



RRB JE 26th May 2019 Shift-3

All rights reserved. No part of this publication may be reproduced, distributed, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, or stored in any retrieval system of any nature without the permission of cracku.in, application for which shall be made to support@cracku.in

RRB JE 26th May 2019 Shift-3

Instructions

For the following questions answer them individually

Question 1

Why does dispersion occur when white light which is a mixture of seven colours passes through a glass prism?

- A The white light scatters the 7 colours throughout the prism
- B 7 colours are refracted at same speed.
- C 7 colours of white light travels at different
- D 7 colours are reflected by prism

Answer: C

RRB NTPC Free Mock Tests

Question 2

Which of the following fuels is NOT used in thermal power plants?

- A Uranium
- B Natural Gas
- C Coal
- D Fueloil

Answer: A

Question 3

Simplify: $1.2 - 0.12$

- A $\frac{9}{10}$
- B $\frac{11}{10}$
- C $\frac{11}{90}$
- D 1

Answer: B

Explanation:

Here, 1.2 and 0.12 are recurring decimals.

A recurring decimal is a number which keeps repeating forever after the decimal point

$$1.2 - 0.12 = 1.2222 - 0.1222 = 1.1000$$

$$1.1 = \frac{11}{10}$$

Question 4

What does the Ashoka's wheel in the Indian National Flag represent?

- A Wheel of prosperity
- B Wheel of the law of dharma
- C Wheel of peace
- D Wheel of authority

Answer: B

RRB JE Previous Papers (Download Pdf)

Question 5

Bronze is an alloy of

- A Zinc and iron
- B Iron and mercury
- C Copper and tin
- D Tin and zinc

Answer: C

Question 6

Who was the Governor General of India during the Sepoy Mutiny?

- A William Bentinck
- B Lord Canning
- C Warren Hastings
- D Robert Clive

Answer: B

Question 7

Read the following information carefully and answer the question given below.

Eight friends—P, Q, R, S, T, U, V and W are sitting around a circular table facing the centre. Each one of them likes different brands of watch—Sonata, Titan, Fastrack, Swiss, Casio, Timex, Rolex and Fossil, but not necessarily in the same order. P sits third to the right of the person who likes Fossil. P does not like Fastrack. T is not an immediate neighbour of W. R sits on the immediate right of the person who likes Fastrack. Neither P nor W likes Casio or a Titan. The person who likes Casio is not an immediate neighbour of the person who likes Fossil. The person who likes Sonata sits second to the left of T. The person who likes Sonata is an immediate neighbour of the both persons who like Timex and Rolex. Person who likes Rolex sits third to the right of Q. Q does not like Casio. U is not an immediate neighbour of P. V is not an immediate neighbour of the person who likes Sonata. Only two people sit between the person who likes Rolex and W. The persons who like Casio and the Titan are immediate neighbours of each other.

Who among the following likes Titan?

- A Q
- B R
- C V
- D S

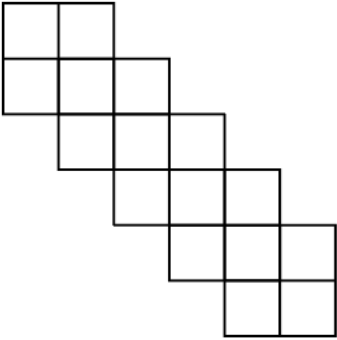
Answer: A



RRB JE Free Mock Test

Question 8

How many Squares are there in the given figure?



A 21

B 18

C 37

D 32

Answer: A

Question 9

If $A + B = C$, $D - C = A$ and $E - B = C$, then what does $D + F$ stand for?

A C

B F

C J

D Q

Answer: C

Question 10

What is the valley (lowest portion) of a sound wave called?

A Highest

B Crest

C Lowest

D Trough

Answer: D

Daily Free RRB Online Test

Question 11

Divide Rs.305 in three parts, so that $\frac{3}{7}$ of the first, $\frac{2}{3}$ of the second and $\frac{4}{5}$ of the third are equal. Find the share of the third one

- A Rs.62
- B Rs.75
- C Rs.72
- D Rs.40

Answer: B

Question 12

Complete the series.
CX, WP, UJ, SF, (...)

- A OP
- B QD
- C YT
- D RE

Answer: B

Question 13

When is 'World Ozone Day' observed?

- A January 15
- B September 16
- C December 16
- D April 25

Answer: B

RRB Group-D Previous Papers

Question 14

If north east becomes west and south east becomes south and so on, what will be the west?

- A North East
- B North West
- C South West
- D South East

Answer: A

Question 15

Two numbers differ by 1365. On dividing the larger number by the smaller, the quotient and remainder got are 6 and 15 respectively. Find the larger number.

- A 1635
- B 270
- C 1784
- D 1095

Answer: A

Question 16

Who was the first Indian male athlete to reach the final of an Olympic athletic event?

- A Surjit Singh
- B Michael Kindo
- C Milka Singh
- D Ajith Pal Singh

Answer: C

RRB Free Videos (You Tube Channel)

Question 17

There are six members in a family. This year the father died and he has a son Ramesh, and a son is born to Ramesh. The average age of the family is the same now as it was 10 years back. At what age has the father of Ramesh died?

