RAILWAY RECRUITMENT BOARDS
रेलवे भर्ती बोर्ड

RRB ALP 2018 CBT-2 Electrician

Assistant Loco Pilot & Technicians | CEN 01/2018 | CBT-2 | Trade: Electrician

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 (Electrician) 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.

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.
4. Use the bookmarks panel of your PDF reader to move between shifts.

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Score & Rank Calculator · rank.qmaths.in

Compiled 02 November 2026

INDEX · Click any row to open that paper

RRB ALP 2018 CBT-2 Electrician (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 $86^{\circ}F$ is equal to _____ .

Ans
- ✗ A. $34^{\circ}C$
- ✓ B. $30^{\circ}C$
- ✗ C. $10^{\circ}C$
- ✗ D. $20^{\circ}C$

Q.2 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. 8%
- ✓ B. 7%
- ✗ C. 6%
- ✗ D. 1%

Q.3 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. 895
- ✗ B. 850
- ✗ C. 880
- ✓ D. 900

Q.4 Molar specific heat capacity of a substance is _____.

Ans
- ✗ A. $\mu\left(\frac{\Delta T}{\Delta Q}\right)$
- ✗ B. $\left(\frac{1}{\mu}\right)\left(\frac{\Delta T}{\Delta Q}\right)$
- ✗ C. $\mu\left(\frac{\Delta Q}{\Delta T}\right)$
- ✓ D. $\left(\frac{1}{\mu}\right)\left(\frac{\Delta Q}{\Delta T}\right)$

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Q.5 Substances that are broken down by biological processes are said to be _____.

Ans

✗ A. reusable

✗ B. non-biodegradable

✗ C. non-reusable

✓ D. biodegradable

Q.6 If $\sin \Theta = 15/17$, then $\cot \Theta = ?$

Ans

✗ A. $\frac{17}{15}$

✗ B. $\frac{8}{17}$

✗ C. $\frac{15}{8}$

✓ D. $\frac{8}{15}$

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

Ans

✗ A. velocity

✗ B. acceleration

✓ C. position

✗ D. pressure

Q.8 Where is the Headquarters of UNESCO located?

Ans

✗ A. New York City

✗ B. Washington DC

✗ C. Geneva

✓ D. Paris

Q.9 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. 3,4,5,2,1,6

✗ C. 2,1,5,3,4,6

✗ D. 1,6,2,4,5,3

Q.10 How many medals did India win in Rio Olympics, 2016?

Ans

✗ A. 4

✗ B. 3

✓ C. 2

✗ D. 5

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

Ans

✗ A. 9

✓ B. 8

✗ C. 7

✗ D. 10

Q.12 If $x = \sqrt{125}\ X\ \sqrt{30}\ X\sqrt{6}$, then x is equal to:

Ans

✗ A. 125

✗ B. 136

✗ C. 175

✓ D. 150

Q.13 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. Only conclusion II follows

✗ B. Neither I nor II follows

✗ C. Both I and II follow

✗ D. Only conclusion I follows

Q.14 What is the least number which when doubled is perfectly divisible by 7, 12 and 15?

Ans

✓ A. 210

✗ B. 215

✗ C. 214

✗ D. 220

Q.15 A _____ is a theoretical exact plane, axis or point location that GD & T or dimensional tolerances are referenced to.

Ans

✓ A. datum

✗ B. flange

✗ C. section

✗ D. frame

Q.16 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. (8/15) A

✗ C. (6/15) A

✓ D. (4/15) A

Q.17 Which of the following options does not have an SI base unit?

Ans

✓ A. Frequency

✗ B. Luminous intensity

✗ C. Electric current

✗ D. Amount of substance

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Q.18 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. Only L

✗ B. L and I

✓ C. K and L

✗ D. Only K

Q.19 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. less than X

✗ D. zero

Q.20 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

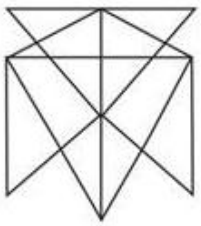
✗ A. 6 minutes

✗ B. $\frac{21}{4}$ minutes

✓ C. $\frac{20}{3}$ minutes

✗ D. 7 minutes

Q.21 What is the minimum number of lines required to make the given image?



Ans

✗ A. 10

✗ B. 9

✓ C. 11

✗ D. 12

Q.22 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

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Q.23 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.24 Velocity ratio of simple machine is the ratio of distance travelled by the _____ to the distance travelled by the _____ in the machine.

