RAILWAY RECRUITMENT BOARDS
रेलवे भर्ती बोर्ड

RB ALP 2018 CBT-2 Mechanic Radio and T

Assistant Loco Pilot & Technicians | CEN 01/2018 | CBT-2 | Trade: Mechanic Radio and TV

ENGLISH ANSWER KEY

Official Answer Key

Complete Paper · 23-01-2019

Questions	175
Marking	+1 correct / -1/3 wrong
Duration	Part A 90 min · Part B 60 min
Sections	Part A 100 · Part B (Mechanic Radio and TV) 75

Every paper is set out as the official RRB response sheet, typed from the saved paper, with the official answer key marked. No candidate details are included.

Short shifts: 23-01-2019 171 of 175 questions.

HOW TO USE THIS BOOK

1. Open the INDEX on the next page.
2. Click any row to jump straight to that date and shift.
3. The correct option is ticked in green; the other options are crossed in red.
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Compiled 02 November 2026

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RRB ALP 2018 CBT-2 Mechanic Radio and TV (English) · 1 shifts

DAY	DATE	SHIFT	TIME	PAGE
Day 1	**23-01-2019**	Shift 1	16:30 - 19:00	**3**

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Test Date	23/01/2019
Test Time	4:30 PM - 7:00 PM
Subject	ALP CBT-2

*** Note**
Correct Answer will carry 1 mark per Question.
Incorrect Answer will carry 1/3 Negative mark per Question.

1. Options shown in green color with a tick icon are correct.

Section : **Part A**

Q.1 Select the option that is related to the third number in the same way as the second number is related to the first number.

-9/11 : 11/9 :: 13/2 : ?

Ans
- ✗ A. 2/13
- ✗ B. 3/7
- ✗ C. -7/3
- ✓ D. -2/13

Q.2 A cylindrical wire of length L and radius r has a resistance of R. The resistance of another wire of the same material but thrice its length and one-third its radius will be_____.

Ans
- ✗ A. R
- ✗ B. 3R
- ✓ C. 27R
- ✗ D. 9R

Q.3 _____ protection must be worn whenever noise levels exceed the noise exposure standard.

Ans
- ✓ A. Hearing
- ✗ B. Foot
- ✗ C. Head
- ✗ D. Eye

Q.4 What is the least number which when doubled is perfectly divisible by 7, 12 and 15?

Ans
- ✓ A. 210
- ✗ B. 220
- ✗ C. 215
- ✗ D. 214

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Q.5 A sum of ₹2,000 was spent in buying a pair of trousers. The sum spent was 2/5th of the total money Shashi had with her. How much was the total money she had?

Ans

✔ A. ₹5,000

✘ B. ₹4,750

✘ C. ₹4,250

✘ D. ₹4,000

Q.6 If, '+' represents '×', '-' represents '+', '×' represents '÷' and '÷' represents '-', then find the value of the following expression.
$9 \times 3 + 6 \div 2 = ?$

Ans

✘ A. 10

✘ B. 20

✔ C. 16

✘ D. 12

Q.7 If a body is NOT homogeneous, then its density is a function of its _____.

Ans

✘ A. velocity

✔ B. position

✘ C. pressure

✘ D. acceleration

Q.8 If a machine overcomes a load '*L*' and the distance travelled by the load is '*Ld*', the work done by the load will be _____.

Ans

✔ A. $L \times Ld$

✘ B. $\frac{L}{Ld}$

✘ C. $\frac{1}{L \times Ld}$

✘ D. $\frac{Ld}{L}$

Q.9 The effort applied to move a load is 15 units and the machine advantage is observed to be 3. Find the load.

Ans

✔ A. 45 units

✘ B. 5 units

✘ C. 15 units

✘ D. 3 units

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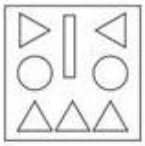
Q.10 Choose the figure that is different from the rest.

Ans

✗ A. 

✓ B. 

✗ C. 

✗ D. 

Q.11 Name the scientist who discovered bacteria.

Ans

✓ A. AV Leeuwenhoek

✗ B. James Chadwick

✗ C. Eugen Goldstein

✗ D. Robert Koch

Q.12 A sum of ₹10,000 amounts to ₹11,449 in 2 years, when the interest is compounded annually. The interest rate percent per annum is:

Ans

✗ A. 1%

✓ B. 7%

✗ C. 8%

✗ D. 6%

Q.13 If $\sin\Theta = 15/17$, then $\cot\Theta =$?

Ans

✓ A. $\frac{8}{15}$

✗ B. $\frac{8}{17}$

✗ C. $\frac{17}{15}$

✗ D. $\frac{15}{8}$

Q.14 A got ₹80 as his share of profit where the total profit was ₹240 and the ratio of profit distribution between A and B was x : 2. What is the value of x?

Ans

✓ A. 1

✗ B. 5

✗ C. 4

✗ D. 2

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Q.15 Identify the material having high coefficient of volume expansion.

Ans

✔ A. Alcohol

✘ B. Brass

✘ C. Glass

✘ D. Water

Q.16 Two planes E and F start flying from the same point. E flies 7 km west, then turns to its left and flies 15 km. Meanwhile F flies 11 km east and turns right and flies 15 km. Where is F with respect to E?