- A 60
- B 64
- C 50
- D 72

Answer: A

Explanation:

Before the 10 years the average age of 5 members and father of Ramesh = $(\text{age of 5 members} + \text{age of Ramesh's father} - 60)/6$

After death of Ramesh's father, average age of 5 members and Ramesh's son = $(\text{age of 5 members} + \text{age of Ramesh's son})/6$

According to the question,

$$\Rightarrow (\text{Age of 5 members} + \text{age of Ramesh's father} - 60)/6 = (\text{age of 5 members} + \text{age of Ramesh's son})/6$$

Age of Ramesh's father = 60

(\because Age of Ramesh's son = 0)

Question 18

The force of attraction between all masses in the universe, especially the attraction of the earth's mass for bodies near its surface is called

- A Mechanical force
- B Gravitational force
- C Friction force
- D Spring force

Answer: B

Question 19

Which of the following is a folk dance popular during the harvest season in Punjab?

- A Bhagra
- B Grabha
- C Kathak
- D Oddisi

Answer: A

20 RRB NTPC Mocks-Tests Rs.149

Question 20

A trader makes a profit by selling goods at a profit of 20%. He also uses weights that are 20% less. What is his actual gain per cent?

- A 40%
- B 60%
- C 20%
- D 50%

Answer: D

Question 21

Which of these is NOT a blood group?

- A A
- B O
- C AB
- D c

Answer: D

Question 22

An aqueous solution turns red litmus solution blue. Excess addition of which of the following solutions would reverse the change?

- A Ammonium Hydroxide
- B Baking Powder

C Hydrochloric Acid

D Lime

Answer: C

10 RRB JE Mocks-Tests Rs.117

Question 23

Express $\frac{44}{5}\% + \frac{4}{5}\% + \frac{0.4}{5}\%$ in decimal form

A 0.0888

B 0.0998

C 0.0968

D 0.0896

Answer: C

Question 24

Which is the oldest hockey tournament in India?

A Nehru cup

B Beigton cup

C Durand

D Ramswamy

Answer: B

Question 25

Bohr's orbits are called stationary, because

A Electrons in them are stationary

B Electrons in them have fixed energy

C Protons remain in the nuclei and are stationary

D Their orbits have fixed radii

Answer: B

RRB General Science Notes (Download Pdf)

Question 26

P is facing Q. Q is to the north of P. R is placed on right side of Q. What is the direction of R with respect to P?

A North east

B South West

C North West

D South East

Answer: C

Question 27

At what rate per cent will a sum of money double itself in 30 years?

A $3\frac{1}{4}\%$

B 3%

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

D $3\frac{1}{2}\%$

Answer: C

Question 28

The Government of India designated 29 June every year as 'Statistics Day' in the memory of

A Shakuntala Devi

B Prasanta Chandra Mahalanobis

C Radhakamal Mukerjee

D Dhananjay Ramchandra Gadgil

Answer: B

RRB GK Material (Download Pdf)

Question 29

On increasing the temperature of solids, the kinetic energy of the particles

A Is constant

B First increases and then decreases

C Increases

D Decreases

Answer: C

Question 30

become the first police force in the country to digitise all malkhanas, rooms for keeping seized arms and ammunition.

A Bengaluru Police

B Mumbai Police

C Delhi Police

D Chennai Police

Answer: C

Question 31

The negatively charged ion is known as

- A Cathode
- B Anion
- C Cation
- D Anode

Answer: B

RRB NTPC Previous Papers (Download PDF)

Question 32

Which of the following laws states that electric current ' I ' flowing through a metallic wire is directly proportional to the potential difference ' V ', across its ends provided its temperature remains constant?

- A Pascal law
- B Gauss law
- C Newtons Law
- D Ohms Law

Answer: D

Question 33

If 'PALE' is coded as 2134, 'EARTH' is coded as 41590, how is 'PEARL' coded?

- A 25430
- B 29530
- C 24153
- D 25413

Answer: C

Question 34

What is the unit of measurement of very long distances between celestial bodies?

- A Meters
- B Light years
- C Miles
- D Kilometers

Answer: B

Join Competitive Exam Updates Telegram Group

Question 35

In this question, two statements are given followed by two conclusions. Choose the conclusion(s) which best fit(s) logically.

Statements:

- 1) All fruits are baskets.
- 2) Some baskets are jars.

Conclusions:

- I. Some jars are baskets.
- II. No basket is fruit.

- A Neither conclusion I nor II follows
- B Only conclusion I follows
- C Both conclusions I and II follow
- D Only conclusion II follows

Answer: B

Question 36

Find the ODD one out from the given options.

- A Tree : Branch
- B Car : Engine
- C Table : Chair
- D House : Room

Answer: C

Explanation:

Branch is a part of the tree

Engine part of car

Same way room also part of the house

But both chair and table are furnitures

Question 37

Find the ODD one out from the given options.

- A 80
- B 40
- C 79
- D 20

Answer: C

Explanation:

Except 79 all others are multiple of 4

Question 38

According to Mendeleev's periodic law, the elements were arranged in the periodic table in the order of

- A Increasing atomic masses
- B Decreasing atomic number
- C Increasing atomic number
- D Decreasing atomic masses

Answer: A

Question 39

Which of the following is the cause of ringworm?

- A Fungus
- B Virus
- C Bacteria
- D livewort

Answer: A

Question 40

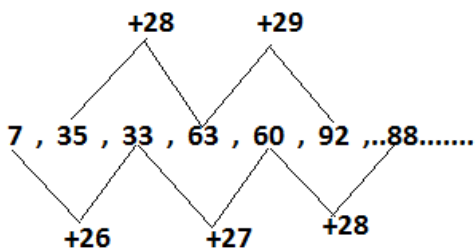
Complete the series.

7, 35, 33, 63, 60, 92, (...)

