer Key

Q1 Quantitative Aptitude

A shopkeeper buys a mobile phone for ₹5,000. He spends ₹800 on repairs and ₹200 on transportation. If he sells the mobile phone for ₹7,000, what is his total profit?

A. ₹1,200

B. ₹1,600

C. ₹1,400

D. ₹1,000



Q2 Quantitative Aptitude

Which of the following is a standard trigonometric identity?

A. $\sec \theta = \cos \theta$ B. $\tan \theta = \sin \theta \times \cos \theta$ C. $3. \sin^2 \theta + \cos^2 \theta = 1$ D. $\sin \theta + \cos \theta = 1$

Q3 Quantitative Aptitude

A bakery mixes flour and sugar in the ratio 3:2 to make a special bread. If the bakery uses 18 kg of flour, how much sugar should they use to maintain the same ratio?

A. 10 kg

B. 12 kg



C. 9 kg

D. 15 kg

Q4 Quantitative Aptitude

A train runs at 50 km/h for 2 hours, 40 km/h for the next 3 hours, and 30 km/h for the final 5 hours. Find the average speed of the train over the entire journey.

A. 37 km/h



B. 35 km/h

C. 32 km/h

D. 40 km/h

Q5 Quantitative Aptitude

If ₹5000 is invested at 5% compound interest per annum, compounded annually for 2 years, what will be the total amount received at the end?

A. ₹5250.30

B. ₹5512.50



C. ₹5610

D. ₹5500

Q6 Quantitative Aptitude

Aman's monthly income is 25% more than his expenditure. If his expenditure is ₹16,000, what is his income?

A. ₹20,000



B. ₹21,000

C. ₹18,000

D. ₹19,000

Q7 Quantitative Aptitude

A milkman sells milk for ₹150 after buying it for ₹120. What is the percentage profit earned?

A. 25%



B. 20%

C. 15%

D. 30%

Q8 Quantitative Aptitude

A sum of ₹20,000 is invested at 12% per annum, compounded half-yearly, for 1.5 years. What is the amount at the end of the investment period?

A. ₹23,820.32



B. ₹23,550.80

C. ₹23,102.40

D. ₹24,048.64



Q9 Quantitative Aptitude

A sum at simple interest of 4% per annum amounts to ₹3720 in 5 years. Find the sum.

A. ₹3100



B. ₹2800

C. ₹3400

D. ₹2500

Q10 Quantitative Aptitude

If a bus travels 240 kilometers at a speed of 80 kilometers per hour, how long does it take to complete the journey?

A. 4 hours

B. 2 hours

C. 6 hours

D. 3 hours

**Q11 Quantitative Aptitude**

An artist mixes three paints in the ratio 3:7:10. If 21 ml of the second paint is used, find the amount (in ml) of the third paint required to maintain the same proportion.

A. 27

B. 35

C. 24

D. 30

**Q12 Quantitative Aptitude**

Given $(m^2 - 9m + 20)x^2 + (m - 2)x + 4 = 0$, which of the following possible value of m makes the equation not quadratic?

A. 3

B. 7

C. 6

D. 5

**Q13 Quantitative Aptitude**

What is the total surface area of a cube with each edge measuring 4 inches?

A. 48 square inches

B. 24 square inches

C. 96 square inches



D. 64 square inches

Q14 Quantitative Aptitude

Rajesh spends 90% of his monthly income. If his income decreases by 10% but his expenditure decreases by only 5%, by what percentage do his savings decrease?

A. Savings decrease by 50%

B. Savings decrease by 25%

C. Savings decrease by 10%

D. Savings decrease by 55%

**Q15 Quantitative Aptitude**

If a point P divides the line joining (4, 2) and (8, 6) externally in the ratio 3:1, what are the coordinates of P?

A. (6, 4)

B. (10, 8)



C. (5, 3)

D. (7, 5)

Q16 Quantitative Aptitude

A scholarship examination report states that the mean score of the candidates is 62. The report also mentions that the mode score exceeds the median score by 8 marks. Assuming that the empirical relation holds, what is the median score?

A. 72

B. 70

C. 66



D. 68

Q17 Quantitative Aptitude

Two inlet pipes, A and B, can fill a tank in 6 hours and 8 hours, respectively. An outlet pipe C can empty the tank in 12 hours. If all three pipes are opened together, how long will it take to fill the tank?

A. 6 hours

B. 4.8 hours



C. 5.5 hours

D. 4 hours

Q18 Quantitative Aptitude

On an expressway, a truck covers 120 km at 60 km/h, 90 km at 45 km/h, and 90 km at 90 km/h. What is the average speed for the entire journey?

A. 60 km/h



B. 55 km/h

C. 50 km/h

D. 75 km/h



Q19 Quantitative Aptitude

A man purchased a bag for ₹540 and sold it at a 10% loss. What is his selling price of the bag?

A. ₹508

B. ₹486



C. ₹520

D. ₹500

Q20 Quantitative Aptitude

If a rectangle has an area of 32 m^2 and a length of 6 m, find the numerical value of the mean proportional between its length and its area.

A. $10\sqrt{2}$

B. $14\sqrt{2}$

C. $8\sqrt{3}$



D. $16\sqrt{3}$

Q21 Quantitative Aptitude

A cone has a base radius of 7 cm and a height of 24 cm. What is the slant height of the cone?

A. 18 cm

B. 22 cm

C. 20 cm

D. 25 cm

**Q22 Quantitative Aptitude**

A data analyst chooses an assumed mean of 40 for a dataset. The sum of deviations from the assumed mean is 25, and the number of observations is 5. What is the arithmetic mean of the data?

A. 42

B. 45



C. 65

D. 40

Q23 Quantitative Aptitude

Simplify and evaluate $(x + 2)(x + 3)$ for $x = 5$.

A. 45

B. 35

C. 50

D. 56

**Q24 Quantitative Aptitude**

Given the equations $x^2 + 4x + 3 = 0$ and $x^2 + 8x + m = 0$, what is the value of m , if they have one root in common?

A. 7 or 15



B. 3 or 7

C. 3 or 15

D. 1 or 7

Q25 Quantitative Aptitude

A triangle has sides in the ratio 2:3:4, and its perimeter is 54 cm. Calculate the perpendicular height from the vertex opposite the smallest side to the smallest side (use $\sqrt{15} = 3.9$).

A. 16.32 cm

B. 12.84 cm

C. 17.55 cm



D. 14.25 cm



Q26 Quantitative Aptitude

Three pipes can fill a cistern in 6 hours, 8 hours, and 12 hours respectively. If all pipes are opened together, what fraction of the cistern is filled in 1 hour?

A. 1. $\frac{3}{8}$



B. 2. $\frac{2}{3}$

C. 3. $\frac{5}{12}$

D. 4. $\frac{11}{24}$

Q27 Quantitative Aptitude

What is the value of $20(\sin^2\theta + \cos^2\theta) - 19$?

A. 0

B. -1

C. 1



D. 2

Q28 Quantitative Aptitude

A pipe can fill a tank in 10 hours. How much fraction of the tank will it fill in 2 hours?

A. 1. $\frac{1}{2}$

B. 2. $\frac{1}{10}$

C. 3. $\frac{1}{5}$



D. 4. $\frac{1}{4}$

Q29 Quantitative Aptitude

What is the value of $\left(5.25 \div \frac{3}{4}\right) - \left(1.5 \times \frac{2}{3}\right) + 0.5$?