Ans

✔ A. F is 18 km east of E

✘ B. F is 4 km east of E

✘ C. F is 18 km west of E

✘ D. F is 4 km west of E

Q.17 The effort in a class 1 lever is in _____ direction(s).

Ans

✔ A. one

✘ B. two

✘ C. multiple

✘ D. three

Q.18 If G + H means G is daughter of H, G - H means G is sister H and G * H means G is husband of H, which of the following shows that I is the daughter of H?

Ans

✘ A. I * J - F + H

✘ B. I - J * F + H

✔ C. I - J + F * H

✘ D. I + J - F * H

Q.19 If C $ D means C is daughter of D, C & D means C is mother of D and C % D means C is son of D, then what does W $ X & Y % Z mean?

Ans

✘ A. Z is wife of W

✘ B. Z is mother of W

✘ C. Z is daughter of W

✔ D. Z is father of W

Q.20 What is the curved surface area of a hemisphere whose radius is 7 cm? (take $\pi = 22/7$)

Ans

✘ A. 924 cm^2

✘ B. 154 cm^2

✔ C. 308 cm^2

✘ D. 616 cm^2

Q.21 The ages of X and Y are in the ratio 4 : 7. Three years earlier, the ratio of their ages was 1 : 2. What is the difference between their current ages (Y - X)?

Ans

✘ A. 6

✘ B. 3

✘ C. 7.5

✔ D. 9

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Q.22 A software program that has been developed to harm other computers is called a/an _____.

Ans
- ✔ A. malware
- ✘ B. server
- ✘ C. LAN
- ✘ D. operating system

Q.24 An airplane flies at the speed of 50 m/s. How much distance (in km) will it cover in a flight of 5 hours?

Ans
- ✘ A. 850
- ✘ B. 880
- ✘ C. 895
- ✔ D. 900

Q.25 A salesperson starts from his office and drives 2 km east, then turns north and drives 7 km, then turns to his right and drives 6 km, then turns south and drives 7 km. Where is he now with respect to his starting position?

Ans
- ✘ A. 4 km west
- ✘ B. 8 km west
- ✔ C. 8 km east
- ✘ D. 4 km east

Q.26 If $5050 \times 0.5x = 25250$, then $2505 \div x^2 = ?$

Ans
- ✔ A. 25.05
- ✘ B. 2.505
- ✘ C. 250.5
- ✘ D. 0.2505

Q.27 Substances that are broken down by biological processes are said to be _____.

Ans
- ✘ A. non-reusable
- ✔ B. biodegradable
- ✘ C. non-biodegradable
- ✘ D. reusable

Q.28 Two resistors of 2 Ω and 6 Ω are connected in series and this combination is connected across a 12 V battery. Find the current in the 6 Ω resistor.

Ans
- ✘ A. 0.5 A
- ✔ B. 1.5 A
- ✘ C. 2.5 A
- ✘ D. 3.5 A

Q.29 The abbreviation AC in an engineering drawing stands for _____.

Ans
- ✔ A. Across Corners
- ✘ B. Aerial Cut
- ✘ C. Air Conditioning
- ✘ D. Attached Circle

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Q.30 Two resistors of 2 Ω and 6 Ω are connected in series and this combination is connected across a 12 V battery. Find the power supplied by the battery.

Ans

✗ A. 14 W

✓ B. 18 W

✗ C. 16 W

✗ D. 10 W

Q.31 JPEG stands for _____.

Ans

✗ A. Joint Program Executing Group

✗ B. Joint Program Experimental Group

✓ C. Joint Photographic Experts Group

✗ D. Joint Program Experts Group

Q.32 If the width of a standard engineering drawing sheet is 841 mm, then its length would be _____ mm.

Ans

✗ A. 1216

✓ B. 1189

✗ C. 1000

✗ D. 1250

Q.33 In engineering drawing, the letters LH signifies _____.

Ans

✗ A. Low Heat

✗ B. Level Hide

✓ C. Left Hand

✗ D. Limit of Height

Q.34 A machine was bought for ₹1,500 and a repairing charge of ₹100 was paid afterwards. At what price should it be sold to gain a profit of 25%?

Ans

✗ A. ₹1,960

✓ B. ₹2,000

✗ C. ₹1,920

✗ D. ₹2,040

Q.35 Which two signs should be interchanged to make the given equation correct?

$9 \div 3 + 8 \times 2 - 15 = 2$

Ans

✓ A. + and -

✗ B. × and -

✗ C. ÷ and -

✗ D. + and ×

Q.36 Where is the Headquarters of UNESCO located?

Ans

✗ A. Geneva

✗ B. New York City

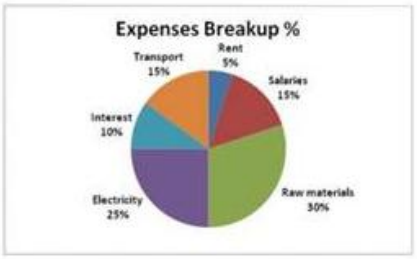
✓ C. Paris

✗ D. Washington DC

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Q.37 The pie chart shows the breakup in percentages of the various expenses of a Company. Study the diagram and answer the following question.



What is the interest expense if total expenses are ₹25,000 approximately?

Ans

✗ A. ₹5,000

✓ B. ₹2,500

✗ C. ₹9,000

✗ D. ₹1,800

Q.38 What is 80% of 50% of 90?