- A 69
- B 74
- C 88
- D 81

Answer: C

Explanation:



RRB JE Previous Papers (Download Pdf)

Question 41

Two numbers have their LCM and HCF to be 693 and 11 respectively. If one number is 99, find the other number.

- A 12
- B 79
- C 77
- D 34

Answer: C

Explanation:

Let the two numbers be x and y

$$\text{then } x \times y = LCM \times HCF$$

here x=99(given)

$$\text{therefore, } 99 \times y = 693 \times 11 \quad [\text{given LCM}=693, \text{HCF}=11]$$

Solving we get y=77

Question 42

Put the proper symbols +, -, ×, ÷ in the blank spaces to fit the equation.

$$(18_3)_7_15_5 = 0$$

- A +, -, ×, -
- B +, ×, -, ÷
- C +, ÷, -, ÷
- D +, +, ×, ÷

Answer: C

Explanation:

According to BODMAS rule

Bracket open first then division, multiplication, addition and subtraction

$$\text{Step 1: } (18+3) = 21$$

$$\text{Step 2: } 21 \div 7 - 15 \div 5$$

$$\text{Step 3: } 3-3=0$$

Thus option C is the answer

Question 43

Which of the following cities became the first to launch a 24×7 Ultra Low Emission Zone(ULEZ), inside which vehicles will have to meet emission standards or face a charge?

- A Chennai
- B Sydney
- C Washington
- D London

Answer: D

RRB JE Free Mock Test

Question 44

What does the five interlinked rings in the Olympic flag represent?

- A Sports
- B Mountains
- C Continents
- D Oceans

Answer: C

Question 45

Choose the alternative that best replaces the question mark from the given figure?

6	5	4
11	9	7
?	56	33

- A 75
- B 65
- C 95
- D 85

Answer: D

Explanation:

$$4 + 7 = 11 \times 3 = 33$$

$$5 + 9 = 14 \times 4 = 56$$

$$6 + 11 = 17 \times 5 = 85$$

Question 46

While executing a job, what 20 women can do in 16 days will be done by 16 men in 15 days. Find the ratio of capacity of a man to that of a woman.

- A 4 : 3
- B 3 : 4
- C 5 : 6
- D 6 : 7

Answer: A

Explanation:

Let us assume capacity of women as 'w' and men as 'm'

$$\text{work} = \text{capacity} \times \text{time}$$

$$20 \times w \times 16 = 16 \times m \times 15$$

thus, solving

$$m:w=4:3$$

Daily Free RRB Online Test

Question 47

Which element is the first element in the periodic table?

- A Neon
- B Hydrogen
- C Oxygen
- D Helium

Answer: B

Question 48

P, Q and R work together to finish a work. P and Q finish 70% of the work while Q and R finish 50% of the work. Who will finish first, if they work alone?

- A Q
- B Can not determined
- C R
- D P

Answer: D

Explanation:

Total work = 100%

Work done by (P + Q) = 70%

Work done by (Q + R) = 50%

Work done by (P + Q) and (Q + R) = 70% + 50% = 120%

Work done by (P + Q + R) = 100%

now,

$$(P + Q) + (Q + R) - (P + Q + R) = 120 - 100 = 20\%$$

$$Q = 20\%$$

Work done by P = 70 - 20 = 50%

Work done by R = 50 - 20 = 30%

P works 50% of the total work in same time so P will finish the work first.

Question 49

Simplify: $0.8 + 0.08 + 0.008 + 8$

- A 8.088

- B 8.808
- C 880.8
- D 888.8
- E 8.888

Answer: E

Explanation:

Solving we get

$$\begin{array}{r}
 0.8 \\
 0.08 \quad + \\
 0.008 \quad + \\
 8.000 \quad + \\
 \hline
 8.888
 \end{array}$$

RRB Group-D Previous Papers

Question 50

Evaluate: $\left[\frac{\sqrt{3}+1}{\sqrt{3}-1}\right]^2 + \left[\frac{\sqrt{3}-1}{\sqrt{3}+1}\right]^2$

- A 16
- B 12
- C 14
- D 24

Answer: C

Explanation:

Using the identities

$$(a + b)^2 = a^2 + 2ab + b^2$$

$$(a - b)^2 = a^2 - 2ab + b^2$$

$$(a + b)(a - b) = a^2 - b^2$$

Rationalizing the denominator,

$$\left[\frac{\sqrt{3}+1}{\sqrt{3}-1}\right] = \frac{\sqrt{3}+1}{\sqrt{3}-1} \times \frac{\sqrt{3}+1}{\sqrt{3}+1}$$

Solving the equation using identities we get

$$\frac{\sqrt{3}+1}{\sqrt{3}-1} \times \frac{\sqrt{3}+1}{\sqrt{3}+1} = \frac{4+2\sqrt{3}}{2}$$

$$= 2 + \sqrt{3}$$

$$\left[\frac{\sqrt{3}+1}{\sqrt{3}-1}\right]^2 = (2 + \sqrt{3})^2$$

$$= 7 + 4\sqrt{3}$$

Rationalizing the denominator,

$$\left[\frac{\sqrt{3}-1}{\sqrt{3}+1}\right] = \frac{\sqrt{3}-1}{\sqrt{3}+1} \times \frac{\sqrt{3}-1}{\sqrt{3}-1}$$

Solving the equation using identities we get

$$\frac{\sqrt{3}-1}{\sqrt{3}+1} \times \frac{\sqrt{3}-1}{\sqrt{3}-1} = \frac{4-2\sqrt{3}}{2}$$
$$= 2 - \sqrt{3}$$

$$\left[\frac{\sqrt{3}-1}{\sqrt{3}+1}\right]^2 = (2 - \sqrt{3})^2$$
$$= 7 - 4\sqrt{3}$$

Thus,

$$\left[\frac{\sqrt{3}+1}{\sqrt{3}-1}\right]^2 + \left[\frac{\sqrt{3}-1}{\sqrt{3}+1}\right]^2 = 7 + 4\sqrt{3} + 7 - 4\sqrt{3}$$
$$= 14$$

Question 51

Complete the series.