Ans

✗ A. load; effort

✗ B. effort; effort

✗ C. load; load

✓ D. effort; load

Q.25 Safety boots or shoes must be worn in designated areas to protect your _____ from falling objects.

Ans

✗ A. head

✗ B. ear

✓ C. feet

✗ D. eye

Q.26 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. R/2

✓ B. 2R

✗ C. R

✗ D. 4R

Q.27 If $5050 \times 0.5x = 25250$, then $2505 \div x^2 = ?$

Ans

✗ A. 2.505

✓ B. 25.05

✗ C. 250.5

✗ D. 0.2505

Q.28 A body starts from rest. Its displacement is proportional to _____ when its acceleration is constant.

Ans

✗ A. velocity

✓ B. time squared

✗ C. time

✗ D. work

Q.29 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. 10.71 days

✗ B. 10.67 days

✗ C. 10.91 days

✓ D. 9.23 days

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Q.30 Select the option that is related to the third term in the same way as the second term is related to the first term.

Tall : Short :: Glad : ?

Ans

✗ A. Smile

✓ B. Sad

✗ C. Happy

✗ D. Emotion

Q.31 What is the curved surface area of a hemisphere whose radius is 7 cm? (take $\pi = 22/7$)

Ans

✓ A. 308 cm^2

✗ B. 924 cm^2

✗ C. 154 cm^2

✗ D. 616 cm^2

Q.32 RK Narayan is famous for his book _____.

Ans

✗ A. Two Lives

✓ B. Malgudi Days

✗ C. A Suitable Boy

✗ D. The Toom on the Roof

Q.33 A motorcycle travelled 1000 m at 36 km/hr. Find the time (in seconds) taken by the motorcycle to cover this distance.

Ans

✓ A. 100

✗ B. 300

✗ C. 400

✗ D. 200

Q.34 Given below is a question, followed by two arguments, I and II. You have to decide which of the given arguments, if any, is a strong argument, with respect to the question.

Question: Should advertisements be banned on television?

Argument I : Yes, advertisements are immoral.
Argument II : No, advertisements bring in revenue which helps reduce cost for viewers.

Ans

✗ A. Only argument I is strong.

✓ B. Only argument II is strong.

✗ C. Neither I nor II is strong.

✗ D. Both I and II are strong.

Q.35 A number is as much greater than 50 as it is lesser than 84. What is the number?

Ans

✗ A. 65

✗ B. 68

✗ C. 66

✓ D. 67

Q.36 A 4-digit number 1xy7 is divisible by 11. What is the value of x-y?

Ans

✓ A. - 6

✗ B. - 4

✗ C. - 2

✗ D. - 8

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Q.37 Who was the first governor of the Reserve Bank of India?

Ans

✗ A. Sir James Braid Taylor

✓ B. Sir Osborne A Smith

✗ C. HVR Iyengar

✗ D. KR Puri

Q.38 What is the distance between the points (4, 3) and (3, -2)?

Ans

✗ A. $\sqrt{24}$

✗ B. 6

✓ C. $\sqrt{26}$

✗ D. 5

Q.39 Reflection of point (-2, -6) on the Y-axis is:

Ans

✗ A. (-6, -2)

✓ B. (2, -6)

✗ C. (2, 6)

✗ D. (-2, 6)

Q.40 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. 5 V

✗ B. 20 V

✗ C. 15 V

✓ D. 10 V

Q.41 $\sec 45° - \tan 60° = ?$

Ans

✗ A. $\sqrt{3} + \sqrt{2}$

✗ B. $\frac{\sqrt{3}}{2}$

✗ C. $-\sqrt{3} - \sqrt{2}$

✓ D. $-\sqrt{3} + \sqrt{2}$

Q.42 The volume of a given amount of water _____ between 0° C to 4° C.

Ans

✗ A. is zero

✓ B. decreases

✗ C. remains constant

✗ D. increases

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Q.43 You are given a question and two statements. Identify which of the statements is/are necessary/sufficient to answer the question.

Question: What was the discount percent offered on the soap by the store?
Statements:
I) The store is giving 1 soap free on purchase of three.
II) ₹10 discount is offered on purchase of soap worth ₹36.