A. 6.2

B. 5.7

C. 6.5



D. 5.5



Q30 Quantitative Aptitude

Simplify: $24 - 6 \div 3 \times 2$

A. 20



B. 24

C. 18

D. 6



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Quantitative Aptitude

30 Questions · Answer Key

Q1 Quantitative Aptitude

Which number is the mean proportional between 36 and 81?

- A. 48
- B. 60
- C. 45
- D. 54



Q2 Quantitative Aptitude

In an election, a total of 900 valid votes were cast. If Candidate B secured victory by a margin of 180 votes and only two candidates were in the contest, how many votes were obtained by the losing candidate?

- A. 540
- B. 450
- C. 720
- D. 360



Q3 Quantitative Aptitude

Which of the following pairs of numbers has a Highest Common Factor (HCF) equal to 8?

- A. 32 and 64
- B. 48 and 72
- C. 24 and 40
- D. 56 and 84



Q4 Quantitative Aptitude

In the step deviation method, if the class interval width is incorrectly used as 5 instead of 10, how will this affect the calculated mean?

- A. Only the assumed mean will be affected
- B. The mean will be incorrectly scaled and not represent the actual central tendency
- C. The mean will remain unchanged
- D. The calculated mean will always be smaller



Q5 Quantitative Aptitude

A cyclist rides at 15 km/h for 2 hours. How far does the cyclist travel?

- A. 17 km
- B. 7.5 km
- C. 30 km
- D. 13 km



Q6 Quantitative Aptitude

A solid cylindrical metal block of radius 14 cm and height 30 cm is melted and recast into smaller solid cylindrical rods, each having a radius of 2 cm and height 15 cm. How many such rods can be made?

- A. 90
- B. 98
- C. 84
- D. 72



Q7 Quantitative Aptitude

Pipe A can fill a cistern in 10 hours, and Pipe B can fill the same cistern in 15 hours. If both pipes are opened together and after 5 hours Pipe A is closed, how many hours will Pipe B take alone to fill the remaining part?

- A. 2.5 hours
- B. 2 hours
- C. 4 hours
- D. 3.5 hours



Q8 Quantitative Aptitude

If a cone has a radius of 5 cm and a slant height of 10 cm, what is its curved surface area? (Use $\pi = 3.14$)

- A. 1.157 cm^2
- B. 2.314 cm^2
- C. 3.50 cm^2
- D. 4.785 cm^2



Q9 Quantitative Aptitude

The present ages of two friends are in the ratio 4 : 7. Six years from now, the ratio of their ages will be 5 : 8. What is the present age (in years) of the younger friend?

A. 28

B. 18

C. 21

D. 24

**Q10 Quantitative Aptitude**

A sum of ₹2,000 is invested at 10% per annum, compounded half-yearly, for 2 years. Which of the following correctly gives the rate of interest per compounding period and the total number of compounding periods?

A. 10% and 2

B. 5% and 4



C. 10% and 4

D. 5% and 2

Q11 Quantitative Aptitude

If a trader makes a profit of ₹15 on an article whose cost price is ₹120, what is the percentage profit?

A. 20.8%

B. 15.5%

C. 12.5%



D. 10.2%

Q12 Quantitative Aptitude

A digital fixed deposit scheme in a bank allows a customer to invest ₹2,000. The deposit earns ₹300 as simple interest over a period of 3 years. What is the rate of interest per annum offered by the bank?

A. 6%

B. 8%

C. 5%



D. 4%

Q13 Quantitative Aptitude

A principal of ₹10,000 is invested at 5% compound interest per annum, compounded annually for 3 years. What will be the compound interest earned after 3 years?

A. ₹1,650.30

B. ₹1,576.25



C. ₹1,450.50

D. ₹1,500.15

Q14 Quantitative Aptitude

Evaluate: $63^2 - 57^2$

A. 720



B. 600

C. 660

D. 780

Q15 Quantitative Aptitude

A wholesaler purchases 72 toys for ₹10,296. How many toys can he purchase for ₹4,147, assuming the cost per toy remains the same?

A. 32

B. 27

C. 35

D. 29

**Q16 Quantitative Aptitude**

Point A(x, y) lies on the negative x-axis. If the distance of A from the origin is 7 units, then find the value of x + y?

A. 0

B. 14

C. -7



D. 7

Q17 Quantitative Aptitude

A shopkeeper buys a notebook for ₹200 and sells it for ₹240. What is the profit percentage?

A. 10%

B. 25%

C. 15%

D. 20%

**Q18 Quantitative Aptitude**

If the discriminant of the quadratic equation $3x^2 + 4x + 2 = 0$ is calculated, what type of roots does the equation have?

A. Two distinct real roots

B. Two complex (imaginary) roots



C. One repeated real root

D. Two equal real roots



Q19 Quantitative Aptitude

A pipe fills a tank in 8 hours, while a leak at the bottom can empty the full tank in 24 hours. If both are open together, how long will it take to fill the tank?

- A. 18 hours
- B. 12 hours
- C. 9 hours
- D. 6 hours

**Q20 Quantitative Aptitude**

A salaried employee spends 70% of his monthly income and saves the rest. In the following month, his income increases by 10% and his expenditure increases by 5%. If his monthly savings increase by ₹2,600, find his original monthly income (in ₹).

- A. 40,000
- B. 60,000
- C. 50,000
- D. 30,000

**Q21 Quantitative Aptitude**

Pipe A can fill a cistern in 10 minutes, and Pipe B can fill the same cistern in 15 minutes. How many minutes will it take to fill the empty cistern if both pipes are opened together?

- A. 6
- B. 12
- C. 8
- D. 5

**Q22 Quantitative Aptitude**

If the numbers 2, 8, 6, and x are in proportion, what is the value of x?

- A. 32
- B. 12
- C. 18
- D. 24

**Q23 Quantitative Aptitude**

A cyclist travels a certain distance at 24 km per hour and returns at 18 km per hour. If the total time taken for the round trip is 7 hours, what is the one-way distance?

- A. 32 km
- B. 40 km
- C. 30 km
- D. 72 km

**Q24 Quantitative Aptitude**

The marks obtained by five students are 42, 48, 50, 60, and 70. If 50 is taken as the assumed mean, what is the sum of the deviations of the marks from the assumed mean?

- A. 20
- B. -10
- C. 40
- D. 0

**Q25 Quantitative Aptitude**

A ladder is placed against a vertical wall. If the foot of the ladder is 6 m from the wall and the ladder makes an angle of 60° with the ground, what is the height at which the ladder touches the wall? (Rounded off to one decimal place)

- A. 10.4 m
- B. 6.0 m
- C. 8.7 m
- D. 12.2 m

**Q26 Quantitative Aptitude**

A boat can travel at 10 km/h in still water. If it takes 2.5 hours to cover a distance of 20 km upstream, find the speed of the stream.

- A. 2 km/hr
- B. 4 km/hr
- C. 8 km/hr
- D. 5 km/hr

**Q27 Quantitative Aptitude**

Karan buys a scooter for ₹45,000 and spends ₹5,000 on its modifications. He sells it to Arjun at a 20% profit on the total cost price of the scooter, including the modification charges. Arjun later sells it to Vikas at a 10% loss. What is the final amount Vikas paid?

- A. ₹52,500
- B. ₹58,000
- C. ₹56,500
- D. ₹54,000



Q28 Quantitative Aptitude

For the equation $x^2 + 6x + 8 = 0$, what is the product of its roots?

A. 8



B. -8

C. -6

D. 6

Q29 Quantitative Aptitude

Two equal poles stand directly opposite each other across a 100-meter-wide road. From a point on the line joining their bases and lying between them, the angles of elevation of their tops are 30° and 60° . Find the height of each pole.