11, 77, 38.5, 231, (...)

- A 125
- B 121.5
- C 115.5
- D 120

Answer: C

Explanation:

$$11 \times 7 = 77$$

$$77 \times 0.5 = 38.5$$

$$38.5 \times 6 = 231$$

$$231 \times 0.5 = 115.5$$

Question 52

What causes decomposition of organic matter?

- A Algae
- B Livewort
- C Bacteria
- D Virus

Answer: C

RRB Free Videos (You Tube Channel)

Question 53

Lactose is composed of and glucose.

- A Maltose
- B Fructose
- C Galactose

D Glucose

Answer: C

Question 54

A son's present age is two-fifths of his mother's age. After 8 years, he will be one half his mother's age. What is his mother's age now?

A 36

B 42

C 50

D 40

Answer: D

Explanation:

Assume mother's present age be $5x$

then son's present age is two-fifth of mother's age that is $2 \div 5 \times 5x = 2x$

Ratio of mother's age to son's age is $5x : 2x$

After 8 years ratio becomes $5x+8 : 2x+8$

after 8 years son's age will be one half of mother's age (Given)

that is, $2x + 8 = 1 \div 2 \times (5x + 8)$

Solving we get $x=8$

thus present age of mother $5 \times 8 = 40$

Question 55

Find the ODD one out from the given options.

A ORT

B TYW

C LQO

D PUS

Answer: A

Explanation:

In the given options

TYW

Place value of T = 20

Place value of Y = 25

Place value of W = 23

Place value of 1st letter + 3 gives the place value of 3rd letter and the place value of 3rd letter + 2 gives the place value of 2nd letter

This is same for all the terms except ORT

20 RRB NTPC Mocks-Tests Rs.149

Question 56

If $(1 + \tan A)(1 + \tan B) = 2$, then find $A + B$.

- A 90°
- B 180°
- C 0°
- D 45°

Answer: D

Explanation:

$$(1 + \tan A)(1 + \tan B) = 2$$

$$1 + \tan B + \tan A + \tan A \tan B = 2$$

$$\tan A + \tan B + \tan A \tan B = 1$$

$$\tan A + \tan B = 1 - \tan A \tan B$$

$$\frac{\tan A + \tan B}{1 - \tan A \tan B} = 1$$

$$\frac{\tan x + \tan y}{1 - \tan x \tan y} = \tan(x + y)$$

$$\frac{\tan A + \tan B}{1 - \tan A \tan B} = \tan(A + B) = 1$$

$$\tan(A + B) = \tan 45^\circ$$

therefore, $A + B = 45^\circ$

Question 57

Find the wrong number in the following series

6, 12, 21, 36, 56, 81

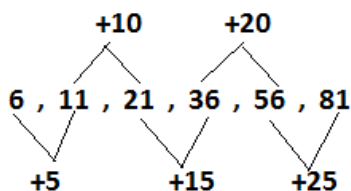
- A 21
- B 12
- C 56
- D 36

Answer: B

Explanation:

Wrong term is 12

the correct series is shown below:



Question 58

In this question, a statement is given followed by two conclusions. Choose the conclusion(s) which best fit(s) logically.

Statement:

Money plays a vital role in our lives.

Conclusions:

- I. The poor can never become rich.
- II. All the rich men take part in politics.

- A Only conclusion I follows
- B Only conclusion II follows
- C Either conclusion I or II follows
- D Neither conclusion I nor II follows

Answer: D

Explanation:

The conclusion drawn on the basis of a given fact and can only be one for any given situation .

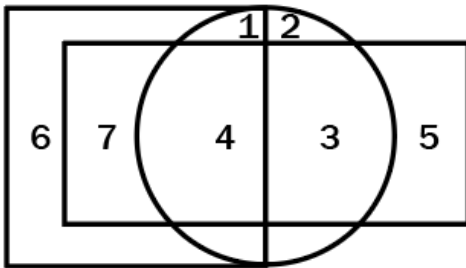
There is no mention of rich or poor in the statement, so both the conclusion are invalid .

Hence the answer is option D

10 RRB JE Mocks-Tests Rs.117

Question 59

In the given figure the circle represents educated, rectangle represents unemployed and square represents villagers. which region represents villagers and educated but not employed?



- A 3
- B 4
- C 1
- D 2

Answer: B

Explanation:

In this question

Square represents villagers so 6,7,4,1,3,5 are villagers and Circle represents educated .

1 and 4 are villagers who are educated.

Rectangle represents unemployed that is 7,4,3,5.

Therefore villagers who are educated and unemployed is 4

Thus option B

Question 60

Sound travels in a medium as a

- A Beam
- B Series of compressions and rarefactions

- C Particle
- D Straight line

Answer: B

Question 61

Which hormone is produced by islets of Langerhans to control diabetes mellitus?

- A Ptyalin
- B Rennin
- C Insulin
- D HCl

Answer: C

RRB General Science Notes (Download Pdf)

Question 62

A person travels from P to Q at a speed of 50 km/h for 30 minutes. He then increases his speed to 60 km/h and reaches his destination R in 20 minutes. What is his average speed for the whole journey?