Ans

✗ A. I alone is sufficient while II alone is not sufficient

✗ B. II alone is sufficient while I alone is not sufficient

✓ C. Either I or II is sufficient

✗ D. Neither I nor II is sufficient

Q.44 Kuchipudi has its roots in which Indian State?

Ans

✗ A. Himachal Pradesh

✓ B. Andhra Pradesh

✗ C. Kerala

✗ D. Arunachal Pradesh

Q.45 Unscramble the letters in the words given below and find the odd word out.

Ans

✗ A. ERTIG

✗ B. ILNO

✗ C. FLOW

✓ D. WCO

Q.46 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.47 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. ₹4,000

✗ B. ₹4,750

✓ C. ₹5,000

✗ D. ₹4,250

Q.48 Identify the material having low coefficient of volume expansion

Ans

✗ A. Aluminium

✓ B. Iron

✗ C. Brass

✗ D. Mercury

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Q.49 Given below is a statement followed by two assumptions numbered I and II. You have to decide which of the assumptions is/are implicit in the statement.

Statement: The human body produces Vitamin D when exposed to sunlight.

Assumption I: The human body will have Vitamin D even if it is not consumed via food.
Assumption II: A large portion of the global population suffers from Vitamin D deficiency.

Ans

✗ A. Only assumption II is implicit

✗ B. Neither I nor II is implicit

✗ C. Both I and II are implicit

✓ D. Only assumption I is implicit

Q.50 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. 8 km west

✗ B. 4 km west

✗ C. 4 km east

✓ D. 8 km east

Q.51 _____ protection must be worn whenever noise levels exceed the noise exposure standard.

Ans

✗ A. Eye

✗ B. Head

✗ C. Foot

✓ D. Hearing

Q.52 A software program that has been developed to harm other computers is called a/an _____.

Ans

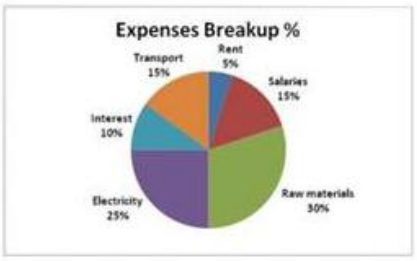
✓ A. malware

✗ B. server

✗ C. LAN

✗ D. operating system

Q.53 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. ₹1,800

✗ B. ₹5,000

✓ C. ₹2,500

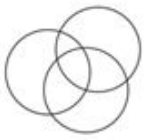
✗ D. ₹9,000

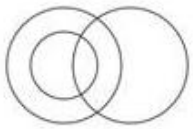
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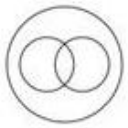
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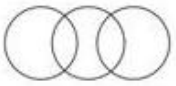
Q.54 Which of the following Venn diagrams best represents the relationship between Indians, doctors and women?

Ans

✔ A. 

✘ B. 

✘ C. 

✘ D. 

Q.55 If a body has a specific gravity of less than 1, then it will float in/on _____.

Ans

✘ A. air

✘ B. liquids

✔ C. water

✘ D. mercury

Q.56 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 daughter of W

✘ B. Z is mother of W

✔ C. Z is father of W

✘ D. Z is wife of W

Q.57 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. 2.4 m/s

✘ B. 3.6 m/s

✘ C. 8.8 m/s

✔ D. 7.2 m/s

Q.58 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. 5.80 kJ/s

✘ D. 3.42 kJ/s

Q.59 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. ₹2,040

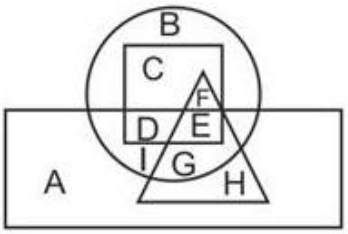
✘ C. ₹1,920

✔ D. ₹2,000

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Q.60 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. DEIG

✓ B. GEF

✗ C. DEF

✗ D. IGH

Q.61 What is the unit's digit in $3^{66} \times 6^{41} \times 7^{53}$

Ans

✗ A. 6

✗ B. 7

✗ C. 3

✓ D. 8

Q.62 The Ajanta Caves in Maharashtra feature paintings and sculptures that depict _____ tales?

Ans

✓ A. Buddhist

✗ B. Maratha

✗ C. Arabic

✗ D. Islamic

Q.63 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

Q.64 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. 9

✓ B. 11

✗ C. 8

✗ D. 10

Q.65 The effort applied to move a load is 15 units and the machine advantage is observed to be 3. Find the load.

