RAILWAY RECRUITMENT BOARDS
रेलवे भर्ती बोर्ड

RRB ALP 2018 CBT-2 Electrician

Assistant Loco Pilot & Technicians · CEN 01/2018 · CBT-2 (21-23 Jan 2019) · Trade: Electrician · Question Paper

English

Complete Paper · 175 Questions · Official Answer Key

About this Compilation

This booklet contains the complete question paper of the **RRB ALP 2018 CBT-2 Electrician** examination in **English**, with the correct option marked as per the official answer key.

✓ Correct option (highlighted green)

Source. Original images of the official RRB response sheets (no retyping). Paper = Part A 100 (Maths, Reasoning, Basic Science & Engineering, Current Affairs) + Part B 75 (trade).

Not in this edition (less than half saved in English; see the Hindi edition): 22 Jan 12:30 PM; 22 Jan 4:30 PM; 22 Jan 8:30 AM; 23 Jan 12:30 PM; 23 Jan 8:30 AM.

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.

More from QMaths

Check your marks, normalized score and zone-wise rank free at **rank.qmaths.in**. Master English vocabulary with the **Blackbook** app.



Toppers' Choice, Blackbook of English Vocabulary, Now available in App format : DOWNLOAD NOW

Index — All Sets (click to open)

Set 1
23 Jan 2019
4:30 PM - 7:00 PM

Part A 100 Questions • Answer Key

Q1 Part A

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

A. $34^{\circ}C$

B. $30^{\circ}C$ ✓

C. $10^{\circ}C$

D. $20^{\circ}C$

Q2 Part A

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:

A. 8%

B. 7% ✓

C. 6%

D. 1%

Q3 Part A

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

A. 895

B. 850

C. 880

D. 900 ✓

Q4 Part A

Molar specific heat capacity of a substance is _____.

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

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q5 Part A

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

A. reusable

B. non-biodegradable

C. non-reusable

D. biodegradable ✓

Q6 Part A

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

A. $\frac{17}{15}$

B. $\frac{8}{17}$

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

D. $\frac{8}{15}$ ✓

Q7 Part A

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

A. velocity

B. acceleration

C. position ✓

D. pressure

Q8 Part A

Where is the Headquarters of UNESCO located?

A. New York City

B. Washington DC

C. Geneva

D. Paris ✓

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q9 Part A

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

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

Q10 Part A

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

A. 4

B. 3

C. 2 ✓

D. 5

Q11 Part A

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

A. 9

B. 8 ✓

C. 7

D. 10

Q12 Part A

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

A. 125

B. 136

C. 175

D. 150 ✓

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q13 Part A

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.

A. Only conclusion II follows ✓
B. Neither I nor II follows
C. Both I and II follow
D. Only conclusion I follows

Q14 Part A

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

A. 210 ✓
B. 215
C. 214
D. 220

Q15 Part A

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

A. datum ✓
B. flange
C. section
D. frame

Q16 Part A

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_____.

A. (2/15) A
B. (8/15) A
C. (6/15) A
D. (4/15) A ✓

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q17 Part A

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

A. Frequency ✓

B. Luminous intensity

C. Electric current

D. Amount of substance

Q18 Part A

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?

A. Only L

B. L and I

C. K and L ✓

D. Only K

Q19 Part A

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

A. more than X

B. equal to X

C. less than X ✓

D. zero

Q20 Part A

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?

A. 6 minutes

B. $\frac{21}{4}$ minutes

C. $\frac{20}{3}$ minutes ✓

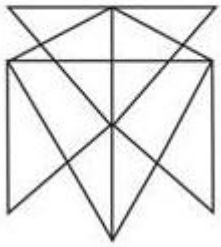
D. 7 minutes

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q21 Part A

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



A. 10

B. 9

C. 11 ✓

D. 12

Q22 Part A

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 : ?

A. -2/13 ✓

B. 3/7

C. -7/3

D. 2/13

Q23 Part A

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

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

A. × and -

B. + and - ✓

C. ÷ and -

D. + and ×

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q24 Part A

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

A. load; effort

B. effort; effort

C. load; load

D. effort; load ✓

Q25 Part A

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

A. head

B. ear

C. feet ✓

D. eye

Q26 Part A

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 ___.