- A 65 km/h
- B 55 km/h
- C 54 km/h
- D 70 km/h

Answer: C

Explanation:

$$\text{Average speed} = \frac{\text{Total distance}}{\text{Total time}}$$

From P to Q

Speed = 50 km/hr

$$\text{Time} = 30 \text{ min} = \frac{1}{2} \text{ hr}$$

$$\text{Distance} = \text{speed} \times \text{time}$$

$$\text{Distance} = 50 \text{ km/hr} \times \frac{1}{2} \text{ hr}$$

$$\text{Solving, Distance} = 25 \text{ km}$$

To R

Speed = 60 km/hr

$$\text{Time} = 20 \text{ min} = \frac{1}{3} \text{ hr}$$

$$\text{Distance} = \text{speed} \times \text{time}$$

$$\text{Distance} = 60 \text{ km/hr} \times \frac{1}{3} \text{ hr}$$

$$\text{Solving, Distance} = 20 \text{ km}$$

$$\text{Average speed} = \frac{\text{Total distance}}{\text{Total time}}$$

$$\text{Total distance} = 25 + 20 = 45$$

$$Total\ time = \frac{1}{2} + \frac{1}{3} = \frac{5}{6}$$

On solving,

Average speed = 54 km/hr

Question 63

Which of the following is a reproductive cell?

- A Lymphocytes
- B Rbc
- C Gametes
- D Wbc

Answer: C

Question 64

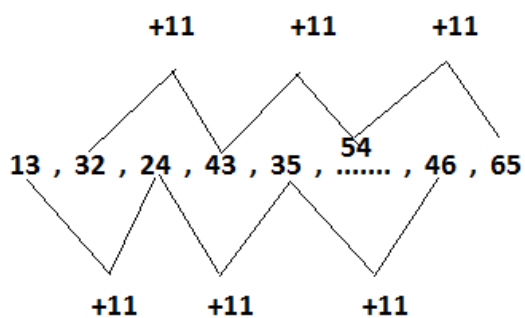
Find the missing number in the following series.

13, 32, 24, 43, 35, (...), 46, 65

- A 52
- B 54
- C 60
- D 56

Answer: B

Explanation:



RRB GK Material (Download Pdf)

Question 65

A cone is 32 cm high and the radius of its base is 8 cm. It is melted and recast into a sphere. Find the radius of the sphere

- A 6.5
- B 2.5
- C 4
- D 8

Answer: D

Explanation:

Volume of cone = Volume of sphere

$$\text{Volume of cone} = \frac{1}{3} \times \frac{22}{7} \times r^2 \times h$$

$$\text{Volume of sphere} = \frac{4}{3} \times \frac{22}{7} \times r^3$$

$$\frac{1}{3} \times \frac{22}{7} \times 8^2 \times 32 = \frac{4}{3} \times \frac{22}{7} \times r^3$$

On solving we get $r^3 = 512$

$r = 8\text{cm}$

Question 66

Simplify: $\cos(30^\circ - A) - \cos(30^\circ + A)$

- A $\sin A$
- B $2 \sin A$
- C $\cos A$
- D $\left(\frac{1}{2}\right) \sin A$

Answer: A

Explanation:

$$\cos(x - y) = \cos x \cos y + \sin x \sin y$$

$$\cos(x + y) = \cos x \cos y - \sin x \sin y$$

$$\cos(30 - A) = \cos 30 \cos A + \sin 30 \sin A$$

$$\cos(30 + A) = \cos 30 \cos A - \sin 30 \sin A$$

Thus solving,

$$\cos(30^\circ - A) - \cos(30^\circ + A) = \cos 30^\circ \times \cos A + \sin 30^\circ \times \sin A - \cos 30^\circ \times \cos A + \sin 30^\circ \times \sin A$$

$$\cos(30^\circ - A) - \cos(30^\circ + A) = 2 \times \sin 30^\circ \times \sin A$$

$$\cos(30^\circ - A) - \cos(30^\circ + A) = 2 \times \frac{1}{2} \times \sin A$$

$$\cos(30^\circ - A) - \cos(30^\circ + A) = \sin A$$

Question 67

Which of these states was NOT divided in the year 2000?

- A Maharashtra
- B Madhya Pradesh
- C Bihar
- D Uttar Pradesh

Answer: A

RRB NTPC Previous Papers (Download PDF)

Question 68

Which of the following does NOT increase while moving down the group of the periodic table?

- A Number of shells in an element
- B Metallic character
- C Valency
- D Atomic radius

Answer: C

Question 69

If $x + \frac{1}{x} = 2$, then find the value of $x^2 + \frac{1}{x^2}$.

- A 2
- B 1
- C -2
- D 0

Answer: A

Explanation:

$$(x + \frac{1}{x})^2 = 4$$

Using the identity $(a + b)^2 = a^2 + 2 \times a \times b + b^2$

$$(x + \frac{1}{x})^2 = x^2 + 2 \times x \times \frac{1}{x} + \frac{1}{x^2}$$

$$x^2 + 2 \times x \times \frac{1}{x} + \frac{1}{x^2} = 4$$

$$x^2 + \frac{1}{x^2} + 2 = 4$$

solving we get

$$x^2 + \frac{1}{x^2} = 2$$

Question 70

What is the concept of spherical mirrors?