Ans

✗ A. 15 units

✓ B. 45 units

✗ C. 5 units

✗ D. 3 units

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Q.66 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. 5

✗ B. 2

✓ C. 8

✗ D. 4

Q.67 Identify the material having high coefficient of volume expansion.

Ans

✗ A. Brass

✗ B. Water

✓ C. Alcohol

✗ D. Glass

Q.68 If, '+' represents '×', '-' represents '+', '×' represents '÷' and '÷' represents '-', then find the value of the following expression.
$9 \times 3 + 6 \div 2 = ?$

Ans

✗ A. 12

✗ B. 20

✗ C. 10

✓ D. 16

Q.69 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. ₹11,000

✗ C. ₹10,800

✗ D. ₹10,200

Q.70 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 4 km west of E

✗ B. F is 4 km east of E

✓ C. F is 18 km east of E

✗ D. F is 18 km west of E

Q.71 Which Indian cricketer received the Padma Bhushan in 2018?

Ans

✗ A. Virat Kohli

✗ B. Sachin Tendulkar

✓ C. MS Dhoni

✗ D. Saurav Ganguly

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Q.72 Choose the figure that is different from the rest.

Ans

✗ A. 

✗ B. 

✗ C. 

✓ D. 

Q.73 Greater the value of _____ of a material, the more rapidly it will conduct heat.

Ans

✗ A. latent heat

✗ B. melting point

✓ C. thermal conductivity

✗ D. regelation

Q.74 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. 8 J

✓ C. 6 J

✗ D. 12 J

Q.75 In engineering drawing, the letters LH signifies _____.

Ans

✓ A. Left Hand

✗ B. Level Hide

✗ C. Limit of Height

✗ D. Low Heat

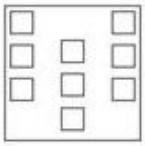
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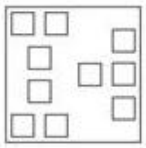
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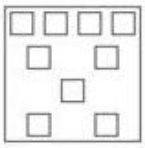
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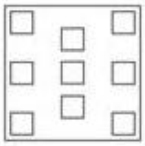
Q.76 Choose the figure that is different from the rest.

Ans

✗ A. 

✓ B. 

✗ C. 

✗ D. 

Q.77 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. 9.6 minutes

✗ B. 8.6 minutes

✗ C. 9 minutes

✗ D. 9.4 minutes

Q.78 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. 1.5 A

✗ B. 0.5 A

✗ C. 3.5 A

✗ D. 2.5 A

Q.79 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. OXXXXX

✗ D. OOXXXXX

Q.80 A car covers 400 m in 20 seconds. Find the average speed (in km/hr) of the car.

Ans

✓ A. 72

✗ B. 124

✗ C. 108

✗ D. 36

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Q.81 The abbreviation AC in an engineering drawing stands for _____.

Ans

✔ A. Across Corners

✘ B. Attached Circle

✘ C. Air Conditioning

✘ D. Aerial Cut

Q.82 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. V/it

✘ C. Vi/t

✔ D. Vit

Q.83 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. Venus

✘ B. Sun

✔ C. Moon

✘ D. Mercury

Q.84 What is 80% of 50% of 90?

Ans

✘ A. 30

✔ B. 36

✘ C. 32

✘ D. 34

Q.85 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. $\frac{1}{L \times Ld}$

✘ C. $\frac{Ld}{L}$

✘ D. $\frac{L}{Ld}$

Q.86 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. 44

✘ B. 40

✘ C. 48

✘ D. 36

Q.87 Name the scientist who discovered bacteria.

Ans

✘ A. Robert Koch

✔ B. AV Leeuwenhoek

✘ C. Eugen Goldstein

✘ D. James Chadwick

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Q.88 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

Q.89 Find the odd group of letters from the given alternatives.

Ans
- ✘ A. VWX
- ✘ B. EFG
- ✘ C. PQR
- ✔ D. HJL

Q.90 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. 6000 J
- ✘ C. 270 J
- ✘ D. 27 J

Q.91 Name the painter of the famous painting, 'Mahishasura'.

Ans
- ✘ A. Raja Ravi Verma
- ✘ B. MF Hussain
- ✔ C. Tyeb Mehta
- ✘ D. Amrita Sher-Gil

Q.92 JPEG stands for _____.