A. R/2

B. 2R ✓

C. R

D. 4R

Q27 Part A

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

A. 2.505

B. 25.05 ✓

C. 250.5

D. 0.2505

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q28 Part A

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

A. velocity

B. time squared ✓

C. time

D. work

Q29 Part A

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?

A. 10.71 days

B. 10.67 days

C. 10.91 days

D. 9.23 days ✓

Q30 Part A

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 : ?

A. Smile

B. Sad ✓

C. Happy

D. Emotion

Q31 Part A

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

A. 308 cm^2 ✓

B. 924 cm^2

C. 154 cm^2

D. 616 cm^2

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q32 Part A

RK Narayan is famous for his book _____.

A. Two Lives

B. Malgudi Days ✓

C. A Suitable Boy

D. The Toom on the Roof

Q33 Part A

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

A. 100 ✓

B. 300

C. 400

D. 200

Q34 Part A

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.

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.

Q35 Part A

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

A. 65

B. 68

C. 66

D. 67 ✓

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q36 Part A

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

A. - 6 ✓

B. - 4

C. - 2

D. - 8

Q37 Part A

Who was the first governor of the Reserve Bank of India?

A. Sir James Braid Taylor

B. Sir Osborne A Smith ✓

C. HVR Iyengar

D. KR Puri

Q38 Part A

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

A. $\sqrt{24}$

B. 6

C. $\sqrt{26}$ ✓

D. 5

Q39 Part A

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

A. (-6, -2)

B. (2, -6) ✓

C. (2, 6)

D. (-2, 6)

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q40 Part A

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.

A. 5 V

B. 20 V

C. 15 V

D. 10 V ✓

Q41 Part A

$\sec 45° - \tan 60° = ?$

A. $\sqrt{3} + \sqrt{2}$

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

C. $-\sqrt{3} - \sqrt{2}$

D. $-\sqrt{3} + \sqrt{2}$ ✓

Q42 Part A

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

A. is zero

B. decreases ✓

C. remains constant

D. increases

Q43 Part A

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.

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

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q44 Part A

Kuchipudi has its roots in which Indian State?

A. Himachal Pradesh

B. Andhra Pradesh ✓

C. Kerala

D. Arunachal Pradesh

Q45 Part A

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

A. ERTIG

B. ILNO

C. FLOW

D. WCO ✓

Q46 Part A

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?

A. I - J + F * H ✓

B. I * J - F + H

C. I + J - F * H

D. I - J * F + H

Q47 Part A

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?

A. ₹4,000

B. ₹4,750

C. ₹5,000 ✓

D. ₹4,250

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q48 Part A

Identify the material having low coefficient of volume expansion

A. Aluminium

B. Iron ✓

C. Brass

D. Mercury

Q49 Part A

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.

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 ✓

Q50 Part A

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?

A. 8 km west

B. 4 km west

C. 4 km east

D. 8 km east ✓

Q51 Part A

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

A. Eye

B. Head

C. Foot

D. Hearing ✓

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q52 Part A

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

A. malware ✓

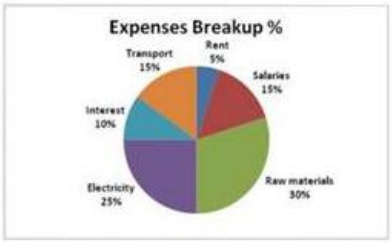
B. server

C. LAN

D. operating system

Q53 Part A

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?

A. ₹1,800

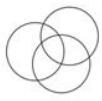
B. ₹5,000

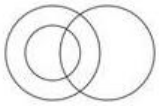
C. ₹2,500 ✓

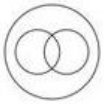
D. ₹9,000

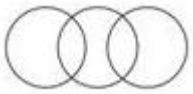
Q54 Part A

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

A.  ✓

B. 

C. 

D. 

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q55 Part A

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

A. air

B. liquids

C. water ✓

D. mercury

Q56 Part A

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?