- A Refraction of light
- B Scattering of Light
- C Reflection of light
- D Radiation of Light

Answer: C

Join Competitive Exam Updates Telegram Group

Question 71

In this question, statement is given followed by three conclusions. Choose the conclusion(s) which best fit(s) logically.

Statement:

$$F \leq H < J \geq V > E$$

Conclusions:

- I. $H < V$
- II. $J > E$
- III. $F < E$

- A Only conclusion II is true
- B Only conclusion I and III are true
- C Only conclusion III is true
- D Only conclusions I are true

Answer: A

Explanation:

From the given combination

we get $H < J$ and $J \geq V$ thus we can't compare H and V, hence I does not follow

From $J \geq V > E$ we get the relation $J > E$ hence II follows

In the same way we cant compare F and E

Thus only conclusion II follows

Question 72

What is the name of the observatory to study Saturn's moon and comets by NASA 2018 campaign?

- A Pioneer
- B Sofia
- C W.M.Keck observatory
- D Aryabhata space observato

Answer: B

Question 73

A hare spots a dog 100 m away and starts running away from it at 12 km/h. One minute later, the dog gives a chase at 16 km/h speed. At what distance from the spot where the hare took flight and the dog catch the hare?

- A 900 m
- B 1000 m
- C 950 m
- D 1100 m

Answer: A

Explanation:

Hare spots a dog at a distance of 100 m

Distance covered by hare in 1 min, $d = 12 \text{ km/hr} \times \frac{1}{60}$

$$d = \frac{1}{5} km$$
$$= 200 m$$

Now dog has to cover total 300 m (100 + 200)

Time taken by dog to cover total 300 m ,

Relative speed = 16-12 = 4 km/hr

$$t = \frac{300m}{4km/hr}$$

$$300 m = \frac{3}{10} km$$

Solving , we get $t = \frac{3}{40} hr$

Distance covered by hare = $12 \times \frac{3}{40}$

$$d = \frac{9}{10} km$$

$$= 900 m$$

RRB NTPC Free Mock Tests

Question 74

Which number will best complete the relationship given below?

7 : 64 :: 8 : ?

- A 81
- B 79
- C 82
- D 80

Answer: A

Explanation:

7:64

Relation between 7 and 64

$$7+1=8$$

$$8 \times 8 = 64$$

Same way

8:?

$$8+1=9$$

$$9 \times 9 = 81$$

Question 75

Which of these is used to break the circuit or to close the electric circuit?

- A Switch
- B Wire
- C Cell
- D Bulb

Answer: A

Question 76

Which of these is a trace element?

- A Sodium
- B Manganese
- C Pottasium
- D Magnesium

Answer: B

RRB JE Previous Papers (Download Pdf)

Question 77

Which of these fractions cannot be reduced further?

$\frac{14}{21}, \frac{33}{43}, \frac{18}{24}, \frac{92}{24}, \frac{41}{82}$

- A $\frac{33}{43}$
- B $\frac{41}{82}$
- C $\frac{18}{24}$
- D $\frac{92}{24}$

Answer: A

Explanation:

$$\frac{14}{21} = \frac{2 \times 7}{3 \times 7}, \text{ solving we get } \frac{14}{21} = \frac{2}{3}$$

$$\frac{18}{24} = \frac{6 \times 3}{8 \times 3}, \text{ solving we get } \frac{18}{24} = \frac{3}{4}$$

$$\frac{92}{24} = \frac{23 \times 4}{6 \times 4}, \text{ solving we get } \frac{92}{24} = \frac{23}{6}$$

$$\frac{41}{82} = \frac{1 \times 41}{2 \times 41}, \text{ solving we get } \frac{41}{82} = \frac{1}{2}$$

Both 33 and 43 are prime numbers thus cannot be reduced further

Question 78

Which number will best complete the relationship given below?

$120 : 168 :: 288 : ?$

- A 358
- B 359
- C 352
- D 360

Answer: D

Explanation:

Relation between 120 and 168

$$\text{Prime number } 11^2 - 1 = 121 - 1 = 120$$

Prime number $13^2 - 1 = 169 - 1 = 168$

Similarly,

Prime number $17^2 - 1 = 289 - 1 = 288$

Consecutive prime number, $19^2 - 1 = 361 - 1 = 360$

120:168::288:360

Question 79

Captain AmarinderSinghis the present Chief Ministerof-

- A Sikkim
- B Rajasthan
- C Punjab
- D Odisha

Answer: C

RRB JE Free Mock Test

Question 80

What is the LCM of $6(xy - y), 8(x^4y - xy)$?

- A $24xy$
- B $24(x^3 - 1)$
- C $24xy(x^3 - 1)$
- D $(x^3 - 1)xy$

Answer: C

Explanation:

Factorizing $6(xy - y)$ by taking the common factor '6y', we get

$$6y(x-1)$$

Factorizing $8(x^4y - xy)$ by taking the common factor '8xy', we get $8xy(x^3 - 1)$

Therefore, the LCM of $6(xy - y)$ and $8(x^4y - xy)$ is $24xy(x^3 - 1)$

Question 81

If the selling price of an article is Rs.240, the profit is 20%, then for how much should it be sold, if the profit is to be 30%?

- A Rs.300
- B Rs.280
- C Rs.260
- D Rs.200

Answer: C

Explanation:

$$\text{profit \%} = (sp - cp) \div cp$$

sp=selling price cp=cost price

for 20% profit, sp=240

$$20 \div 100 = (240 - cp) \div cp$$

on solving we get cp=200

if profit is to be 30%, then we need to find out sp=?

$$30 \div 100 = (sp - 200) \div 200$$

solving we get sp=260

Question 82

Which acid is present in sour milk?

