

Railway Recruitment Cell

Post Name : JE-MECHANICAL AND ELECTRICAL

Exam Code : RCGDUA

Exam Date : 21-11-2024

Exam Time : 10:30AM

Question No. 1

Which of the following monsoons accounts for most of the rainfall in India?

- A) Northeast monsoon
- B) Southwest monsoon
- C) Southeast monsoon
- D) Northwest monsoon

Answer Key: B

Question No. 2

In India, political parties are given recognition by the-

- A) President
- B) Law Commission
- C) Election Commission of India
- D) Speaker of the Lok Sabha

Answer Key: C

Question No. 3

With which of the following productions is Black Revolution associated?

- A) Fish production
- B) Leather production
- C) Petroleum production
- D) Mustard production

Answer Key: C

Question No. 4

Where is the famous Lotus Temple located?

- A) Pune
- B) Vadodara
- C) New Delhi
- D) Chennai

Answer Key: C

Question No. 5

Which of the following games is played on a board divided into 64 squares?

- A) Scrabble
- B) Chess
- C) Ludo
- D) Chinese Checkers

Answer Key: B

Question No. 6

Which of the following is a water-borne disease?

- A) Anthrax
- B) Tuberculosis
- C) Smallpox
- D) Cholera

Answer Key: D

#### Question No. 7

Who was the only Indian leader to be awarded the Bharat Ratna and the highest civilian award of Pakistan?

- A) Jawaharlal Nehru
- B) Lal Bahadur Shastri
- C) Morarji Desai
- D) Indira Gandhi

Answer Key: C

#### Question No. 8

Which Congress leader passed the Indian Civil Service Examination?

- A) Subhas Chandra Bose
- B) Aurobindo Ghosh
- C) Both Subhas Chandra Bose and Aurobindo Ghosh
- D) Mahatma Gandhi

Answer Key: C

#### Question No. 9

Which State has been selected for the land-based landing of ISRO's Reusable Launch Vehicle (RLV)?

- A) Tamilnadu
- B) Kerala
- C) Karnataka
- D) Madhya Pradesh

Answer Key: C

#### Question No. 10

What does VIPER, the golf cart-sized robot that NASA is planning to send to the Moon to explore underwater deposits, stand for?

- A) Vortex Intelligence Polar Exploration Rover
- B) Volatiles Investigating Particle Evaporation Rover
- C) Volatiles Investigating Particle Exploration Range
- D) Volatiles Investigating Polar Exploration Rover

Answer Key: D

#### Question No. 11

Where did the last surviving Sumatran rhino, Iman, die?

- A) Malaysia
- B) China
- C) Indonesia
- D) India

Answer Key: A

#### Question No. 12

Ramsar Convention is primarily related to-

- A) Deserts
- B) Wetlands
- C) Agriculture Land
- D) Forest Land

Answer Key: B

#### Question No. 13

\_\_\_\_\_ was the first President of the All India Trade Union Congress.

- A) Lala Lajpat Rai
- B) Sardar Vallabhbhai Patel

C) Mahatma Gandhi

D) Jawaharlal Nehru

Answer Key: A

#### Question No. 14

In which city did the Uttar Pradesh Chief Minister inaugurate the three-day Armed Forces Festival in September 2024?

A) Lucknow

B) New Delhi

C) Varanasi

D) Prayagraj

Answer Key: A

#### Question No. 15

For the Chandrayaan-3 mission, which Indian was recently awarded the IAF World Space Award?

A) Manoj Govil

B) P.K. Mishra

C) Pawan Kumar Goenka

D) S. Somnath

Answer Key: D

#### Question No. 16

Which vitamin is often used for the treatment of common cold?

A) Vitamin B

B) Vitamin D

C) Vitamin C

D) Vitamin A

Answer Key: C

#### Question No. 17

The colour of hair is due to-

A) Melanin

B) Carotene

C) Peptin

D) Keratin

Answer Key: A

#### Question No. 18

A normal pulse rate for adults is between-

A) 60 and 100 beats per minute

B) 27 and 40 beats per minute

C) 50 and 55 beats per minute

D) 10 and 25 beats per minute

Answer Key: A

#### Question No. 19

What does phototropism mean?