A. Z is daughter of W

B. Z is mother of W

C. Z is father of W ✓

D. Z is wife of W

Q57 Part A

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_____.

A. 2.4 m/s

B. 3.6 m/s

C. 8.8 m/s

D. 7.2 m/s ✓

Q58 Part A

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 _____.

A. 4.36 kJ/s ✓

B. 2.32 kJ/s

C. 5.80 kJ/s

D. 3.42 kJ/s

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q59 Part A

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%?

A. ₹1,960

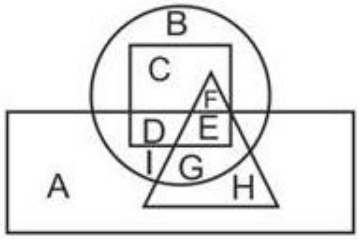
B. ₹2,040

C. ₹1,920

D. ₹2,000 ✓

Q60 Part A

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?



A. DEIG

B. GEF ✓

C. DEF

D. IGH

Q61 Part A

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

A. 6

B. 7

C. 3

D. 8 ✓

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q62 Part A

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

A. Buddhist ✓

B. Maratha

C. Arabic

D. Islamic

Q63 Part A

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)?

A. 6

B. 3

C. 7.5

D. 9 ✓

Q64 Part A

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?

A. 9

B. 11 ✓

C. 8

D. 10

Q65 Part A

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

A. 15 units

B. 45 units ✓

C. 5 units

D. 3 units

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q66 Part A

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'.

A. 5

B. 2

C. 8 ✓

D. 4

Q67 Part A

Identify the material having high coefficient of volume expansion.

A. Brass

B. Water

C. Alcohol ✓

D. Glass

Q68 Part A

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

A. 12

B. 20

C. 10

D. 16 ✓

Q69 Part A

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?

A. ₹10,000 ✓

B. ₹11,000

C. ₹10,800

D. ₹10,200

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q70 Part A

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?

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

Q71 Part A

Which Indian cricketer received the Padma Bhushan in 2018?

A. Virat Kohli

B. Sachin Tendulkar

C. MS Dhoni ✓

D. Saurav Ganguly

Q72 Part A

Choose the figure that is different from the rest.

A. 

B. 

C. 

D.  ✓

Q73 Part A

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

A. latent heat

B. melting point

C. thermal conductivity ✓

D. regelation

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q74 Part A

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?

A. 10 J

B. 8 J

C. 6 J ✓

D. 12 J

Q75 Part A

In engineering drawing, the letters LH signifies _____.

A. Left Hand ✓

B. Level Hide

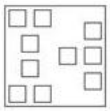
C. Limit of Height

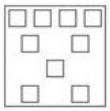
D. Low Heat

Q76 Part A

Choose the figure that is different from the rest.

A. 

B.  ✓

C. 

D. 

Q77 Part A

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?

A. 9.6 minutes ✓

B. 8.6 minutes

C. 9 minutes

D. 9.4 minutes

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q78 Part A

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.

A. 1.5 A ✓

B. 0.5 A

C. 3.5 A

D. 2.5 A

Q79 Part A

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, ?

A. OOXXXX

B. XXXXXX

C. OXXXXX ✓

D. OOXXXXX

Q80 Part A

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

A. 72 ✓

B. 124

C. 108

D. 36

Q81 Part A

The abbreviation AC in an engineering drawing stands for _____.

A. Across Corners ✓

B. Attached Circle

C. Air Conditioning

D. Aerial Cut

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q82 Part A

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 _____.

A. 1/Vit

B. V/it

C. Vi/t

D. Vit ✓

Q83 Part A

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.

A. Venus

B. Sun

C. Moon ✓

D. Mercury

Q84 Part A

What is 80% of 50% of 90?

A. 30

B. 36 ✓

C. 32

D. 34

Q85 Part A

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

A. $L \times Ld$ ✓

B. $\frac{1}{L \times Ld}$

C. $\frac{Ld}{L}$

D. $\frac{L}{Ld}$

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q86 Part A

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?

A. 44 ✓

B. 40

C. 48

D. 36

Q87 Part A

Name the scientist who discovered bacteria.