A. 1. $25\sqrt{3}$ meters



B. 2. $50\sqrt{3}$ meters

C. 3. $75\sqrt{3}$ meters

D. 4. $20\sqrt{3}$ meters

Q30 Quantitative Aptitude

A conical tent has a base diameter of 14 meters and a height of 24 meters. What is the volume of the tent in cubic meters? (Use $\pi = \frac{22}{7}$)

A. 1540 cubic meters

B. 1232 cubic meters



C. 616 cubic meters

D. 980 cubic meters



Quantitative Aptitude

30 Questions • Answer Key

Q1 Quantitative Aptitude

If the curved surface area of a cylinder is 440 cm^2 and its height is 10 cm, what is the radius? (Use $\pi = 22/7$)

- A. 22 cm
B. 14 cm
C. 10 cm
D. 7 cm



Q2 Quantitative Aptitude

An article is sold at a 15% loss. If the selling price is ₹42,500, the cost price is:

- A. ₹54,000
B. ₹52,000
C. ₹50,000
D. ₹48,000



Q3 Quantitative Aptitude

In how many years will ₹2,500 become ₹3,500 at 10% per annum simple interest?

- A. 4 years
B. 3 years
C. 5 years
D. 2 years



Q4 Quantitative Aptitude

A runner completes the first 10 km at 10 km/h, the next 10 km at 20 km/h, and the last 10 km at 20 km/h. What is the average speed for the entire 30 km?

- A. 15 km/h
B. 8 km/h
C. 12 km/h
D. 16 km/h



Q5 Quantitative Aptitude

A vendor purchases mangoes for ₹600 and sells them for ₹760. The profit percentage is (rounded off to two decimal places):

- A. 26.33%
B. 27.33%
C. 26.67%
D. 27.67%



Q6 Quantitative Aptitude

If $\cos \theta = 1$, find the value of $\sin 4\theta + \tan 3\theta$.

- A. 2
B. 1
C. 0
D. -1



Q7 Quantitative Aptitude

The difference between two natural numbers is 12, and their product is 253. Find the two natural numbers.

- A. 23 and 11
B. 33 and 21
C. 24 and 12
D. 21 and 13



Q8 Quantitative Aptitude

If a cubic polynomial has roots 2, 3, and 4, what is the value of the product of its roots?

- A. 6
B. 9
C. 8
D. 24



Q9 Quantitative Aptitude

Choose the correct descending order of the following ratios: 11:20, 7:10, 13:15, 3:5.

- A. 13:15 > 3:5 > 7:10 > 11:20
B. 3:5 > 13:15 > 7:10 > 11:20
C. 7:10 > 13:15 > 11:20 > 3:5
D. 13:15 > 7:10 > 3:5 > 11:20



Q10 Quantitative Aptitude

Two cars start at the same point and travel in opposite directions. Car A moves at 50 km/h and Car B at 70 km/h. How long will it take before they are 480 km apart?

- A. 6 hours
- B. 5 hours
- C. 4 hours
- D. 3 hours

**Q11 Quantitative Aptitude**

If the coordinates of A are (2, 3) and B are (6, 7), and a point P divides AB externally in the ratio 2:1, which of the following could be the x-coordinate of P?

- A. 8
- B. 0
- C. 4
- D. 10

**Q12 Quantitative Aptitude**

The HCF and LCM of two numbers are 12 and 720, respectively. If one number is 48, then find the other number.

- A. 160
- B. 140
- C. 120
- D. 180

**Q13 Quantitative Aptitude**

The ratios of the lengths and widths of two rectangles are 3:4 and 5:8, respectively. Then the ratio between their areas is:

- A. 15:32
- B. 17:32
- C. 19:32
- D. 21:32

**Q14 Quantitative Aptitude**

Find the difference (in ₹) between the compound interest, compounded annually, and simple interest on ₹6,000 at 5% per annum for 2 years.

- A. 12
- B. 15
- C. 16
- D. 14

**Q15 Quantitative Aptitude**

Pipe A fills a tank in 10 hours and Pipe B fills it in 15 hours. Both pipes are opened together. After how many hours will exactly half the tank be filled?

- A. 5 hours
- B. 4 hours
- C. 2 hours
- D. 3 hours

**Q16 Quantitative Aptitude**

Which of the following sets of numbers are NOT in proportion?

- A. 7, 14, 10, 25
- B. 5, 10, 9, 18
- C. 2, 4, 6, 12
- D. 3, 6, 8, 16

**Q17 Quantitative Aptitude**

A dealer bought 30 units of item X at ₹280 each and 25 units of item Y at ₹320 each. He sells X at 30% profit and Y at 15% profit. Calculate the total profit (in ₹).

- A. 3,460
- B. 3,640
- C. 3,720
- D. 3,380

**Q18 Quantitative Aptitude**

Each value in the data set 7, 12, 9, 15, and 10 is multiplied by 3, and then 2 is subtracted from each value. What is the median of the resulting data set?

- A. 32
- B. 26
- C. 28
- D. 30

**Q19 Quantitative Aptitude**

A sample of 10 measurements has an assumed mean of 50. The sum of deviations from the assumed mean is 35. Calculate the actual mean.

- A. 53.5
- B. 51.5
- C. 54.5
- D. 52.5



Q20 Quantitative Aptitude

The compound interest (in ₹) on ₹17,000 at 8% per annum compounded half-yearly for 1 year is:

A. 1,387.20



B. 1,317.80

C. 1,337.60

D. 1,367.60

Q21 Quantitative Aptitude

If three numbers are in continued proportion and the first and third numbers are 18 and 200, respectively, what is the middle number?

A. 100

B. 90

C. 60



D. 36

Q22 Quantitative Aptitude

Pipe M fills a tank in 6.5 hours. Pipe N empties it in 10.5 hours. How much time will it take to fill the tank when both pipes are operated (rounded off to two decimal places)?

A. 17.46 hours

B. 17.86 hours

C. 17.66 hours

D. 17.06 hours

**Q23 Quantitative Aptitude**

Pipe X can fill an empty water tank in 20 hours, while Pipe Y can completely empty the full tank in 30 hours. If both pipes are opened simultaneously in an empty tank, how many hours will it take to fill the tank?

A. 50

B. 10

C. 25

D. 60

**Q27 Quantitative Aptitude**

Simplify the expression: $\{(3m + 6n)(3m - 6n) \div \{9m^2 - 36mn + 36n^2\}$

A. 1. $m + n$

B. 2. $\frac{m + 2n}{m - 2n}$



C. 3. $m - n$

D. 4. $\frac{m - 2n}{m + 2n}$

Q24 Quantitative Aptitude

The speed of a boat in still water is 15.7 km/h, and the speed of the stream is 3.35 km/h. The speed of the boat downstream is:

A. 19.75 km/h

B. 12.95 km/h

C. 19.05 km/h



D. 12.35 km/h

Q25 Quantitative Aptitude

A man stands at a point on level ground that is 52.62 m from the base of a tower. If the angle of elevation of the top of the tower from that point is 45° , what is the height of the tower?

A. 70.00 meters

B. 26.31 meters

C. 105.24 meters

D. 52.62 meters

**Q26 Quantitative Aptitude**

A person's monthly income increased from ₹24,000 to ₹30,000, while his monthly expenditure increased from ₹16,000 to ₹20,000. By what percentage did his monthly savings increase?

A. 30%

B. 20%

C. 35%

D. 25%



Q28 Quantitative Aptitude

A company's profit decreased by 40% in the first quarter and then increased by $66\frac{2}{3}\%$ in the second quarter. If the original profit was ₹30,000, what is the profit at the end of the second quarter?