- A Lactic Acid
- B Citric Acid
- C Glycoic Acid
- D Acetic Acid

Answer: A

Daily Free RRB Online Test

Question 83

The reaction of sodium sulphate and barium chloride solution is an example of

- A Exothermic reaction
- B Double displacement reaction
- C Endothermic reaction
- D Single displacement reaction

Answer: B

Question 84

Which state lies to the east of Jharkhand?

- A West Bengal
- B Chattisgarh
- C Bihar
- D Odissa

Answer: A

Question 85

Read the following information carefully and answer the question given below.

Eight friends—P, Q, R, S, T, U, V and W are sitting around a circular table for a meeting facing center. P is second to the right of V who is third to the right of Q. S is second to the left of U who sits between V and P. R is not a neighbour of Q or T.

Who is third to the right of V ?

A Q

B W

C R

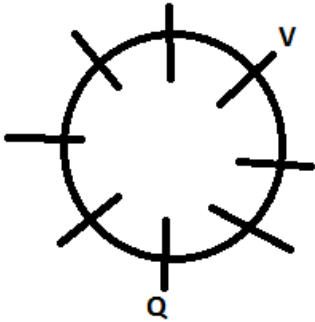
D T

Answer: C

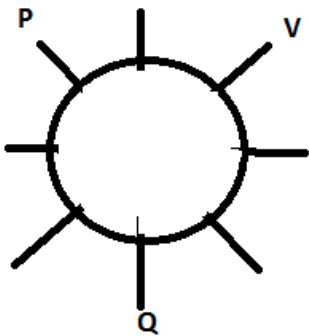
Explanation:

Eight friends sitting around circular table facing centre

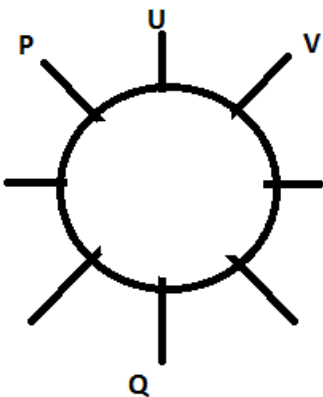
Step 1: V is third to the right of Q



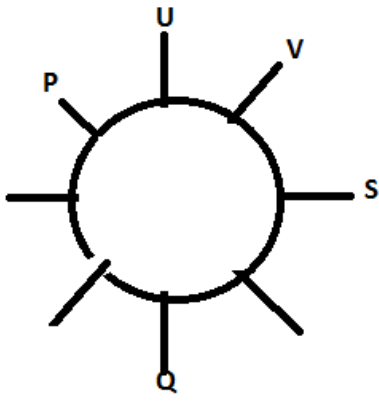
Step 2: P is second to the right of V



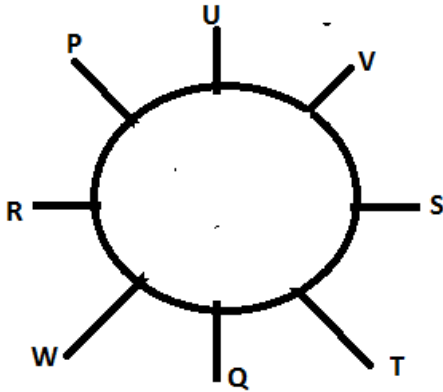
Step 3: U sits between V and P



Step 4: S is second to the left of U



Step 5: R is not neighbour of Q and T



third to the right of V is R

RRB Group-D Previous Papers

Question 86

Which of these plants has multi coloured leaves?

- A Jasmine
- B Hibiscus
- C Croton
- D Tulsi

Answer: C

Question 87

In the second quadrant, $\cos \theta$ varies from:

- A $\frac{1}{2}$ to -1
- B -1 to 1
- C 0 to $\frac{1}{2}$
- D 0 to -1

Answer: D

Explanation:

In the second quadrant θ varies from

90° to 180° . That is, $90^\circ \leq \theta \leq 180^\circ$

$\cos 90^\circ = 0$

$\cos 180^\circ = -1$

Thus in second quadrant $\cos \theta$ varies from 0 to -1

Question 88

If A, B and C are three points on a circle, where BC is the diameter and $AC = AB = 5\sqrt{2}$ cm. Find the radius of the circle.

A $\frac{5}{\sqrt{2}}$ cm

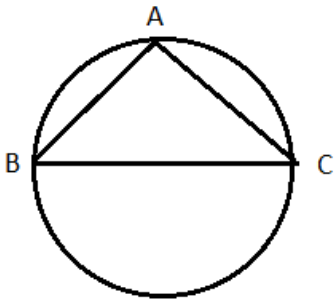
B 5 cm

C 4 cm

D 6 cm

Answer: B

Explanation:



BC is the diameter and $AC = AB = 5\sqrt{2}$ cm

$$\begin{aligned} BC^2 &= AB^2 + AC^2 \\ &= (5\sqrt{2})^2 + (5\sqrt{2})^2 \\ &= 25 \times 2 \times 2 \\ &= 100 \end{aligned}$$

$BC = 10$ cm, diameter of circle

$$\begin{aligned} \text{radius} &= \frac{10}{2} \\ &= 5 \text{ cm} \end{aligned}$$

RRB Free Videos (You Tube Channel)

Question 89

India's first self-made fighter jet is

A LCA Tejas

B Dassault Rafale

C MiG-21

D Dassault Mirage 2000

Answer: A

Question 90

If in a certain code 'YELLOW' is written as 'XFKMNX', how is 'BORDER' coded?