A. Robert Koch

B. AV Leeuwenhoek ✓

C. Eugen Goldstein

D. James Chadwick

Q88 Part A

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?

A. 1 ✓

B. 5

C. 4

D. 2

Q89 Part A

Find the odd group of letters from the given alternatives.

A. VWX

B. EFG

C. PQR

D. HJL ✓

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q90 Part A

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 $Jkg^{-1}K^{-1}$)?

A. 2700 J ✓

B. 6000 J

C. 270 J

D. 27 J

Q91 Part A

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

A. Raja Ravi Verma

B. MF Hussain

C. Tyeb Mehta ✓

D. Amrita Sher-Gil

Q92 Part A

JPEG stands for _____.

A. Joint Photographic Experts Group ✓

B. Joint Program Executing Group

C. Joint Program Experimental Group

D. Joint Program Experts Group

Q93 Part A

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

A. 1.54

B. 1.68

C. 1.56 ✓

D. 1.62

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q94 Part A

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

A. 65.27

B. 90

C. 180

D. 57.27 ✓

Q95 Part A

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

A. one ✓

B. two

C. multiple

D. three

Q96 Part A

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.

A. 18 W ✓

B. 10 W

C. 14 W

D. 16 W

Q97 Part A

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

A. 1189 ✓

B. 1216

C. 1000

D. 1250

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q98 Part A

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_____.

- A. 27R ✓
- B. 3R
- C. 9R
- D. R

Q99 Part A

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.

- A. development
- B. projection ✓
- C. dimensioning
- D. animation

Q100 Part A

Which one of these is a harvest festival?

- A. Teej
- B. Deepawali
- C. Onam ✓
- D. Janmashtami

Part B (Electrician)

75 Questions • Answer Key

Q101 Part B (Electrician)

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

- A. inductor
- B. resistor and capacitor
- C. resistor ✓
- D. resistor and inductor

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q102 Part B (Electrician)

PIV in a full-wave rectifier is:

A. $V_m/\sqrt{2}$

B. V_m

C. $V_m/2$

D. $2V_m$ ✓

Q103 Part B (Electrician)

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

A. Aluminium

B. Silver

C. Paper ✓

D. Copper

Q104 Part B (Electrician)

Which of the following protects a cable against mechanical injury?

A. Core

B. Bedding

C. Armouring ✓

D. Sheath

Q105 Part B (Electrician)

Choppers are _____ converters.

A. AC to DC

B. DC to AC

C. AC to AC

D. DC to DC ✓

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q106 Part B (Electrician)

The average power dissipated in a pure inductor is:

A. proportional to value of inductance

B. infinite

C. zero ✓

D. proportional to applied voltage

Q107 Part B (Electrician)

For the maximum efficiency of a transformer:

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

Q108 Part B (Electrician)

Which of the following is NOT a trivalent impurity?

A. Phosphorus ✓

B. Gallium

C. Boron

D. Indium

Q109 Part B (Electrician)

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

A. low hysteresis coefficient ✓

B. low transmission coefficient

C. unit hysteresis coefficient

D. high hysteresis coefficient

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q110 Part B (Electrician)

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

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. $r = \frac{1}{\sqrt{3}fR_LC}$

Q111 Part B (Electrician)

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

A. copper loss

B. friction loss

C. hysteresis loss

D. eddy current loss ✓

Q112 Part B (Electrician)

In an induction motor, as the air gap increases:

A. speed of motor will increase

B. windage losses will increase

C. speed of motor will decrease

D. power factor will decrease ✓

Q113 Part B (Electrician)

Iron loss of a transformer can be measured by:

A. unity power factor watt meter

B. any type of watt meter

C. frequency meter

D. low power factor watt meter ✓

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q114 Part B (Electrician)

Which of the following device is bidirectional?

A. TRIAC ✓

B. BJT

C. SCR

D. GTO

Q115 Part B (Electrician)

Which of the following motor is self-starting?