A. ₹25,000

B. ₹20,000

C. ₹30,000



D. ₹36,000

Q29 Quantitative Aptitude

A worker can complete $\frac{5}{8}$ of a project in 112 days. In how many days can the worker complete the entire project?

A. 179.2 days



B. 178.6 days

C. 177.8 days

D. 179.8 days

Q30 Quantitative Aptitude

A decorative glass sphere with a radius of 7 cm is to be completely painted. What is the total surface area that needs to be covered? $\left(\text{Use } \pi = \frac{22}{7} \right)$

A. 1. 784 cm²

B. 2. 308 cm²

C. 3. 462 cm²

D. 4. 616 cm²



Quantitative Aptitude

30 Questions • Answer Key

Q1 Quantitative Aptitude

The population of a town was 18,000 last year. Due to migration, the population decreased by 10% in the first six months and then increased by 20% in the next six months. What is the population at the end of the year?

A. 19,440



B. 20,160

C. 18,720

D. 21,600

Q2 Quantitative Aptitude

A sphere has a radius of $(x + 2)$ cm. Another sphere has a radius of $(x - 1)$ cm. If the difference of their surface areas is $168\pi \text{ cm}^2$, find x .

A. 5.5

B. 6.5



C. 8.5

D. 7.5

Q3 Quantitative Aptitude

The quantity of sugar in a jar is first decreased by 15% and then increased by 10%. If the initial quantity was 200 grams, what is the final quantity?

A. 187 grams



B. 177 grams

C. 197 grams

D. 167 grams

Q4 Quantitative Aptitude

A wholesaler buys 80 sacks of rice at ₹1,200 each and sells them in two lots: 50 sacks at a profit of 20% each and the remaining at a loss of 10% each. What is the total profit or loss amount in this transaction?

A. Profit of ₹8,400



B. Loss of ₹8,400

C. Loss of ₹800

D. Profit of ₹8,200

Q5 Quantitative Aptitude

For what value of k will the equation $x^2 + 8x + k = 0$ have equal roots?

A. $k = 32$ B. $k = 4$ C. $k = 16$ D. $k = 8$

Q6 Quantitative Aptitude

Find the fourth proportional to 24, 48, and 54.

A. 27

B. 135

C. 108



D. 81

Q7 Quantitative Aptitude

A sum of ₹8,000 is invested at 12% per annum, compounded half-yearly. Find the amount at the end of 1 year.

A. ₹8960.80

B. ₹8948.80

C. ₹8798.80

D. ₹8988.80



Q8 Quantitative Aptitude

Given the quadratic equation $2x^2 - 9x + 10 = 0$, which of the following is one of its roots?

A. 4

B. 5

C. 2.5



D. 3

Q9 Quantitative Aptitude

A ferry travels 56 km downstream in 2 hours and returns 56 km upstream in 4 hours. If the speed of the stream is 7 km/h, what is the speed of the ferry in still water?

A. 7 km/h

B. 28 km/h

C. 14 km/h

D. 21 km/h



Q10 Quantitative Aptitude

A trader marks an article 25 percent above its cost price and then offers a 10 percent discount on the marked price. What is his profit percentage?

- A. 10 %
- B. 25 %
- C. 15 %
- D. 12.5 %

**Q11 Quantitative Aptitude**

What is the fourth proportional to 15, 25, and 45?

- A. 90
- B. 30
- C. 75
- D. 60

**Q12 Quantitative Aptitude**

A point P lies on the x axis at a distance of 4 units to the left of the y-axis. What are the coordinates of P?

- A. (4, 0)
- B. (0, -4)
- C. (0, 4)
- D. (-4, 0)

**Q13 Quantitative Aptitude**

Which of the following expressions is always equal to 1, according to trigonometric identities?

- A. $1. \sec^2 \theta - \tan^2 \theta$
- B. $2. \tan^2 \theta + \sec^2 \theta$
- C. $3. \tan^2 \theta - \sec^2 \theta$
- D. $4. \cot^2 \theta - \csc^2 \theta$

**Q14 Quantitative Aptitude**

For ₹4,000 invested at 10% for 1 year, what is the difference between Simple Interest and Compound Interest?

- A. The difference is ₹40.
- B. The difference is ₹400.
- C. There is no difference between Simple Interest and Compound Interest.
- D. The difference is ₹4.

**Q15 Quantitative Aptitude**

Find the greatest number that divides 22, 37, and 52 and leaves the same remainder in each case.

- A. 14
- B. 12
- C. 15
- D. 10

**Q16 Quantitative Aptitude**

What is the simple interest earned on ₹2,500 at 8% per annum for 2 years?

- A. ₹200
- B. ₹400
- C. ₹500
- D. ₹450

**Q17 Quantitative Aptitude**

A piece of fabric is 16 m long and another is 36 m long. What is the mean proportional length (in meters) between them?

- A. 48
- B. 12
- C. 24
- D. 36

**Q18 Quantitative Aptitude**

A tank can be filled by Pipe M in 10 hours and by Pipe N in 15 hours. Both are opened together but after 4 hours, Pipe M is closed. How long will Pipe N take to fill the remaining part of the tank?

- A. 7 hours
- B. 4 hours
- C. 6 hours
- D. 5 hours

**Q19 Quantitative Aptitude**

A bus travels 360 km in 6 hours. What is its speed?

- A. 66 km/h
- B. 60 km/h
- C. 30 km/h
- D. 54 km/h



Q20 Quantitative Aptitude

Two identical cubes, each with edge length 2.4 cm, are joined together along one face. What is the total surface area of the resulting solid?

A. 57.6 cm²



B. 69.12 cm²

C. 34.56 cm²

D. 46.08 cm²

Q21 Quantitative Aptitude

The travel distances of 60 corporate employees to a park are grouped as follows: 12 employees travel 10–20 km, 18 travel 20–30 km, 15 travel 30–40 km, 10 travel 40–50 km, and 5 travel 50–60 km. What is the median travel distance?

A. 37 km

B. 30 km



C. 35 km

D. 27 km

Q22 Quantitative Aptitude

A fruit seller buys 10 oranges for ₹120 and sells 5 oranges for ₹75. What is his profit or loss percentage?

A. 25% Loss

B. 20% Loss

C. 25% Profit



D. 20% Profit

Q23 Quantitative Aptitude

The mean score of a class in a mathematics test is 60 and the median is 65. What is the mode of the scores based on the empirical relation?

A. 75



B. 85

C. 70

D. 90

Q24 Quantitative Aptitude

A runner covers 150 meters in 15 seconds. What is his speed in meters per second?

A. 12 m/s

B. 5 m/s

C. 15 m/s

D. 10 m/s

**Q25 Quantitative Aptitude**

The present ages of two brothers, S and T, are in the ratio 5 : 7, and the difference between their ages is 12 years. What will be the ratio of their ages after 6 years?

A. 10 : 13

B. 3 : 4



C. 13 : 17

D. 9 : 11

Q26 Quantitative Aptitude

A cuboid tank with length 80 cm, width 60 cm, and height 45 cm contains water up to a depth of 30 cm. If water is drained until the level drops to 15 cm, how many liters of water has been removed?

A. 90

B. 54

C. 72



D. 60

Q27 Quantitative Aptitude

A and B can do a task in 10 days. B and C can do the same task in 15 days. If A, B, and C together finish the work in 6 days, how long will A and C together take to finish the task?

A. 9 days

B. 6 days



C. 3 days

D. 12 days



Q28 Quantitative Aptitude

If in a right triangle, $\cos \theta = \frac{4}{5}$, what is the value of $\sec \theta - \tan \theta$?