Ans
- ✔ A. Joint Photographic Experts Group
- ✘ B. Joint Program Executing Group
- ✘ C. Joint Program Experimental Group
- ✘ D. Joint Program Experts Group

Q.93 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.94 In angular measurements, one radian is equivalent to _____ degrees (approximately).

Ans
- ✘ A. 65.27
- ✘ B. 90
- ✘ C. 180
- ✔ D. 57.27

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Q.95 The effort in a class 1 lever is in _____ direction(s).

Ans
- ✔ A. one
- ✘ B. two
- ✘ C. multiple
- ✘ D. three

Q.96 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. 18 W
- ✘ B. 10 W
- ✘ C. 14 W
- ✘ D. 16 W

Q.97 If the width of a standard engineering drawing sheet is 841 mm, then its length would be _____ mm.

Ans
- ✔ A. 1189
- ✘ B. 1216
- ✘ C. 1000
- ✘ D. 1250

Q.98 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. 27R
- ✘ B. 3R
- ✘ C. 9R
- ✘ D. R

Q.99 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. development
- ✔ B. projection
- ✘ C. dimensioning
- ✘ D. animation

Q.100 Which one of these is a harvest festival?

Ans
- ✘ A. Teej
- ✘ B. Deepawali
- ✔ C. Onam
- ✘ D. Janmashtami

Section : **Part B**

Q.101 In a capacitor start single-phase motor, the motor will continue to run in same direction if the capacitor is replaced by a:

Ans
- ✘ A. inductor
- ✘ B. resistor and capacitor
- ✔ C. resistor
- ✘ D. resistor and inductor

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Q.102 PIV in a full-wave rectifier is:

Ans
- ✗ A. $V_m/\sqrt{2}$
- ✗ B. V_m
- ✗ C. $V_m/2$
- ✓ D. $2V_m$

Q.103 Which of the following material is NOT used as fuse wire?

Ans
- ✗ A. Aluminium
- ✗ B. Silver
- ✓ C. Paper
- ✗ D. Copper

Q.104 Which of the following protects a cable against mechanical injury?

Ans
- ✗ A. Core
- ✗ B. Bedding
- ✓ C. Armouring
- ✗ D. Sheath

Q.105 Choppers are _____ converters.

Ans
- ✗ A. AC to DC
- ✗ B. DC to AC
- ✗ C. AC to AC
- ✓ D. DC to DC

Q.106 The average power dissipated in a pure inductor is:

Ans
- ✗ A. proportional to value of inductance
- ✗ B. infinite
- ✓ C. zero
- ✗ D. proportional to applied voltage

Q.107 For the maximum efficiency of a transformer:

Ans
- ✓ A. copper loss should be equal to iron loss
- ✗ B. copper loss should be greater than iron loss
- ✗ C. copper loss should be less than iron loss
- ✗ D. copper loss should be zero

Q.108 Which of the following is NOT a trivalent impurity?

Ans
- ✓ A. Phosphorus
- ✗ B. Gallium
- ✗ C. Boron
- ✗ D. Indium

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Q.109 Hysteresis loss can be minimized by selecting a material for the core that has:

Ans

✔ A. low hysteresis coefficient

✘ B. low transmission coefficient

✘ C. unit hysteresis coefficient

✘ D. high hysteresis coefficient

Q.110 The ripple factor for a full-wave rectifier with capacitor is given by:

Ans

✘ A. $r = \frac{1}{4\sqrt{3}fR_L}$

✘ B. $r = \frac{1}{2\sqrt{3}fR_LC}$

✔ C. $r = \frac{1}{4\sqrt{3}fR_LC}$

✘ D. $r = \frac{1}{\sqrt{3}fR_LC}$

Q.111 In an electrical machine, the core is laminated to reduce:

Ans

✘ A. copper loss

✘ B. friction loss

✘ C. hysteresis loss

✔ D. eddy current loss

Q.112 In an induction motor, as the air gap increases:

Ans

✘ A. speed of motor will increase

✘ B. windage losses will increase

✘ C. speed of motor will decrease

✔ D. power factor will decrease

Q.113 Iron loss of a transformer can be measured by:

Ans

✘ A. unity power factor watt meter

✘ B. any type of watt meter

✘ C. frequency meter

✔ D. low power factor watt meter

Q.114 Which of the following device is bidirectional?