A. Low horse power motor

B. Single-phase induction motor

C. Variable speed motor

D. Three-phase induction motor ✓

Q116 Part B (Electrician)

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

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

Q117 Part B (Electrician)

Conduit elbows are usually located at:

A. straight runs

B. the tappings of the connection

C. sharp ends ✓

D. away from walls

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q118 Part B (Electrician)

Overheating of DC motors is mainly due to:

A. rough commutator

B. loose parts

C. absence of brushes

D. overloads ✓

Q119 Part B (Electrician)

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

A. Copper

B. Steel

C. Aluminium

D. Tungsten ✓

Q120 Part B (Electrician)

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

A. 0 W ✓

B. 23 W

C. 230 W

D. 2300 W

Q121 Part B (Electrician)

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:

A. 0.0318Ω ✓

B. 31.83Ω

C. 3183Ω

D. 3.183Ω

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q122 Part B (Electrician)

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

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. $r = \frac{1}{2\sqrt{3}fR_LC}$ ✓

Q123 Part B (Electrician)

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

A. KVA ✓

B. KW

C. KA

D. KVAR

Q124 Part B (Electrician)

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

A. 50/100V

B. 270/300V

C. 100/200V

D. 230/400V ✓

Q125 Part B (Electrician)

A 3-point starter is used to:

A. minimize armature current ✓

B. minimize back emf

C. maximize armature current

D. maximize back emf

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q126 Part B (Electrician)

Power transmission for long distance is carried out at:

A. high current

B. high voltage ✓

C. low voltage

D. low current

Q127 Part B (Electrician)

In the case of direct current:

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 ✓

Q128 Part B (Electrician)

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:

A. 1

B. $1/\sqrt{3}$

C. 3

D. 1/3 ✓

Q129 Part B (Electrician)

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

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

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q130 Part B (Electrician)

The unit of sensitivity of an instrument is:

A. volt-amp

B. ampere/sec

C. volt/ohm

D. ohm/volt ✓

Q131 Part B (Electrician)

The resistance of an ideal voltmeter is:

A. very large

B. zero

C. very low

D. infinite ✓

Q132 Part B (Electrician)

A DC generator works on the principle of:

A. Ampere's law

B. Lenz's law

C. Steinmetz's law

D. Faraday's law ✓

Q133 Part B (Electrician)

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:

A. 30 V

B. zero

C. 60 V ✓

D. 20 V

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q134 Part B (Electrician)

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

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

Q135 Part B (Electrician)

The function of inverter in an UPS is to:

A. convert AC to AC ✓

B. convert DC to AC

C. convert DC to DC

D. convert AC to DC

Q136 Part B (Electrician)

Three-point starter can be used for:

A. both series and compound motor

B. shunt motor only

C. series motor only

D. both shunt and compound motor ✓

Q137 Part B (Electrician)

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

A. Inverse active region

B. Active region

C. Saturation or cut-off region ✓

D. Active or inverse active region

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q138 Part B (Electrician)

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

A. neither series nor parallel circuit

B. series-parallel circuit

C. series circuit ✓

D. parallel circuit

Q139 Part B (Electrician)

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

A. cut-off region

B. active region

C. inverse active region

D. saturation ✓

Q140 Part B (Electrician)

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

A. two

B. double the number of poles

C. same as the number of poles ✓

D. half the number of poles

Q141 Part B (Electrician)

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

A. Low mechanical strength ✓

B. Low melting point

C. High dielectric strength

D. Good current conductivity

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q142 Part B (Electrician)

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

A. Distance between the plates

B. Nature of the dielectric

C. Thickness of the plates ✓

D. Area of the plates

Q143 Part B (Electrician)

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

A. 36 ohm

B. 3 ohm

C. 11 ohm

D. 1 ohm ✓

Q144 Part B (Electrician)

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

A. Megohm bridge

B. Kelvin bridge method

C. Ammeter-voltmeter method ✓

D. Potentiometer method

Q145 Part B (Electrician)

Conductance is defined as reciprocal of:

A. capacitance

B. inductance

C. resistance ✓

D. susceptance

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q146 Part B (Electrician)

UJT is used for which of the following applications?