A. 1. $\frac{1}{3}$

B. 2. $\frac{1}{5}$

C. 3. $\frac{1}{2}$



D. 4. $\frac{1}{4}$

Q29 Quantitative Aptitude

What is the value of $2^3 \times \sqrt[3]{27} \times 4^{-2} \times \sqrt[3]{64}$?

A. 9

B. 2

C. 6



D. 3

Q30 Quantitative Aptitude

Liam, Mia, and Noah can each complete the same fence on their own in 12 hours, 8 hours, and 24 hours, respectively. How much of the fence can they build in one hour if they all work together?

A. 1. $\frac{1}{4}$



B. 2. $\frac{1}{3}$

C. 3. $\frac{1}{5}$

D. 4. $\frac{1}{6}$



Quantitative Aptitude

30 Questions · Answer Key

Q1 Quantitative Aptitude

A delivery truck travels 72 km at 36 km/h, stops for 30 minutes, and then covers 54 km at x km/h. If the average speed for the entire trip including the stop is 28 km/h, find the value of x .

- A. 28 km/h
- B. 32 km/h
- C. 27 km/h
- D. 30 km/h



Q2 Quantitative Aptitude

A chef uses 150 g of sugar to bake 24 cookies. How much sugar is needed to bake 40 cookies using the same recipe?

- A. 300 g
- B. 250 g
- C. 220 g
- D. 200 g



Q3 Quantitative Aptitude

A pole casts a shadow of 8 m when the angle of elevation of the sun is 45° . What is the height of the pole?

- A. 4 m
- B. 6 m
- C. 8 m
- D. 12 m



Q4 Quantitative Aptitude

A pipe fills a tank at the rate of one-sixth of the tank per hour. How long will it take to fill the entire tank?

- A. 3 hours
- B. 2 hours
- C. 9 hours
- D. 6 hours



Q5 Quantitative Aptitude

In an election contested by two candidates, A and B, 60% of the eligible voters cast their votes, and all the votes cast were valid. If candidate A receives 55% of the votes cast and wins by a margin of 660 votes, what is the total number of eligible voters?

- A. 16,500
- B. 25,000
- C. 11,000
- D. 22,000



Q6 Quantitative Aptitude

A shopkeeper bought 30 calculators for a total of ₹900. If he sells each calculator at ₹35, what is the total profit?

- A. ₹150
- B. ₹90
- C. ₹120
- D. ₹60



Q7 Quantitative Aptitude

A contractor pays ₹45,000 to 15 workers for 10 days of work. If he employs 25 workers for 14 days at the same daily wage rate, what will be the total payment?

- A. ₹1,15,000
- B. ₹85,000
- C. ₹95,000
- D. ₹1,05,000



Q8 Quantitative Aptitude

A sum of ₹6,000 is invested at a compound interest rate of 12% per annum, compounded annually. Find the compound interest earned at the end of 2 years.

- A. ₹1,600
- B. ₹1,680
- C. ₹1,440.50
- D. ₹1,526.40



Q9 Quantitative Aptitude

A bus covers a distance of 180 km at a constant speed in 4 hours. What is the speed of the bus?

- A. 40 km/hr
- B. 50 km/hr
- C. 45 km/hr
- D. 36 km/hr

**Q10 Quantitative Aptitude**

A tank can be filled by an inlet pipe in 8 hours and emptied by an outlet pipe in 12 hours. If both pipes are opened together, how long will it take to fill the empty tank?

- A. 24 hours
- B. 20 hours
- C. 10 hours
- D. 4 hours

**Q11 Quantitative Aptitude**

The radius of a sphere is increased by 50%. By what percentage does its volume increase?

- A. 125%
- B. 50%
- C. 237.5%
- D. 337.5%

**Q12 Quantitative Aptitude**

In an election, 50% of the 6800 registered voters cast their votes. If 17% of these votes were invalid and the rest were distributed equally between two candidates, how many valid votes did each candidate get?

- A. 1413
- B. 1417
- C. 1415
- D. 1411

**Q13 Quantitative Aptitude**

A cone has a base radius of 4 cm and a height of 9 cm. What is the volume of the cone?

- A. $1.96\pi \text{ cm}^3$
- B. $2.72\pi \text{ cm}^3$
- C. $3.48\pi \text{ cm}^3$
- D. $4.36\pi \text{ cm}^3$

**Q14 Quantitative Aptitude**

A sports analyst recorded the scores of 25 players in a tournament. Using an assumed mean of 60, the sum of the deviations of these 25 scores from the assumed mean was calculated as (-50). Later, it was discovered that the score of one additional player had been omitted from the analysis. After including this player's score, the average score of all 26 players was 59. What was the omitted player's score?

- A. 76
- B. 82
- C. 84
- D. 86

**Q15 Quantitative Aptitude**

A digital healthcare van travels three equal distances at speeds of 20 km/h, 30 km/h, and 60 km/h, respectively. What is its average speed for the entire journey?

- A. 27 km/h
- B. 30 km/h
- C. 24 km/h
- D. 36 km/h

**Q16 Quantitative Aptitude**

A wholesale dealer sells a laptop to a distributor at a profit of 10%. The distributor then sells it to a retailer at a profit of 5%. If the retailer pays ₹46,200, what was the original cost price for the wholesale dealer?

- A. ₹39,500
- B. ₹42,000
- C. ₹41,200
- D. ₹40,000

**Q17 Quantitative Aptitude**

If the quadratic equations $x^2 + 4x + 3 = 0$ and $x^2 + kx + 6 = 0$ share exactly one common root and the common root is the smaller root of the first equation, find the value of k.

- A. 7
- B. 5
- C. 3
- D. 9



Q18 Quantitative Aptitude

If 3 liters of solution A is mixed with 8 liters of solution B, how many liters of solution B should be mixed with 15 liters of solution A to keep the same proportion?

A. 24

B. 40



C. 32

D. 20

Q19 Quantitative Aptitude

If the quadratic equation $x^2 + mx + 2 = 0$ has $x = -1$ as one of its roots, what is the value of m ?

A. $m = -3$

B. $m = 3$



C. $m = -5$

D. $m = 5$

Q20 Quantitative Aptitude

A store manager records the number of shirts sold each day in a week as: 8, 12, 9, 12, 15, 10, 12. What is the mode of the data set?

A. 9

B. 12



C. 8

D. 15

Q21 Quantitative Aptitude

Which set of coordinates will result in a line that passes through both the first and third quadrants?

A. (4, -2) and (5, 3)

B. (-3, 2) and (0, -5)

C. (2, 3) and (-4, -1)



D. (-2, 4) and (1, 5)

Q22 Quantitative Aptitude

A sum of ₹2,000 is invested at 5% per annum for 3 years. How much more interest is earned under compound interest, compounded annually than under simple interest?

A. ₹15.25



B. ₹12.50

C. ₹10.00

D. ₹20.00

Q23 Quantitative Aptitude

Which of the following expressions evaluates to 20 when simplified using the BODMAS rule?

A. $6 \times 4 + 2$

B. $(6 + 4) \times 2$



C. $(6 \times 4) \div 2$

D. $6 + (4 \times 2)$

Q24 Quantitative Aptitude

A sum at simple interest becomes 2.5 times itself in 12 years. After how many years will it become five times the original amount?

A. 24 years

B. 30 years

C. 40 years

D. 32 years

**Q25 Quantitative Aptitude**

A shopkeeper marks an item at ₹200 and offers a discount of 10%. If the item was bought at ₹150, what is the percentage profit?

A. 25%

B. 10%

C. 20%



D. 15%

Q26 Quantitative Aptitude

If $x:12 = 15:20$, what is the value of x ?