Ans

✗ A. 30

✓ B. 36

✗ C. 32

✗ D. 34

Q.39 An object weighs X units on the earth. If we take the same object to the moon, its weight there will be _____.

Ans

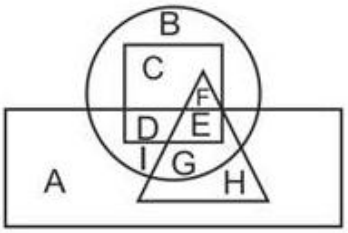
✗ A. more than X

✗ B. equal to X

✗ C. zero

✓ D. less than X

Q.40 In the following figure, square represents Chinese, triangle represents dancers, circle represents male and rectangle represents architects. Which set of letters represents dancers who are male?



Ans

✓ A. GEF

✗ B. DEF

✗ C. IGH

✗ D. DEIG

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Q.41 How many medals did India win in Rio Olympics, 2016?

Ans
- ✗ A. 5
- ✗ B. 3
- ✓ C. 2
- ✗ D. 4

Q.42 If $x = \sqrt{125} \times \sqrt{30} \times \sqrt{6}$, then x is equal to:

Ans
- ✗ A. 175
- ✓ B. 150
- ✗ C. 136
- ✗ D. 125

Q.43 An article was sold for ₹12,000. Had a discount of 15% been offered, a profit of 2% would have been made. What was the cost price?

Ans
- ✓ A. ₹10,000
- ✗ B. ₹10,200
- ✗ C. ₹10,800
- ✗ D. ₹11,000

Q.44 Greater the value of _____ of a material, the more rapidly it will conduct heat.

Ans
- ✗ A. melting point
- ✓ B. thermal conductivity
- ✗ C. regelation
- ✗ D. latent heat

Q.45 In an examination, the highest score and the lowest score differed by 55 and the higher one was 9/4 times the lower one. What is the lowest score?

Ans
- ✗ A. 36
- ✓ B. 44
- ✗ C. 40
- ✗ D. 48

Q.46 A series is given, with one number missing. Choose the correct alternative from the given ones that will complete the series.

1.14, 1.28, 1.42, ?, 1.70, 1.84

Ans
- ✗ A. 1.54
- ✗ B. 1.68
- ✓ C. 1.56
- ✗ D. 1.62

Q.47 What is the work that needs to be done to increase the speed of a 1 kg ball from 2 m/s to 4 m/s?

Ans
- ✗ A. 10 J
- ✗ B. 12 J
- ✓ C. 6 J
- ✗ D. 8 J

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Q.48 A 200 g block of iron was heated from 30°C to 60°C How much heat was transferred to the block (specific heat of iron is 450 $Jkg^{-1}K^{-1}$)?

Ans

✔ A. 2700 J

✘ B. 27 J

✘ C. 270 J

✘ D. 6000 J

Q.49 It is mainly due to the gravitational effect of the _____ on the rotating earth that the level of water in the sea rises and falls.

Ans

✔ A. Moon

✘ B. Venus

✘ C. Sun

✘ D. Mercury

Q.50 What is the unit's digit in $3^{66} \times 6^{41} \times 7^{53}$

Ans

✘ A. 3

✘ B. 7

✘ C. 6

✔ D. 8

Q.51 Given below are two statements, followed by two conclusions, I and II. You have to consider the statements to be true even if they seem to be at variance from commonly known facts. You have to decide which of the given conclusions, if any, follow(s) from the given statements.

Statement 1: No quadrilaterals are polygons.
Statement 2: All polygons are rhombuses.

Conclusion I: Some rhombuses are quadrilaterals.
Conclusion II: Some rhombuses are polygons.

Ans

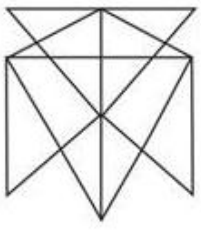
✘ A. Neither I nor II follows

✔ B. Only conclusion II follows

✘ C. Both I and II follow

✘ D. Only conclusion I follows

Q.52 What is the minimum number of lines required to make the given image?



Ans

✔ A. 11

✘ B. 12

✘ C. 9

✘ D. 10

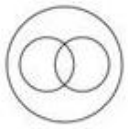
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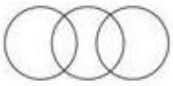
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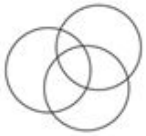
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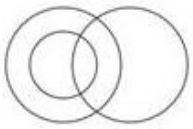
Q.54 Which of the following Venn diagrams best represents the relationship between Indians, doctors and women?

Ans

✗ A. 

✗ B. 

✓ C. 

✗ D. 

Q.55 A car covers 400 m in 20 seconds. Find the average speed (in km/hr) of the car.

Ans

✗ A. 108

✓ B. 72

✗ C. 124

✗ D. 36

Q.56 A can do 2/5 of a work in 10 days. B can do ½ of the same work in 10 days. They worked together for 5 days and then A left. In how many days will B finish the remaining work?

Ans

✗ A. 10

✓ B. 11

✗ C. 9

✗ D. 8

Q.57 Which one of these is a harvest festival?

Ans

✗ A. Teej

✗ B. Deepawali

✗ C. Janmashtami

✓ D. Onam

Q.58 If straight lines are drawn from various points on the contour of an object to meet a plane, the figure obtained on the plane is called the _____ of the object.