A) Movement of the plant towards water and moisture

B) Specialised protoplasm from which arises a cilia

C) Union between unequal gametes

D) Movement of plants towards light

Answer Key: D

#### Question No. 20

\_\_\_\_\_ is the gradual increase in the concentration of phosphorus, nitrogen, and other plant nutrients in an aging aquatic ecosystem such as a lake.

- A) Mesotrophism
- B) Oligotrophication
- C) Eutrophication
- D) Endotrophism

Answer Key: C

Question No. 21

The largest organ in the human body is the-

- A) Brain
- B) Heart
- C) Skin
- D) Liver

Answer Key: C

Question No. 22

What is the work done at the point to which a unit positive charge is moved from infinity?

- A) Current
- B) Charge
- C) Electric potential
- D) Resistance

Answer Key: C

Question No. 23

On what factor does the colour of scattered light depend upon?

- A) The amount of impurity
- B) The colour of the scattering particles
- C) The size of the scattering particles
- D) None of the options

Answer Key: C

Question No. 24

When objects are immersed in a fluid, they experience which of the following forces?

- A) Mechanical force
- B) Frictional force
- C) Spring force
- D) Buoyant force

Answer Key: D

Question No. 25

Which of the following statements is TRUE about acids?

- A) Bitter and change red litmus to blue
- B) Sour and change blue litmus to red
- C) Sour and change red litmus to blue
- D) Bitter and change blue litmus to red

Answer Key: B

Question No. 26

Which of the following statements is/are CORRECT for carbon compounds?

- A) Good conductors of electricity only
- B) Poor conductors of electricity only
- C) Do not have strong forces of attraction between their molecules only
- D) Both poor conductors of electricity and do not have strong forces of attraction between their molecules

Answer Key: D

Question No. 27

Carbon compounds have low melting and boiling points because of the \_\_\_\_\_ nature of bonds.

- A) Covalent
- B) Ionic
- C) Coordinate
- D) Metallic

Answer Key: A

Question No. 28

What is the physical state of water at 250 °C?

- A) Solid
- B) Liquid
- C) Gas
- D) Plasma

Answer Key: C

Question No. 29

Elements which generally exhibit multiple oxidation states and whose ions are usually coloured are-

- A) Alkali metals
- B) Transition elements
- C) Alkaline earth metals
- D) Non-metals

Answer Key: B

Question No. 30

When sulphuric acid is poured over zinc, which of the following gases is formed?

- A) Sulphur dioxide
- B) Hydrogen
- C) Oxygen
- D) Zinc dioxide

Answer Key: B

Question No. 31

The momentum of a massive object at rest is-

- A) Very large
- B) Very small
- C) Zero
- D) Infinity

Answer Key: C

Question No. 32

Scurvy is caused by the deficiency of-

- A) Vitamin A
- B) Vitamin B1
- C) Vitamin B2
- D) Vitamin C

Answer Key: D

Question No. 33

Fertility of soil in rice fields can be improved by-

- A) Blue green algae
- B) Sodium chloride

C) Gypsum

D) Potassium chloride

Answer Key: A

#### Question No. 34

Beta carotene is converted into \_\_\_\_\_ by the body.

A) Vitamin A

B) Vitamin B

C) Vitamin C

D) Vitamin D

Answer Key: A

#### Question No. 35

Which of the following vitamins is fat soluble?

A) Vitamin C

B) Vitamin B7

C) Vitamin B6

D) Vitamin E

Answer Key: D

#### Question No. 36

Zero degree Celsius is equivalent to \_\_\_\_\_ degrees of Fahrenheit.

A) 1000

B) 273

C) 100

D) 32

Answer Key: D

#### Question No. 37

Give an example of a metal which can be easily cut with a knife.

A) Mercury

B) Sodium

C) Silver

D) Iron

Answer Key: B

#### Question No. 38

A metal wire has a resistance of 32  $\Omega$ . What will be the resistance of a similar wire of same material and same length and twice the area of cross section at the same temperature?

A) 32  $\Omega$

B) 64  $\Omega$

C) 16  $\Omega$

D) 8  $\Omega$

Answer Key: C

#### Question No. 39

Which of the following elements was the last element in Newland's Law of Octaves?