A. 9



B. 6

C. 15

D. 12

Q27 Quantitative Aptitude

A rectangle has dimensions 28 cm by 14 cm. Four quarter circles, each of radius 7 cm, are drawn at each corner towards the inside. What is the area of the shaded region inside the rectangle but outside the four quarter circles? (Use $\pi = 22/7$)

A. 1. 236 cm²

B. 2. 234 cm²

C. 3. 238 cm²



D. 4. 240 cm²



Q28 Quantitative Aptitude

If $\tan \alpha : \cot \alpha = 5:2$, what is the value of $\tan^3 \alpha + \cot^3 \alpha$?

A. 1. $\frac{141\sqrt{10}}{100}$

B. 2. $\frac{117\sqrt{10}}{100}$

C. 3. $\frac{133\sqrt{10}}{100}$ ✓

D. 4. $\frac{127\sqrt{10}}{100}$

Q29 Quantitative Aptitude

Find the value of $(x+7)^2 - (x-7)^2$.

A. 1. $2(x^2 - 49)$

B. 2. $2(x^2 + 49)$

C. 3. $28x$ ✓

D. 4. $(x^2 + 49)$

Q30 Quantitative Aptitude

A fintech company automates transactions using two bots. Bot A can finish the task in 10 hours, while Bot B can do it in 15 hours. If both start together, what fraction of the work is done after 4 hours?

A. 1. $\frac{5}{6}$

B. 2. $\frac{2}{3}$ ✓

C. 3. $\frac{1}{2}$

D. 4. $\frac{3}{4}$



Quantitative Aptitude

30 Questions • Answer Key

Q1 Quantitative Aptitude **GUJARATI ONLY**

એક નિસરણી એક સીધી દિવાલ સાથે ટેકવેલી છે. નિસરણીનો તળિયાનો છેડો જમીન સાથે 45° ના માપનો ખૂણો બનાવે છે. જો નિસરણીનો તળિયાનો છેડો દિવાલથી 60 m દૂર હોય, તો નિસરણીના ટોચના છેડાનું જમીનથી અંતર કેટલું હશે?

A. 55 m

B. 60 m ☒

C. 45 m

D. 50 m

Q2 Quantitative Aptitude

A sum of ₹4,000 is invested at 5% per annum, compounded annually, for 2 years. What is the amount at the end of 2 years?

A. ₹4,610

B. ₹4,510

C. ₹4,410 ☒

D. ₹4,310

Q3 Quantitative Aptitude

Given the quadratic equation $x^2 + 5x + 6 = 0$ with roots α and β , what is the value of $\alpha^2 + \beta^2$?

A. 36

B. 13 ☒

C. 25

D. 11

Q4 Quantitative Aptitude

A company wants to maximize returns on a fixed deposit for 2 years at an interest rate of 10% per annum. Which compounding option should the company choose, and why?

A. Annual compounding, because interest is calculated only once per year, reducing fluctuations.

B. Annual compounding, because the annual interest rate is effectively doubled.

C. Both annual and half-yearly methods yield the same maturity amount.

D. Half-yearly compounding, because interest is added more frequently and earns interest on interest sooner. ☒

Q5 Quantitative Aptitude

If the sum of the roots of a quadratic equation is -7 and their product is 10, what is the equation?

A. $x^2 - 7x - 10 = 0$ B. $x^2 - 7x + 10 = 0$ C. $x^2 + 7x + 10 = 0$ ☒D. $x^2 + 7x - 10 = 0$

Q6 Quantitative Aptitude

If the mean proportional between $8/3$ and $27/2$ is x , then find the value of x .

A. 6 ☒

B. 9

C. 8

D. 12

Q7 Quantitative Aptitude

In an election, 500 people voted. Candidate A received 60% of the votes. How many votes did Candidate A receive?

A. 200

B. 300 ☒

C. 250

D. 350

Q8 Quantitative Aptitude

A sum of money earns ₹9,600 as simple interest in 5 years at 8% per annum. Find the principal amount.

A. ₹24,000 ☒

B. ₹20,000

C. ₹26,000

D. ₹22,000



Q9 Quantitative Aptitude

A boat can travel at a speed of 18 km/h in still water. If the speed of the stream is 4 km/h, what is the downstream speed (in km/h) of the boat?

A. 18

B. 22



C. 14

D. 26

Q10 Quantitative Aptitude

If 60 pens cost ₹1200, what will be the cost of 90 pens at the same rate?

A. ₹ 1350

B. ₹ 2000

C. ₹ 1600

D. ₹ 1800

**Q11 Quantitative Aptitude**

A large pipe fills a tank in 5 hours, and a small pipe fills it in 10 hours. If both pipes opened together, how long will they take to fill the tank?

A. 6 hours and 40 minutes

B. 2 hours and 30 minutes

C. 3 hours and 20 minutes



D. 5 hours and 15 minutes

Q12 Quantitative Aptitude

A tank can be filled by Pipe A in 18 hours and by Pipe B in 9 hours. If both pipes are opened together, but after 3 hours Pipe B is turned off, how much longer will Pipe A take to finish filling the tank?

A. 6 hours

B. 12 hours

C. 8 hours

D. 9 hours

**Q13 Quantitative Aptitude**

A cuboid has a surface area of 94 cm^2 . If its length, breadth, and height are 5 cm, 3 cm, and h cm respectively, what is the value of h ?

A. 2

B. 5

C. 4



D. 3

Q14 Quantitative Aptitude

In an election between two candidates P and Q, P won by 4% of the valid votes. During a recount, 3% of the valid votes were found to have been wrongly counted for P instead of Q. These votes were transferred from P to Q. After the recount, P lost the election by 180 votes. How many valid votes were cast in total?

A. 7,500

B. 8,000

C. 10,500

D. 9,000

**Q15 Quantitative Aptitude**

A student uses the step deviation method but accidentally uses a value for h that is twice the actual class width. If the rest of the formula is used consistently, how will the calculated mean compare to the true mean?

A. The calculated mean will always be twice of the true mean

B. The calculated mean will always be less than the true mean

C. The calculated mean will be incorrect and greater than the true mean

D. The calculated mean will be the same as the true mean

**Q16 Quantitative Aptitude**

The cost price of a shirt is ₹500 and the shopkeeper earns 20% profit on it. What is the selling price (in ₹)?

A. 650

B. 600



C. 500

D. 550

Q17 Quantitative Aptitude

Five years ago, a father was three times as old as his son. If the sum of their current ages is 50 years, what is the present age of the son?

A. 25 years

B. 15 years



C. 10 years

D. 20 years



Q18 Quantitative Aptitude

The daily wage distribution of 50 workers is as follows: 12 workers earn between ₹100-₹200, 14 earn between ₹200-₹300, 8 earn between ₹300-₹400, 6 earn between ₹400-₹500, and 10 earn between ₹500-₹600. What is the mean daily wage of the workers?

A. ₹326



B. ₹396

C. ₹356

D. ₹376

Q19 Quantitative Aptitude

A train moving at a constant speed passes three consecutive poles P, Q, and R, each separated by 300 m. The front of the train takes 15 seconds to travel from P to Q. The rear of the train reaches Q exactly 10 seconds after the front reaches R. The length of the train is:

A. 200 m

B. 250 m

C. 400 m

D. 500 m

**Q20 Quantitative Aptitude**

A shopkeeper buys two types of goods: 50 pens at ₹12 each and 30 markers at ₹18 each. If he sells all pens at a 25% profit and all markers at a 20% loss, what is his (approx.) total percentage gain or loss?