Ans

✗ A. animation

✗ B. dimensioning

✗ C. development

✓ D. projection

Q.59 Two resistors, one of 12 Ω and the other of 24 Ω are connected in parallel. This combination is connected in series with a 22 Ω resistor and a 12 V battery. The current in the 12 Ω resistor is_____.

Ans

✗ A. (2/15) A

✗ B. (6/15) A

✓ C. (4/15) A

✗ D. (8/15) A

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Q.60 A series is given, with one term missing. Choose the correct alternative from the given ones that will complete the series.
OOOOOX, OOOOXX, OOOXXX, OOXXXX, ?

Ans
- ✗ A. OOXXXX
- ✗ B. XXXXXX
- ✗ C. OOXXXXX
- ✓ D. OXXXXX

Q.61 Identify the material having low coefficient of volume expansion

Ans
- ✓ A. Iron
- ✗ B. Mercury
- ✗ C. Aluminium
- ✗ D. Brass

Q.62 Given below are some letters, that each of these letters has a corresponding number. Select the combination of numbers from the options so that the jumbled letters arranged accordingly will form a meaningful English word.

H T R U O A
1 2 3 4 5 6

Ans
- ✓ A. 6,4,2,1,5,3
- ✗ B. 2,1,5,3,4,6
- ✗ C. 3,4,5,2,1,6
- ✗ D. 1,6,2,4,5,3

Q.63 Kuchipudi has its roots in which Indian State?

Ans
- ✗ A. Kerala
- ✓ B. Andhra Pradesh
- ✗ C. Himachal Pradesh
- ✗ D. Arunachal Pradesh

Q.64 If a body has a specific gravity of less than 1, then it will float in/on _____.

Ans
- ✗ A. mercury
- ✗ B. liquids
- ✗ C. air
- ✓ D. water

Q.65 RK Narayan is famous for his book _____.

Ans
- ✗ A. The Toom on the Roof
- ✗ B. A Suitable Boy
- ✗ C. Two Lives
- ✓ D. Malgudi Days

Q.66 A body starts from rest. Its displacement is proportional to _____ when its acceleration is constant.

Ans
- ✗ A. velocity
- ✓ B. time squared
- ✗ C. work
- ✗ D. time

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Q.67 $86^{\circ}F$ is equal to _____ .

Ans

✗ A. $10^{\circ}C$

✗ B. $20^{\circ}C$

✗ C. $34^{\circ}C$

✓ D. $30^{\circ}C$

Q.68 Reflection of point (-2, -6) on the Y-axis is:

Ans

✗ A. (-2, 6)

✗ B. (-6, -2)

✗ C. (2, 6)

✓ D. (2, -6)

Q.69 Name the painter of the famous painting, 'Mahishasura'.

Ans

✗ A. MF Hussain

✓ B. Tyeb Mehta

✗ C. Amrita Sher-Gil

✗ D. Raja Ravi Verma

Q.70 Velocity ratio of simple machine is the ratio of distance travelled by the _____ to the distance travelled by the _____ in the machine.

Ans

✗ A. effort; effort

✗ B. load; effort

✗ C. load; load

✓ D. effort; load

Q.71 In a code language, 295 means 'water is liquid', 549 means 'oil is liquid' and 824 means 'oil on water'. Find the code for 'on'.

Ans

✓ A. 8

✗ B. 5

✗ C. 4

✗ D. 2

Q.72 Which Indian cricketer received the Padma Bhushan in 2018?

Ans

✗ A. Saurav Ganguly

✗ B. Virat Kohli

✗ C. Sachin Tendulkar

✓ D. MS Dhoni

Q.73 What is the distance between the points (4, 3) and (3, -2)?

Ans

✗ A. $\sqrt{24}$

✓ B. $\sqrt{26}$

✗ C. 5

✗ D. 6

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Q.74 Unscramble the letters in the words given below and find the odd word out.

Ans
- ✗ A. FLOW
- ✗ B. ERTIG
- ✗ C. ILNO
- ✓ D. WCO

Q.75 The Ajanta Caves in Maharashtra feature paintings and sculptures that depict _____ tales?

Ans
- ✗ A. Arabic
- ✗ B. Islamic
- ✓ C. Buddhist
- ✗ D. Maratha

Q.76 Safety boots or shoes must be worn in designated areas to protect your _____ from falling objects.

Ans
- ✓ A. feet
- ✗ B. head
- ✗ C. ear
- ✗ D. eye

Q.77 A wire of length l and radius r has a resistance R. The resistance of another wire made of the same material but having half its length and half its radius will be ___.

Ans
- ✓ A. 2R
- ✗ B. R
- ✗ C. 4R
- ✗ D. R/2

Q.78 $\sec 45° - \tan 60° = ?$

Ans
- ✓ A. $-\sqrt{3} + \sqrt{2}$
- ✗ B. $-\sqrt{3} - \sqrt{2}$
- ✗ C. $\frac{\sqrt{3}}{2}$
- ✗ D. $\sqrt{3} + \sqrt{2}$

Q.79 Tap M and N can together fill a cistern in 48/13 minutes. N alone can fill it in 6 minutes. How much time will M alone take to fill the cistern?

Ans
- ✗ A. 9 minutes
- ✗ B. 9.4 minutes
- ✗ C. 8.6 minutes
- ✓ D. 9.6 minutes

Q.80 Two resistors of 10 Ω and 20 Ω are connected in series and this combination is connected across a 30 V supply voltage. Find the voltage across the 10 Ω resistor.