A. Rectification

B. Sawtooth waveform generation ✓

C. Attenuation

D. Amplification

Q147 Part B (Electrician)

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

A. direction of induced voltage

B. direction of current flow

C. direction of motion of conductor ✓

D. direction of magnetic field

Q148 Part B (Electrician)

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

A. Hysteresis motor

B. Capacitor run motor

C. Repulsion motor

D. Universal motor ✓

Q149 Part B (Electrician)

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

A. Class C

B. Class B

C. Class AB

D. Class A ✓

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q150 Part B (Electrician)

A feeder in a transmission system feeds power to:

A. generating station

B. service main

C. distributors ✓

D. generator and distributor

Q151 Part B (Electrician)

The complement of (A.B) is:

A. A.B

B. complement of A . complement of B

C. complement of A + complement of B ✓

D. A + B

Q152 Part B (Electrician)

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

A. phase voltage

B. phase sequence ✓

C. line voltage

D. phase current

Q153 Part B (Electrician)

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

A. 50

B. 100

C. 200 ✓

D. 25

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q154 Part B (Electrician)

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

A. 50Hz

B. 60Hz ✓

C. 30Hz

D. 40Hz

Q155 Part B (Electrician)

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

A. Power

B. Resistance

C. Current ✓

D. Voltage

Q156 Part B (Electrician)

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

A. Silicon steel ✓

B. Copper

C. Brass

D. Aluminium

Q157 Part B (Electrician)

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

A. Silver

B. Rubber ✓

C. Glass

D. Bakelite

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q158 Part B (Electrician)

A transformer transfers which of the following parameters?

A. Voltage

B. Current

C. Frequency

D. Power ✓

Q159 Part B (Electrician)

An SCR consists of:

A. two PN junction

B. no PN junction

C. three PN junction ✓

D. one PN junction

Q160 Part B (Electrician)

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.

A. 180°

B. 120°

C. 90° ✓

D. 100°

Q161 Part B (Electrician)

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

A. active region

B. cut-off region ✓

C. saturation

D. inverse active region

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q162 Part B (Electrician)

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

A. DC compound motor

B. Synchronous motor

C. DC series motor

D. Asynchronous motor ✓

Q163 Part B (Electrician)

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

A. $(\text{ampere-turn})^2$

B. ampere-turn

C. armature current ✓

D. $(\text{armature current})^2$

Q164 Part B (Electrician)

Copper loss is negligible at _____.

A. half load

B. ¼ load

C. no load ✓

D. full load

Q165 Part B (Electrician)

What is the surge resistance of cable?

A. 20 Ω

B. 5 Ω

C. 10 Ω

D. 50 Ω ✓

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q166 Part B (Electrician)

The most commonly used method for cooling power transformers is:

- A. air blast cooling ✓
- B. oil cooling
- C. natural air cooling
- D. gas cooling

Q167 Part B (Electrician)

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

- A. Cut-off region
- B. Saturation region
- C. Active region ✓
- D. Depletion region

Q168 Part B (Electrician)

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

- A. RMS value to average value ✓
- B. peak value to average value
- C. RMS value to instantaneous value
- D. peak value to instantaneous value

Q169 Part B (Electrician)

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

- A. $\frac{1}{2\pi fL}$
- B. $2\pi f$
- C. $2\pi fL$ ✓
- D. $2\pi L$

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q170 Part B (Electrician)

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:

A. M/3

B. 3M

C. 9M ✓

D. M/9

Q171 Part B (Electrician)

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

A. 17.3 A

B. 51.9 A

C. 15 A

D. 30 A ✓

Q172 Part B (Electrician)

Hysteresis loss is given by:

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

Q173 Part B (Electrician)

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

A. hysteresis loss

B. eddy current loss

C. iron loss

D. copper loss ✓

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in

Q174 Part B (Electrician)

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

A. $P = VI \cos \phi$

B. $P = VI$

C. $P = IR \cos \phi$ ✓

D. $P = IR$

Q175 Part B (Electrician)

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

A. Lissajous patterns ✓

B. colour patterns

C. phase patterns

D. eye patterns

Blackbook Vocabulary — Now in the App! ▶ Download Now on Google Play

generated by rank.qmaths.in