A. No net gain or loss

B. 2.68% profit

C. 3.68% loss

D. 3.68% profit

**Q21 Quantitative Aptitude**

A man purchases a shirt for ₹400 and sells it at a profit of 15 percent. What is the selling price?

A. ₹480

B. ₹460



C. ₹420

D. ₹440

Q22 Quantitative Aptitude

The perimeter of a rectangle with a length of 32.25 cm and a breadth of 28.25 cm is:

A. 121 cm



B. 126 cm

C. 128 cm

D. 123 cm

Q23 Quantitative Aptitude

Which of the following best describes the position of the point that divides the line segment joining (3,6) and (11,-2) externally in the ratio 1:3?

A. The point lies in Quadrant I

B. The point lies in Quadrant IV

C. The point lies in Quadrant III

D. The point lies in Quadrant II

**Q24 Quantitative Aptitude**

A cube and a cuboid have the same total surface area. If the side of the cube is 7 cm, and the dimensions of the cuboid are 14 cm, 7 cm, and x cm, what is the value of x (in cm, rounded to two decimal places)?

A. 21.45 cm

B. 2.33 cm



C. 14.67 cm

D. 7.25 cm

Q25 Quantitative Aptitude

Pipe M can fill a tank in 7 hours, while Pipe N can fill it in 14 hours. Both pipes are opened together. After 2 hours, Pipe M is closed and Pipe N continues alone. How much total time will be required to fill the tank completely?

A. 12 hours

B. 9 hours

C. 10 hours



D. 8 hours

Q26 Quantitative Aptitude

A person travels one-third of a journey at 30 km/h, next one-third at 45 km/h, and the remaining one-third at 90 km/h. What is the average speed for the entire journey?

A. 60 km/h

B. 30 km/h

C. 45 km/h



D. 25 km/h



Q27 Quantitative Aptitude

If $x = (6.25)^{\frac{1}{2}} \times (0.49)^{\frac{1}{2}}$, what is the value of x ?

- A. 17.5
- B. 1.075
- C. 1.75
- D. 1.0075

**Q28** Quantitative Aptitude **GUJARATI ONLY**

$\frac{1}{4}$ અને $\frac{1}{9}$ વચ્ચેનું મધ્યમ પ્રમાણિત (mean proportional) શોધો.

- A. 1. $\frac{1}{6}$
- B. 2. $\frac{1}{12}$
- C. 3. $\frac{1}{8}$
- D. 4. $\frac{1}{18}$

**Q29** Quantitative Aptitude

What is the value of $2^3 \times 2^2$?

- A. 64
- B. 16
- C. 128
- D. 32

**Q30** Quantitative Aptitude

Two towers of equal height stand 60 meters apart on level ground. If the angle of elevation to the top of one tower from the base of the other is 30 degrees, what is the height of each tower?

- A. 1. $25\sqrt{3}$ meters
- B. 2. $20\sqrt{3}$ meters
- C. 3. $21\sqrt{3}$ meters
- D. 4. $17\sqrt{3}$ meters



Quantitative Aptitude

30 Questions • Answer Key

Q1 Quantitative Aptitude GUJARATI ONLY

બિંદુઓ (2, 7) અને (10, 3) ને જોડતા રેખાખંડનું 2 : 1 ના ગુણોત્તરમાં બાહ્ય રીતે વિભાજિત કરતાં બિંદુના યામ શોધો.

A. (6, -5)

B. (14, 1)

C. (18, -1)



D. (0, 7)

Q2 Quantitative Aptitude

A teacher calculates the median of a set of numbers as 32 and the mode as 36. What is the mean for this data using the empirical relation?

A. 34

B. 36

C. 30



D. 32

Q3 Quantitative Aptitude

During a school election, a total of 8,000 votes were cast. Of these, 4% were declared invalid. The remaining valid votes were distributed among candidates A, B, and C in the ratio 5 : 3 : 2. How many valid votes were secured by candidate B?

A. 2302

B. 2304



C. 2303

D. 2301

Q4 Quantitative Aptitude GUJARATI ONLY

એક વર્ગમાં છોકરાઓ અને છોકરીઓની સંખ્યાનો ગુણોત્તર 7:3 છે. જો વર્ગમાં છોકરીઓ કરતાં છોકરાઓની સંખ્યા 20 વધારે હોય, તો વર્ગમાં કુલ કેટલા વિદ્યાર્થીઓ હશે?

A. 45

B. 40

C. 60

D. 50



Q5 Quantitative Aptitude GUJARATI ONLY

₹15,000 પર 2 વર્ષમાં વાર્ષિક 7%ના દરે મળતા સાદા વ્યાજ અને વાર્ષિક ચક્રવૃદ્ધિથી મળતા ચક્રવૃદ્ધિ વ્યાજ વચ્ચે શું તફાવત છે?

A. ₹49.00

B. ₹73.50



C. ₹70.00

D. ₹62.25

Q6 Quantitative Aptitude GUJARATI ONLY

3 cm ત્રિજ્યાવાળા અર્ધગોલકનું ઘનફળ (volume) શોધો. ($\pi = 22/7$ નો ઉપયોગ કરો.) (નજીકના પૂર્ણાંક સુધી આવરીને જવાબ આપો.)

A. 38 cm³B. 66 cm³C. 57 cm³D. 113 cm³

Q7 Quantitative Aptitude GUJARATI ONLY

બે પાઇપો A અને B, અનુક્રમે 30 કલાક અને 40 કલાકમાં એક ટાંકીને ભરી શકે છે. બંને પાઇપો એકસાથે ખોલવામાં આવે છે, અને 12 કલાક પછી, પાઇપ A બંધ કરવામાં આવે છે. બાકીની ટાંકી ભરવા માટે એકલી પાઇપ Bને લાગતો સમય શોધો.

A. 12 કલાક



B. 10 કલાક

C. 14 કલાક

D. 18 કલાક

Q8 Quantitative Aptitude GUJARATI ONLY

એક નળાકાર પાઇપ, જેનો આંતરિક વ્યાસ 56 mm છે, તેમાંથી 3 m/s ની ઝડપે પાણી વહે છે. આ પાણીને 4.2 m પાયાની ત્રિજ્યા ધરાવતી એક નળાકાર ટાંકીમાં એકત્રિત કરવામાં આવે છે. ખાલી ટાંકીને 3 m ની ઊંચાઈ સુધી ભરવા માટે કેટલો સમય (કલાકમાં) લાગશે?

A. 5.75

B. 6.75

C. 6.25



D. 5.25



Q9 Quantitative Aptitude **GUJARATI ONLY**

એક ફળવિકેતા 12 નારંગી ₹120માં ખરીદે છે અને 10 નારંગી ₹120માં વેચે છે. તો તેના નફાની ટકાવારી કેટલી થશે?

A. 20%



B. 10%

C. 25%

D. 12%

Q10 Quantitative Aptitude

If the product of two consecutive positive integers is 72, what is the value of the larger integer?

A. 6

B. 12

C. 10

D. 9

**Q11 Quantitative Aptitude** **GUJARATI ONLY**

નીચેનામાંથી કયું સમીકરણ દ્વિઘાત સમીકરણ નથી?

A. $x^2 - 9 = 0$ B. $(x^2 + 1)(x - 2) = 0$ C. $2x^2 + 5x - 1 = 0$ D. $x^2 - 4x + 4 = 0$ **Q12 Quantitative Aptitude** **GUJARATI ONLY**

પ્રિયા એક બેંકમાં ₹4,000 વાર્ષિક 12% વ્યાજના દરે 2 વર્ષ માટે જમા કરાવે છે. 2 વર્ષ પછી મળતા ચક્રવૃદ્ધિ વ્યાજ (વાર્ષિક રીતે ચક્રવૃદ્ધિ પામતાં) અને સાદા વ્યાજ વચ્ચેનો તફાવત શોધો.