Ans
- ✗ A. 20 V
- ✗ B. 15 V
- ✗ C. 5 V
- ✓ D. 10 V

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Q.81 What is the median of 8, 5, 7, 9, 11, 6, 10 ?

Ans

✗ A. 9

✗ B. 7

✓ C. 8

✗ D. 10

Q.82 A brass rod (thermal conductivity 109 J/s m K) has an area of cross section 0.04 m^2 and length 20 cm. If the two end of the rod are maintained at a temperature difference of 200°C, the rate of heat flow through the rod is _____.

Ans

✓ A. 4.36 kJ/s

✗ B. 2.32 kJ/s

✗ C. 3.42 kJ/s

✗ D. 5.80 kJ/s

Q.83 I, J, K and L are sitting in a row. L and I are sitting next to each other and I and K are at the ends. Who is sitting next to J?

Ans

✗ A. L and I

✓ B. K and L

✗ C. Only L

✗ D. Only K

Q.84 Find the odd group of letters from the given alternatives.

Ans

✗ A. PQR

✗ B. EFG

✓ C. HJL

✗ D. VWX

Q.85 Which of the following options does not have an SI base unit?

Ans

✗ A. Luminous intensity

✗ B. Electric current

✓ C. Frequency

✗ D. Amount of substance

Q.88 Who was the first governor of the Reserve Bank of India?

Ans

✗ A. HVR Iyengar

✗ B. Sir James Braid Taylor

✗ C. KR Puri

✓ D. Sir Osborne A Smith

Q.89 A _____ is a theoretical exact plane, axis or point location that GD & T or dimensional tolerances are referenced to.

Ans

✗ A. flange

✗ B. section

✗ C. frame

✓ D. datum

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Q.90 A 4-digit number 1xy7 is divisible by 11. What is the value of x-y?

Ans

✔ A. - 6

✘ B. - 8

✘ C. - 4

✘ D. - 2

Q.91 In angular measurements, one radian is equivalent to _____ degrees (approximately).

Ans

✘ A. 180

✘ B. 65.27

✔ C. 57.27

✘ D. 90

Q.92 A motorcycle travelled 1000 m at 36 km/hr. Find the time (in seconds) taken by the motorcycle to cover this distance.

Ans

✘ A. 400

✔ B. 100

✘ C. 300

✘ D. 200

Q.93 Molar specific heat capacity of a substance is _____.

Ans

✔ A. $\left(\frac{1}{\mu}\right)\left(\frac{\Delta Q}{\Delta T}\right)$

✘ B. $\left(\frac{1}{\mu}\right)\left(\frac{\Delta T}{\Delta Q}\right)$

✘ C. $\mu\left(\frac{\Delta T}{\Delta Q}\right)$

✘ D. $\mu\left(\frac{\Delta Q}{\Delta T}\right)$

Q.94 An object starts from rest at x = 0 m and moves with a constant acceleration of 1.6 m/s^2 along the x-axis. During its journey from x = 12.8 m to x = 20.0 m, its average velocity will be_____.

Ans

✔ A. 7.2 m/s

✘ B. 8.8 m/s

✘ C. 3.6 m/s

✘ D. 2.4 m/s

Q.95 Pipes A and B can fill a tank in 12 minutes and 16 minutes respectively. Both A and B are opened for 4 minutes and then A is closed. How much extra time will B take to fill the tank completely?

Ans

✘ A. $\frac{21}{4}$ minutes

✔ B. $\frac{20}{3}$ minutes

✘ C. 7 minutes

✘ D. 6 minutes

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Q.96 A source of voltage V maintains a current i in a circuit. The energy supplied to the circuit by the source in time t is _____.

Ans

✗ A. 1/Vit

✗ B. Vi/t

✗ C. V/it

✓ D. Vit

Q.97 A number is as much greater than 50 as it is lesser than 84. What is the number?

Ans

✗ A. 66

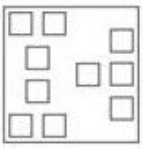
✗ B. 68

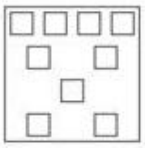
✗ C. 65

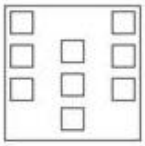
✓ D. 67

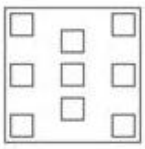
Q.98 Choose the figure that is different from the rest.

Ans

✓ A. 

✗ B. 

✗ C. 

✗ D. 

Q.99 The volume of a given amount of water _____ between 0° C to 4° C.

Ans

✗ A. remains constant

✗ B. is zero

✓ C. decreases

✗ D. increases

Q.100 A and B can do a work in 15 days, B and C can do the work in 20 days and A and C can do the work in 10 days. In how many days will they together complete the work?

Ans

✗ A. 10.91 days

✗ B. 10.67 days

✗ C. 10.71 days

✓ D. 9.23 days

Section : **Part B**

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Q.101 Which of the following quantities is the same for the primary and secondary of a transformer?

Ans

✗ A. current

✓ B. frequency

✗ C. phase

✗ D. voltage

Q.102 A DVD uses the _____ method to store and read data.

Ans

✗ A. Hall effect

✗ B. electrical

✓ C. optical

✗ D. magnetic

Q.103 When a transistor is biased such that its Base current is greater than zero and its collector-to-emitter voltage is less than 0.2 V, it is operating in the _____ region.