Ans

✔ A. TRIAC

✘ B. BJT

✘ C. SCR

✘ D. GTO

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Q.115 Which of the following motor is self-starting?

Ans

✗ A. Low horse power motor

✗ B. Single-phase induction motor

✗ C. Variable speed motor

✓ D. Three-phase induction motor

Q.116 In a current transformer, the number of primary turns is always:

Ans

✗ A. zero

✗ B. greater than the number of secondary turns

✓ C. less than the number of secondary turns

✗ D. equals the number of secondary turns

Q.117 Conduit elbows are usually located at:

Ans

✗ A. straight runs

✗ B. the tappings of the connection

✓ C. sharp ends

✗ D. away from walls

Q.118 Overheating of DC motors is mainly due to:

Ans

✗ A. rough commutator

✗ B. loose parts

✗ C. absence of brushes

✓ D. overloads

Q.119 For transmission and distribution of electric power, which one of the following material is NOT used?

Ans

✗ A. Copper

✗ B. Steel

✗ C. Aluminium

✓ D. Tungsten

Q.120 The input power of an electric heater that draws 10 A at 230 V supply source is:

Ans

✓ A. 0 W

✗ B. 23 W

✗ C. 230 W

✗ D. 2300 W

Q.121 If a resistance of 10 ohms and a capacitance of 1 μF is connected across a 230 V, 50 Hz AC supply, the capacitive reactance of the circuit is:

Ans

✓ A. 0.0318Ω

✗ B. 31.83Ω

✗ C. 3183Ω

✗ D. 3.183Ω

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Q.122 The ripple factor for a half-wave rectifier with capacitor is given by:

Ans

✗ A. $r = \frac{1}{4\sqrt{3}fR_L}$

✗ B. $r = \frac{1}{4\sqrt{3}fR_LC}$

✗ C. $r = \frac{1}{\sqrt{3}fR_LC}$

✓ D. $r = \frac{1}{2\sqrt{3}fR_LC}$

Q.123 In actual practice, the rating of transformer is specified in:

Ans

✓ A. KVA

✗ B. KW

✗ C. KA

✗ D. KVAR

Q.124 Which of the following is a valid grade for which electric cables are commercially manufactured?

Ans

✗ A. 50/100V

✗ B. 270/300V

✗ C. 100/200V

✓ D. 230/400V

Q.125 A 3-point starter is used to:

Ans

✓ A. minimize armature current

✗ B. minimize back emf

✗ C. maximize armature current

✗ D. maximize back emf

Q.126 Power transmission for long distance is carried out at:

Ans

✗ A. high current

✓ B. high voltage

✗ C. low voltage

✗ D. low current

Q.127 In the case of direct current:

Ans

✗ A. magnitude of current changes with time

✗ B. magnitude of current remains constant

✗ C. magnitude and direction of current changes with time

✓ D. magnitude and direction of current remains constant

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Q.128 Three identical resistors are first connected in a star and then in a delta configuration. The ratio of power consumption in the first combination to the second will be:

Ans

✗ A. 1

✗ B. $1/\sqrt{3}$

✗ C. 3

✓ D. 1/3

Q.129 In a series R-C circuit, the AC current is:

Ans

✓ A. leading the applied voltage

✗ B. in phase with the applied voltage

✗ C. lagging behind the applied voltage

✗ D. out of phase with applied voltage

Q.130 The unit of sensitivity of an instrument is:

Ans

✗ A. volt-amp

✗ B. ampere/sec

✗ C. volt/ohm

✓ D. ohm/volt

Q.131 The resistance of an ideal voltmeter is:

Ans

✗ A. very large

✗ B. zero

✗ C. very low

✓ D. infinite

Q.132 A DC generator works on the principle of:

Ans

✗ A. Ampere's law

✗ B. Lenz's law

✗ C. Steinmetz's law

✓ D. Faraday's law

Q.133 If the voltage drop across individual resistors R_1, R_2 and R_3 connected to a battery are 10 V, 20 V and 30 V respectively, then the total battery voltage is:

Ans

✗ A. 30 V

✗ B. zero

✓ C. 60 V

✗ D. 20 V

Q.134 Which of the following two losses are together called core loss?