A. ₹56.40

B. ₹58.30

C. ₹59.60

D. ₹57.60

**Q13 Quantitative Aptitude** **GUJARATI ONLY**

જો સંખ્યાઓ 12, 28, 21 અને x પ્રમાણમાં હોય, તો પદાવલિ $x + 11$ નું મૂલ્ય શું થશે?

A. 60



B. 28

C. 77

D. 39

Q14 Quantitative Aptitude **GUJARATI ONLY**

એક શર્ટની મૂળ કિંમત ₹200 છે. જો તેની કિંમતમાં 10 ટકાનો વધારો થાય, તો શર્ટની નવી કિંમત કેટલી હશે?

A. ₹230

B. ₹240

C. ₹220



D. ₹210

Q15 Quantitative Aptitude **GUJARATI ONLY**

મીરાએ ₹2,000 ની રકમ વાર્ષિક 9% ના સાદા વ્યાજ દરે 5 વર્ષ માટે પોસ્ટ ઓફિસની એક યોજનામાં રોકી. મુદતના અંતે તેની કુલ વ્યાજમુદલ (total amount) કેટલી થશે?

A. ₹900

B. ₹2,800

C. ₹2,900



D. ₹1,000

Q16 Quantitative Aptitude

A boat's speed in still water is 9 km/h. It takes 2 hours to cover a distance downstream and 3 hours to cover the same distance upstream. What is the value of the stream's speed?

A. 3 km/h

B. 2 km/h

C. 1.8 km/h



D. 1.5 km/h

Q17 Quantitative Aptitude **GUJARATI ONLY**

જો 90 cm, 150 cm, અને 210 cm લંબાઈના ત્રણ દોરડાને કોઈ પણ ભાગ બાકી રાખ્યા વગર શક્ય તેટલી મહત્તમ લંબાઈના એકસરખા ટુકડાઓમાં કાપવાના હોય, તો દરેક ટુકડાની લંબાઈ કેટલી હશે?

A. 10 cm

B. 30 cm



C. 20 cm

D. 15 cm

Q18 Quantitative Aptitude **GUJARATI ONLY**

$7 \times 2 + 5 \div 5$ નું પરિણામ શોધો.

A. 15



B. 11

C. 17

D. 13



Q19 Quantitative Aptitude **GUJARATI ONLY**

k ના કયા મૂલ્ય માટે સમીકરણ યુગ્મ (pair of equations) $3x + 2y = 7$ અને $6x + 4y = k$ ને અનંત ઉકેલો હોય?

A. 7

B. 12

C. 14



D. 10

Q20 Quantitative Aptitude **GUJARATI ONLY**

એક ત્રિકોણની બાજુઓ 9 cm, 12 cm અને 15 cm છે, તો 15 cm લંબાઈની બાજુને અનુરૂપ બાજુની ઊંચાઈ કેટલી થાય?

A. 8.2 cm

B. 7.2 cm



C. 6.2 cm

D. 9.2 cm

Q21 Quantitative Aptitude **GUJARATI ONLY**

એક ઓનલાઈન વેપારી ₹15,000 માં 10 સ્માર્ટ હોમ ડિવાઇસ ખરીદે છે અને તેમાંથી 4 ડિવાઇસ 20% નફાથી, 3 ડિવાઇસ 10% ખોટથી, અને બાકીના 3 ડિવાઇસ પડતર કિંમતે વેચે છે, તો વેપારીને એકંદરે કેટલો નફો કે ખોટ (₹ માં) થશે?

A. 600 નો નફો

B. 900 નો ખોટ

C. 300 ની ખોટ

D. 750 નો નફો

**Q22 Quantitative Aptitude** **GUJARATI ONLY**

એકલ (સિંગલ) ઈનલેટ પાઈપ દ્વારા એક ટાંકીને 10 કલાકમાં ભરી શકાય છે. ટાંકીના તળિયામાં એક નાનું છિદ્ર (leak) હોવાને લીધે, ટાંકી ભરવામાં 2 કલાક વધુ લાગે છે. તો આખી ભરેલી ટાંકીને ખાલી કરવામાં એકલા છિદ્ર (leak) ને કેટલો સમય લાગશે?

A. 60 કલાક



B. 50 કલાક

C. 45 કલાક

D. 55 કલાક

Q23 Quantitative Aptitude

Aman drives 15 km in 1.5 hours and then rides a bicycle for 5 km in 1 hour. What is his average speed for the whole trip?

A. 4 km/h

B. 8 km/h



C. 5 km/h

D. 6 km/h

Q24 Quantitative Aptitude

A set of numbers has an arithmetic mean of 30. If the numbers are 40, 25, 35, and x, what is the value of x?

A. 15

B. 30

C. 25

D. 20

**Q25 Quantitative Aptitude** **GUJARATI ONLY**

બે પાઈપ A અને B એક ટાંકીને અનુક્રમે 8 કલાક અને 12 કલાકમાં ભરી શકે છે. એક ત્રીજી પાઈપ C આ ટાંકીને 6 કલાકમાં ખાલી કરી શકે છે. જો ત્રણેય પાઈપ એકસાથે ખોલવામાં આવે, તો ટાંકીને ભરાતા કેટલો સમય લાગશે?

A. 20 કલાક

B. 26 કલાક

C. 24 કલાક



D. 22 કલાક

Q26 Quantitative Aptitude **GUJARATI ONLY**

જો એક હોડી 2 કલાકમાં પ્રવાહની વિરુદ્ધ દિશામાં 10 km ની મુસાફરી કરે છે અને પ્રવાહની ઝડપ 2 km પ્રતિ કલાક છે, તો સ્થિર પાણીમાં હોડીની ઝડપ કેટલી છે?

A. 8 km પ્રતિ કલાક

B. 6 km પ્રતિ કલાક

C. 5 km પ્રતિ કલાક

D. 7 km પ્રતિ કલાક

**Q27 Quantitative Aptitude** **GUJARATI ONLY**

જો 12 મીટર કાપડની કિંમત ₹1800 હોય, તો તે જ કાપડના 20 મીટરની કિંમત કેટલી થાય?

A. ₹3000



B. ₹2500

C. ₹3600

D. ₹2800

Q28 Quantitative Aptitude **GUJARATI ONLY**

ડિજિટલ માર્કેટપ્લેસ પર એક વિક્રેતા ₹5,000માં પર્યાવરણને અનુકૂળ ઉપકરણોનું એક બંડલ ખરીદે છે. જો વિક્રેતા આ વ્યવહાર પર 12% નફો કમાય છે, તો બંડલની વેચાણ કિંમત (₹માં) કેટલી છે?

A. 5,600



B. 6,000

C. 5,800

D. 5,400



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Q29 Quantitative Aptitude

A tree standing on level ground is 20 m high. If the angle of elevation of the sun is 30° , what is the length of the tree's shadow?

(Given $\sqrt{3} = 1.732$)

A. 20.15 m

B. 34.64 m



C. 24.36 m

D. 11.55 m

Q30 Quantitative Aptitude **GUJARATI ONLY**

જો $\tan^2 S$ નું મૂલ્ય $5/13$ હોય, તો $\sec^2 S$ નું મૂલ્ય શોધો.

A. 1. $\frac{8}{13}$

B. 2. $\frac{15}{13}$

C. 3. $\frac{18}{13}$



D. 4. $\frac{6}{13}$



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