Ans

✗ A. cut-off

✗ B. active

✗ C. breakdown

✓ D. saturation

Q.104 A CRO displays a sine waveform which spans 3 cycles in 6 horizontal divisions. If the time base switch is set to 1 ms /div, what is the frequency of this signal which is being measured?

Ans

✗ A. 20 Hz

✗ B. 200 Hz

✗ C. 50 Hz

✓ D. 500 Hz

Q.105 In an Op-Amp voltage regulator, the regulating element is connected:

Ans

✗ A. across the load

✗ B. across the Zener diode

✗ C. in series with the Zener diode

✓ D. in series with the load

Q.106 When simplified, the Boolean expression A+AB results in _____.

Ans

✗ A. AB

✗ B. B

✗ C. A+1

✓ D. A

Q.107 In a motor speed control using TRIAC and UJT, the potentiometer controls:

Ans

✗ A. the thyristor gate current

✓ B. the frequency of the pulses from UJT

✗ C. the gate voltage in the thyristor circuit

✗ D. the thyristor anode voltage

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Q.108 The regenerative process where the collector junction temperature increases the collector current and vice versa is called _____.

Ans

✗ A. oscillation

✗ B. positive feedback

✗ C. temperature stability

✓ D. thermal runaway

Q.109 In wave propagation, fading refers to:

Ans

✗ A. the changing of the colour

✗ B. the changing of the wavelength

✗ C. the shifting of frequency

✓ D. the reduction in signal strength

Q.110 Which stage in an AM transmitter is also known as Harmonic Generator?

Ans

✗ A. Carrier oscillator

✓ B. Frequency multiplier

✗ C. Power amplifier

✗ D. AFC circuit

Q.111 If the height of an antenna increases, the angle of radiation _____

Ans

✗ A. Does not change

✗ B. Becomes a zero

✗ C. Increases

✓ D. Decreases

Q.112 Which of the following types of microphone requires an external power source to operate?

Ans

✗ A. Paper microphone

✗ B. Dynamic microphone

✗ C. Ribbon microphone

✓ D. Condenser microphone

Q.113 _____ is the input of detector stage?

Ans

✗ A. Audio signal

✓ B. IF signal

✗ C. RF signal

✗ D. carrier wave

Q.114 In a PA system, a ____ is used to adjust the amplitude of different frequencies to achieve the desired quality of sound output.

Ans

✗ A. filter

✗ B. attenuator

✗ C. amplifier

✓ D. equaliser

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Q.115 Why crystal receiver has poor selectivity?

Ans

✔ A. No tuned circuit is used

✘ B. No battery is used

✘ C. No loud speaker is used

✘ D. it has long antenna

Q.116 Which one of the following does NOT affect the value of the capacitance of a parallel plate capacitor?

Ans

✘ A. Surface area of the plates

✘ B. Permittivity of the dielectric used

✔ C. Voltage applied to the capacitor

✘ D. Distance between the plates

Q.117 In a mixer, which control determines the amount of signal to be sent to the right or left channels?

Ans

✔ A. PAN

✘ B. Filter

✘ C. Equaliser

✘ D. Treble

Q.118 An ideal 220 VA step-down transformer is connected to a 220 V supply in the primary. If its turns ratio is 4:1, then the value of the secondary current will be_____.

Ans

✘ A. 1 A

✘ B. 22 A

✔ C. 4 A

✘ D. 11 A

Q.119 A 3.1 sound system has _____.

Ans

✘ A. 3 speakers and one tweeter

✘ B. bass, treble, and speaker

✔ C. 3 speakers and one subwoofer

✘ D. only 3 speakers

Q.120 In a common-anode seven-segment display, what will be displayed if all the seven data inputs are at logic ‘’0”?

Ans

✔ A. 8

✘ B. 4

✘ C. 2

✘ D. 0

Q.121 _____ electrons flow every second in ten amperes of current.

Ans

✘ A. 31.4×10^{18}

✔ B. 62.4×10^{18}

✘ C. 62.4×10^{8}

✘ D. 31.4×10^{8}

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Q.122 An advantage of modulation is the use of _____.

Ans

✗ A. smaller circuit

✗ B. lesser power

✓ C. smaller antenna

✗ D. lower bandwidth

Q.123 Which of the following is NOT a type of wireless communication technology?

Ans

✗ A. Infrared communication

✓ B. OFC communication

✗ C. Bluetooth communication

✗ D. Satellite communication

Q.124 A discriminator is basically a _____.

Ans

✗ A. AM modulator

✗ B. RS flip flop

✗ C. Wein bridge oscillator

✓ D. FM detector

Q.125 In a microprocessor, which is the register that always holds the result of an operation?

Ans

✗ A. Buffer

✗ B. Data bus

✗ C. Instruction register

✓ D. Accumulator

Q.126 When the communication allows simultaneous talking and listening by two parties over the same channel, it is called _____.

Ans

✗ A. half duplex

✗ B. simplex

✗ C. biplex

✓ D. full duplex

Q.127 Which component in a TV is responsible for generating the high voltage sawtooth signals at a relatively high frequency?

Ans

✓ A. Fly back transformer

✗ B. UPS transformer

✗ C. SMPS transformer

✗ D. Isolation transformer

Q.128 A bridge rectifier receives its input from a 4: 1 step down transformer connected 220 V AC. Identify the PIV of the bridge rectifier from the given options.