Ans

✓ A. Eddy current loss and hysteresis loss

✗ B. Copper loss and hysteresis loss

✗ C. Primary copper loss and secondary copper loss

✗ D. Connector loss and transmission loss

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Q.135 The function of inverter in an UPS is to:

Ans
- ✔ A. convert AC to AC
- ✘ B. convert DC to AC
- ✘ C. convert DC to DC
- ✘ D. convert AC to DC

Q.136 Three-point starter can be used for:

Ans
- ✘ A. both series and compound motor
- ✘ B. shunt motor only
- ✘ C. series motor only
- ✔ D. both shunt and compound motor

Q.137 For switching applications, a transistor needs to be biased to operate in which of the following regions?

Ans
- ✘ A. Inverse active region
- ✘ B. Active region
- ✔ C. Saturation or cut-off region
- ✘ D. Active or inverse active region

Q.138 A circuit in which resistances are connected end to end so that there is only one path for current to flow is called a _____.

Ans
- ✘ A. neither series nor parallel circuit
- ✘ B. series-parallel circuit
- ✔ C. series circuit
- ✘ D. parallel circuit

Q.139 In the _____ region, a transistor act as a closed switch.

Ans
- ✘ A. cut-off region
- ✘ B. active region
- ✘ C. inverse active region
- ✔ D. saturation

Q.140 In lap winding, the number of parallel paths are always:

Ans
- ✘ A. two
- ✘ B. double the number of poles
- ✔ C. same as the number of poles
- ✘ D. half the number of poles

Q.141 Among the following, which feature is best suited for insulating materials?

Ans
- ✔ A. Low mechanical strength
- ✘ B. Low melting point
- ✘ C. High dielectric strength
- ✘ D. Good current conductivity

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Q.142 From the following parameters, which parameter's variation will not affect the capacitance of the capacitor?

Ans

✗ A. Distance between the plates

✗ B. Nature of the dielectric

✓ C. Thickness of the plates

✗ D. Area of the plates

Q.143 Three resistances of 2 ohms, 3 ohms and 6 ohms are connected in parallel. the total resistance of the combination is:

Ans

✗ A. 36 ohm

✗ B. 3 ohm

✗ C. 11 ohm

✓ D. 1 ohm

Q.144 Among the following, which method is NOT preferred to measure low resistances?

Ans

✗ A. Megohm bridge

✗ B. Kelvin bridge method

✓ C. Ammeter-voltmeter method

✗ D. Potentiometer method

Q.145 Conductance is defined as reciprocal of:

Ans

✗ A. capacitance

✗ B. inductance

✓ C. resistance

✗ D. susceptance

Q.146 UJT is used for which of the following applications?

Ans

✗ A. Rectification

✓ B. Sawtooth waveform generation

✗ C. Attenuation

✗ D. Amplification

Q.147 In a Fleming's right-hand rule, the thumb indicates the:

Ans

✗ A. direction of induced voltage

✗ B. direction of current flow

✓ C. direction of motion of conductor

✗ D. direction of magnetic field

Q.148 In portable drills, which of the following motor is used?

Ans

✗ A. Hysteresis motor

✗ B. Capacitor run motor

✗ C. Repulsion motor

✓ D. Universal motor

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Q.149 In which type of power amplifier does the output current flow for the entire cycle of input signal?

Ans

✗ A. Class C

✗ B. Class B

✗ C. Class AB

✓ D. Class A

Q.150 A feeder in a transmission system feeds power to:

Ans

✗ A. generating station

✗ B. service main

✓ C. distributors

✗ D. generator and distributor

Q.151 The complement of (A.B) is:

Ans

✗ A. A.B

✗ B. complement of A . complement of B

✓ C. complement of A + complement of B

✗ D. A + B

Q.152 The order in which the voltages in the phases reach their maximum positive value is called the _____.

Ans

✗ A. phase voltage

✓ B. phase sequence

✗ C. line voltage

✗ D. phase current

Q.153 For an ideal transformer, if $I_2/I_1 = 2$ and $E_2 = 100$, E_1 will be:

Ans

✗ A. 50

✗ B. 100

✓ C. 200

✗ D. 25

Q.154 If a 4-pole induction motor has a speed of 1800rpm, then the frequency at which the motor is operating is:

Ans

✗ A. 50Hz

✓ B. 60Hz

✗ C. 30Hz

✗ D. 40Hz

Q.155 Which among the following, remains same in a series circuit?