- A APQEDS
- B APSEFS
- C AQPESD
- D ANSCFQ

Answer: A

Explanation:

The logic of coding YELLOW is shown below

Y	E	L	L	O	W
25	5	12	12	15	23
-1	+1	-1	+1	-1	+1
24	6	11	13	14	24
X	F	K	M	N	X

So -1 and +1 is the pattern

Similarly BORDER coded as

B	O	R	D	E	R
2	15	18	4	5	18
-1	+1	-1	+1	-1	+1
1	16	17	5	4	19
A	P	Q	E	D	S

Question 91

What is the difference between Compound Interest and Simple Interest on Rs.1000 at 10% after 4 years?

- A Rs.64.10
- B Rs.74
- C Rs.16.40
- D Rs.52

Answer: A

Explanation:

Simple interest $SI = P \times N \times R \div 100$

P=principle amount

N= Time period

R= rate of interest

$SI = 1000 \times 10 \times 4 \div 100$

SI=400

For compound interest (CI)

$$\text{Amount} = P \times (1 + R \div 100)^N$$

$$\text{Amount} = 1000 \times (1 + 10 \div 100)^4$$

$$\text{Amount} = 1464.1$$

$$\text{Amount} = P + CI$$

$$CI = \text{Amount} - P$$

$$CI = 464.1$$

$$CI - SI = 64.1$$

20 RRB NTPC Mocks-Tests Rs.149

Question 92

Which agent produces a local or general loss of sensation?

- A Glucose
- B Blood
- C Oxygen
- D Anaesthetic

Answer: D

Question 93

A metallic sphere of radius 6 cm is melted and drawn into a wire, whose radius of cross section is 8 cm. What is the length of the wire?

- A 4 cm
- B 5 cm
- C 4.5 cm
- D 3.5 cm

Answer: C

Explanation:

$$\text{Volume of sphere} = \frac{4}{3} \times \pi \times r^3$$

$$\text{Volume of cylinder} = \pi \times r^2 \times h$$

Here the sphere melted into a long wire

Assume wire as cylinder

Therefore,

Sphere radius = 6cm

Cylinder the cross sectional radius = 8cm

We need to find h = ?

$$\frac{4}{3} \times \pi \times 6 \times 6 \times 6 = \pi \times 8 \times 8 \times h$$

Solving we get h = 4.5 cm

Question 94

Find the missing group of alphabets in the following series.

WO, CJ, HF, (...), RA

- A FC
- B AR
- C MC
- D PD

Answer: C

Explanation:

In this series,

WO, CJ, HF, MC, RA

Place value of first letter of first term increased by 5 in each term where as the place value of second letter decreased by 5,4,3,2

That is

WO - Place value of W= 23 adding 5 to this we get the first letter of the next term that is C

Place value of O = 15 subtracting 5 we get place value of Second letter of the next term that is J

10 RRB JE Mocks-Tests Rs.117

Question 95

P invests Rs.3500 in a business. After 5 months, Q joins him with some investment. If the profit that Q gets is 50% more than that of P, then find the investment of Q.

- A Rs.5000
- B Rs.9000
- C Rs.7000
- D Rs.6500

Answer: B

Explanation:

$$\text{Investment} \times \text{timeperiod} = \text{profit}$$

If time period is not specified in the question assume it as 12 months

Here in this question P invests Rs 3500 in 12 months (the time period of the investment not specified)

Q invest 'x' amount in 5 months

therefore,

	P		Q
Investment	3500		x
time period	12		7 (Q invest after 5 months so 12-5=7)
profit ratio	3500×12	:	$x \times 7$
or	6000	:	x

profit that Q gets is 50% more than p

that is, $x = 150 \div 100 \times 6000$

$$x=9000$$

Question 96

Simplify: $(\sqrt{6} - 2\sqrt{3})^2$

- A $18 + 12\sqrt{2}$
- B $18 + 2\sqrt{12}$
- C $18 - 12\sqrt{2}$
- D $18 - 2\sqrt{12}$

Answer: C

Question 97

Find the smallest three-digit number that is exactly divisible by 12, 45, and 24.

- A 120
- B 240
- C 360
- D 180

Answer: A

RRB General Science Notes (Download Pdf)

Question 98

What is reduced by a lubricant?

- A The interlocking of the irregularities of the surfaces
- B The shiny nature of the surfaces
- C The smoothness of the surfaces
- D The bright colours of the surfaces

Answer: A

Question 99

Acidic solutions in water conduct electricity because they produce

- A Chloride
- B Sulphide
- C Hydrogen
- D Hydroxide

Answer: C

Question 100

Find the value of $6 \div 2 \times (1 + 2)$

- A 9
- B 3
- C 1
- D 6

Answer: A

[RRB GK Material \(Download Pdf\)](#)

[RRB NTPC Free Mock Tests](#)

[RRB JE Previous Papers \(Download Pdf\)](#)

[RRB JE Free Mock Test](#)

[Daily Free RRB Online Test](#)

[RRB Group-D Previous Papers](#)

[RRB Free Videos \(You Tube Channel\)](#)

[20 RRB NTPC Mocks-Tests Rs.149](#)

[10 RRB JE Mocks-Tests Rs.117](#)

[RRB General Science Notes \(Download Pdf\)](#)

[RRB GK Material \(Download Pdf\)](#)

[RRB NTPC Previous Papers \(Download PDF\)](#)

[Join Competitive Exam Updates Telegram Group](#)