Ans

✗ A. 77.7 V

✓ B. 55 V

✗ C. 63.6 V

✗ D. 141.4 V

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Q.129 When two resistors of equal value are connected across a 220 V DC supply, the current through each resistor is 1 A. Find the colour code of the resistors.

Ans

✗ A. Black, Brown, Red

✓ B. Red, Red, Brown

✗ C. Red, Red, Red

✗ D. Brown, Black, Red

Q.130 In a direct-coupled amplifier, the gain falls at high frequencies mainly due to _____.

Ans

✗ A. Power supply

✗ B. Coupling capacitors

✗ C. Filtering issues

✓ D. Stray capacitances

Q.131 Which of the following is NOT a topology of an SMPS?

Ans

✗ A. DC to DC converter

✓ B. Reverse converter

✗ C. Forward converter

✗ D. AC to DC converter

Q.132 Identify the features of CC configuration from the options given below.

Ans

✗ A. Lowest input impedance and highest voltage gain.

✓ B. Highest input impedance and highest current gain.

✗ C. Lowest input impedance and lowest voltage gain.

✗ D. Highest input impedance and highest voltage gain.

Q.133 What is the full form of DTS?

Ans

✗ A. Direct Transmission for Satellite Services

✗ B. Digital Transmission Systems Format for Video

✗ C. Digital Theatre Systems Format for Video

✓ D. Digital Theatre Systems Format for Audio

Q.134 In an AM radio receiver, for an RF signal of 1545 kHz, the value of the local oscillator frequency will be _____.

Ans

✗ A. 2,455 kHz

✓ B. 2,000 kHz

✗ C. 455 kHz

✗ D. 1,455 kHz

Q.135 In which part of a cell does oxidation take place?

Ans

✗ A. Cathode

✓ B. Anode

✗ C. Electrolyte

✗ D. Container

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Q.136 AM broadcast transmits _____

Ans
- ✗ A. Only side bands
- ✓ B. Both side bands and carrier
- ✗ C. Carrier and lower side band
- ✗ D. Only carrier

Q.137 The wavelength of the laser used in a DVD player is _____.

Ans
- ✗ A. 820 nm
- ✗ B. 540 nm
- ✗ C. 780 nm
- ✓ D. 650 nm

Q.138 The geostationary orbit is_____ km away from the surface of the earth.

Ans
- ✗ A. 2,950
- ✗ B. 38,000
- ✗ C. 2,200
- ✓ D. 36,000

Q.139 _____ is used to describe information about the hue and saturation of a colour.

Ans
- ✓ A. Chrominance
- ✗ B. Intensity
- ✗ C. Luminance
- ✗ D. Contrast

Q.140 _____ coupling is a way to provide impedance matching in the AF amplifiers.

Ans
- ✗ A. Direct
- ✗ B. Resistive
- ✓ C. Transformer
- ✗ D. RC

Q.141 Which one of the following is referred to as a free one-shot circuit?

Ans
- ✗ A. Schmitt trigger
- ✗ B. Astable multivibrator
- ✓ C. Monostable multivibrator
- ✗ D. Bistable multivibrator

Q.142 The bandwidth of a TV channel in India is _____.

Ans
- ✗ A. 5.5 MHz
- ✗ B. 15 MHz
- ✗ C. 10.8 MHz
- ✓ D. 7 MHz

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Q.143 The binary equivalent of the octal number 456 is_____.

Ans
✗ A. 101011110
✓ B. 100101110
✗ C. 101001101
✗ D. 100111101

Q.144 The band width of an A.M radio receiver?

Ans
✗ A. 5MHz
✗ B. 20 KHz
✗ C. 1KHz
✓ D. 10KHz

Q.145 Which type of loss can be reduced in a transformer by increasing the diameter of the conductor?

Ans
✗ A. Hysteresis loss
✗ B. Eddy current loss
✗ C. Magnetic loss
✓ D. Copper loss

Q.146 According to Kirchoff's current law,:

Ans
✓ A. the sum of the currents entering a node = the sum of the currents leaving the node
✗ B. the sum of the potential differences across all elements =0
✗ C. the total current is directly proportional to the applied voltage
✗ D. the sum total of all the currents in a loop = 0

Q.147 TV remote controls commonly use _____ to communicate with the TV.

Ans
✗ A. UV transmitter
✗ B. Bluetooth transmitter
✓ C. Infrared LED
✗ D. a laser diode

Q.148 Identify the terminals in a three-point starter from the options given below.

Ans
✗ A. Line, field and NLR terminals
✗ B. Line, NLR and armature terminals
✓ C. Line, field and armature terminals
✗ D. NLR, field and armature terminals

Q.149 If the _____ section in a TV has failed, the result is "No Sound, No Picture".

Ans
✗ A. sync separator
✗ B. vertical output
✗ C. IF output
✓ D. horizontal transistor

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Q.150 What are the speakers that handle the higher range of audio frequencies called?

Ans

✗ A. Bass speakers

✗ B. Box speakers

✗ C. Woofers

✓ D. Tweeters

Q.151 The value of the first IF in double conversion FM Radio receivers is _____.

Ans

✗ A. 470 kHz

✓ B. 10.7 MHz

✗ C. 455 kHz

✗ D. 108 MHz

Q.152 What is a wave trap?