Ans

✗ A. Power

✗ B. Resistance

✓ C. Current

✗ D. Voltage

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Q.156 Which one of the following materials is usually used for the construction of transformer core?

Ans
- ✔ A. Silicon steel
- ✘ B. Copper
- ✘ C. Brass
- ✘ D. Aluminium

Q.157 Among the following, which material is a good conductor of electricity?

Ans
- ✘ A. Silver
- ✔ B. Rubber
- ✘ C. Glass
- ✘ D. Bakelite

Q.158 A transformer transfers which of the following parameters?

Ans
- ✘ A. Voltage
- ✘ B. Current
- ✘ C. Frequency
- ✔ D. Power

Q.159 An SCR consists of:

Ans
- ✘ A. two PN junction
- ✘ B. no PN junction
- ✔ C. three PN junction
- ✘ D. one PN junction

Q.160 A three-phase power system with three voltages E_A, E_B and E_C have an equal magnitude and are displaced at _____ from each other.

Ans
- ✘ A. 180°
- ✘ B. 120°
- ✔ C. 90°
- ✘ D. 100°

Q.161 In the _____ region, a transistor act as an open switch.

Ans
- ✘ A. active region
- ✔ B. cut-off region
- ✘ C. saturation
- ✘ D. inverse active region

Q.162 Which one of the following motors is identical to an induction motor?

Ans
- ✘ A. DC compound motor
- ✘ B. Synchronous motor
- ✘ C. DC series motor
- ✔ D. Asynchronous motor

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Q.163 In a DC shunt motor, the torque produced is proportional to:

Ans

✗ A. $(\text{ampere-turn})^2$

✗ B. ampere-turn

✓ C. armature current

✗ D. $(\text{armature current})^2$

Q.164 Copper loss is negligible at _____.

Ans

✗ A. half load

✗ B. ¼ load

✓ C. no load

✗ D. full load

Q.165 What is the surge resistance of cable?

Ans

✗ A. 20 Ω

✗ B. 5 Ω

✗ C. 10 Ω

✓ D. 50 Ω

Q.166 The most commonly used method for cooling power transformers is:

Ans

✓ A. air blast cooling

✗ B. oil cooling

✗ C. natural air cooling

✗ D. gas cooling

Q.167 For amplifier applications, a transistor needs to be biased to operate in which of the following regions?

Ans

✗ A. Cut-off region

✗ B. Saturation region

✓ C. Active region

✗ D. Depletion region

Q.168 The form factor of an AC wave is defined as the ratio of:

Ans

✓ A. RMS value to average value

✗ B. peak value to average value

✗ C. RMS value to instantaneous value

✗ D. peak value to instantaneous value

Q.169 The expression for inductive reactance (X_L) of an AC circuit is:

Ans

✗ A. $\frac{1}{2\pi fL}$

✗ B. $2\pi f$

✓ C. $2\pi fL$

✗ D. $2\pi L$

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Q.170 Three Identical bulbs are connected in series and these together dissipate power 'M'. If now the bulbs are connected in parallel, then the power dissipated will be:

Ans

✗ A. M/3

✗ B. 3M

✓ C. 9M

✗ D. M/9

Q.171 In a balanced three-phase star connected system, if the line current is 30 A, then its phase current is:

Ans

✗ A. 17.3 A

✗ B. 51.9 A

✗ C. 15 A

✓ D. 30 A

Q.172 Hysteresis loss is given by:

Ans

✗ A. $W_e = KB_{max}^2 f^2 t^2$ W

✗ B. $W_{cu} = (I_1^2 R_1 + I_2^2 R_2)$ W

✓ C. $W_h = \eta B_{max}^{1.6} fV$ W

✗ D. $W_{cu} = (I_1^2 R_1)$ W

Q.173 The loss that takes place due to winding resistance is called _____.

Ans

✗ A. hysteresis loss

✗ B. eddy current loss

✗ C. iron loss

✓ D. copper loss

Q.174 Power consumed in a series RLC circuit can be calculated using:

Ans

✗ A. $P = VI \cos \phi$

✗ B. $P = VI$

✓ C. $P = IR \cos \phi$

✗ D. $P = IR$

Q.175 The characteristics of patterns that appear on a CRT screen when sinusoidal voltages are simultaneously applied to horizontal and vertical plates are called _____.

Ans

✓ A. Lissajous patterns

✗ B. colour patterns

✗ C. phase patterns

✗ D. eye patterns

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