Ans

✗ A. High pass filter

✗ B. Wide band amplifier

✗ C. Low pass filter

✓ D. Resonance circuit

Q.153 What is the function of a shunt resistor used for extending the range of an ammeter?

Ans

✗ A. To increase the PF.

✓ B. To bypass the additional current.

✗ C. To divide the additional voltage.

✗ D. To increase the meter resistance.

Q.154 The conductive coating on the outer surface of a picture tube is called _____.

Ans

✗ A. enamel

✗ B. metal primer

✗ C. liquid conductor

✓ D. Aquadag

Q.155 The IC CA810 can be used as power amplifier in many applications. Which is the circuit this IC cannot be used?

Ans

✓ A. Power driving circuits

✗ B. Television receivers

✗ C. Small PA systems

✗ D. Radio receiver and tape recorders

Q.156 One of the criteria for oscillations to occur in an amplifier is that:

Ans

✗ A. the amplifier output impedance must be zero

✗ B. the amplifier must be in the cut-off state

✗ C. the amplifier must have a variable power supply

✓ D. the loop gain must be slightly greater than unity

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Q.157 A series resonant circuit consists of a resistor of 10 Ω, a capacitor of 1 μF and an inductor of 1 mH. What is the value of the current flowing through this circuit at resonance if the applied voltage is 100 V AC?

Ans

✔ A. 10 A

✘ B. 100 mA

✘ C. 1 A

✘ D. 10 mA

Q.158 The shape of the time base signal of a CRO is generally a _____.

Ans

✔ A. sawtooth wave

✘ B. triangle wave

✘ C. square wave

✘ D. sine wave

Q.159 In a transistor, identify the terminal with the highest doping from the options given below.

Ans

✘ A. Intrinsic zone

✘ B. Base

✔ C. Emitter

✘ D. Collector

Q.160 What is the name of the device that have three terminals and two layers?

Ans

✘ A. NPN transistor

✔ B. UJT

✘ C. PNP transistor

✘ D. FET

Q.161 Which type of memory needs to be regularly refreshed?

Ans

✔ A. DRAM

✘ B. ROM

✘ C. CMOS

✘ D. SRAM

Q.162 The basic components of an optocoupler are _____.

Ans

✘ A. LED and LDR

✘ B. crystal and LDR

✔ C. LED and phototransistor

✘ D. photodiode and crystal

Q.163 In Silicon Controlled Rectifier (SCR):

Ans

✔ A. holding current < latching current

✘ B. holding current = latching current

✘ C. holding current > latching current

✘ D. holding current = 0.6 V / forward resistance

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Q.164 In an FM radio receiver, which section uses the limiter circuit at its input?

Ans

✗ A. AF amplifier

✓ B. Detector

✗ C. Mixer

✗ D. AGC

Q.165 _____ is the digital 2-input logic gate whose output is HIGH only when both its inputs are the same.

Ans

✗ A. AND gate

✓ B. EX NOR Gate

✗ C. EX OR Gate

✗ D. NAND Gate

Q.166 What will happen to the output voltage in a series regulator, when temperature increases?

Ans

✗ A. Remain constant

✗ B. Equals input voltage

✗ C. Decreases

✓ D. Increases

Q.167 Which of the following input conditions of an RS flip flop will result in an SET condition at the output?

Ans

✗ A. R= 1, S=0

✗ B. R= 0, S=0

✓ C. R= 0, S=1

✗ D. R= 1, S=1

Q.168 Two amplifiers each of gain 10 and 25 are cascaded. If the input voltage to the first amplifier is 10 mV, the output of the second stage will be _____.

Ans

✗ A. 125 V

✗ B. 25 V

✗ C. 100 V

✓ D. 2.5 V

Q.169 Which of the following statements is **TRUE** in case of filters used with rectifiers?

Ans

✗ A. Capacitors and inductors are both connected in shunt with the output.

✓ B. Capacitors are connected in shunt and inductors in series with the output.

✗ C. Capacitors and inductors are both connected in series with the output.

✗ D. Capacitors are connected in series and inductors in shunt with the output.

Q.170 In satellite communication, the downlink frequency is always_____ the uplink frequency.

Ans

✓ A. lower than

✗ B. equal to

✗ C. higher than

✗ D. independent of

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Q.171 Reception of a station in a wrong position is caused by _____

Ans

✗ A. Defective gang condenser

✗ B. Misalignment of antenna coil

✓ C. Oscillator coil

✗ D. Misalignment of I.F.T

Q.172 In television, one half of horizontal pixels rows are refreshed in one cycle and the other half in the next cycle. This process is known as _____.

Ans

✓ A. interlaced scanning

✗ B. sequential scanning

✗ C. alternate scanning

✗ D. differential scanning

Q.173 If a receiver is able to detect and amplify even very weak signals, its _____ considered to be very good.

Ans

✗ A. bandwidth

✓ B. sensitivity

✗ C. fidelity

✗ D. selectivity

Q.174 In an AM with m=1, the power in one sideband is:

Ans

✗ A. the same as the total power

✗ B. one-tenth of the total power

✓ C. one-fourth of the total power

✗ D. three-fourth of the total power

Q.175 Why FM is popular compared to the AM _____.

Ans

✗ A. Requires simple transmission and reception equipment's

✗ B. Easier to generate and detect

✗ C. Occupies less band width

✓ D. Less sensitivity to noise

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