A) Hydrogen

B) Bromine

C) Thorium

D) Rubidium

Answer Key: C

#### Question No. 40

An object is placed in front of a convex mirror at a point between infinity and the mirror. The image formed is-

- A) Virtual and diminished
- B) Virtual and enlarged
- C) Real and diminished
- D) Real and enlarged

Answer Key: A

#### Question No. 41

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) Jupiter
- B) Venus
- C) Mercury
- D) Moon

Answer Key: D

#### Question No. 42

What is the name of the device which is fitted in automobiles that shows the measure of distance travelled?

- A) Odometer
- B) Speedometer
- C) Indicator
- D) Fuel gauge

Answer Key: A

#### Question No. 43

If the power of a lens is -40 D, then its focal length is-

- A) 4 m
- B) -40 m
- C) -0.025 m
- D) -25 m

Answer Key: C

#### Question No. 44

Identify the group which is NOT a Dobereiner triad.

- A) Li, Na, and K
- B) Be, Mg, and Cr
- C) Ca, Sr, and Ba
- D) Cl, Br, and I

Answer Key: B

#### Question No. 45

What is the pH value of pure water?

- A) 12
- B) 18
- C) 4
- D) 7

Answer Key: D

#### Question No. 46

Find the length of the side of a square whose area is exactly equal to the area of a rectangle whose sides are 6.4 m and 2.5 m.

- A) 0.6 m
- B) 2.4 m
- C) 4 m
- D) 60 m

Answer Key: C

### Question No. 47

**Simplify:  $18.2 \times 5.21 \times 20 \div 4$**

- A) 781.63                      B) 678.12  
C) 574.65                      D) 474.11

Answer Key: D

### Question No. 48

Simplify:  $[(14)^2 \times (16)^2] \div (25)^2$

- A) 18                                      B) 25.55  
C) 60                                        D) 80.28

Answer Key: D

### Question No. 49

Find the place value of '5' in 567008400.

- A) Fifty lakhs  
B) Five crores  
C) Ten crores  
D) Fifty crores

Answer Key: D

### Question No. 50

If  $52416 \div 168 = 312$ , find the value of  $524.16 \div 0.0168$ .

- A) 312                                      B) 3120  
C) 31.2                                     D) 31200

Answer Key: D

### Question No. 51

**If the cost price is equal to 50% of the selling price, then what is the profit percentage?**

- A) 100%                      B) 50%
- C) 75%                        D) 120%

Answer Key: A

### Question No. 52

If the Compound Interest on a certain sum for 3 years at 3% is compounded annually, and it differs from the Simple Interest on the same sum for the same period and rate by Rs.27.27. What is the sum invested?

- A) Rs.10000                      B) Rs.10500  
C) Rs.11000                    D) Rs.12000

Answer Key: A

### Question No. 53

P is 2 years older than Q and Q is 4 years younger than R. If the sum of their ages is 27, then how old is Q?



A) 9 years

B) 11 years

C) 7 years

D) 8 years

Answer Key: C

Question No. 54

The hands of a clock are at right angles \_\_\_\_\_ times a day.

A) 12

B) 24

C) 22

D) 44

Answer Key: D

Question No. 55

The ratio of the areas of two similar triangles is 121 : 196. Find the ratio of their corresponding sides.

A) 21 : 96

B) 7 : 9

C) 11 : 14

D) 10 : 19

Answer Key: C

Question No. 56

What is the median of the following data?

78, 56, 22, 34, 45, 55, 39, 68

A) 55

B) 45

C) 56

D) 50

Answer Key: D

Question No. 57

Two pipes can fill a tank in 20 hours and 60 hours, respectively. A third pipe is an outlet pipe. If all three are opened together, the tank gets filled up in 40 hours. What time will the outlet pipe take to empty the full tank?

A) 24 hours

B) 20 hours

C) 30 hours

D) 28 hours

Answer Key: A

Question No. 58

If the LCM of 8, 16 and p is 48, then find the possible value of 'p'.

A) 2

B) 64

C) 24

D) 80

Answer Key: C

Question No. 59

Express  $\frac{5}{8}$  as a rate percent.

A) 37.5%

B) 62.5%

C) 50%

D) 6.25%

Answer Key: B

### Question No. 60

By selling an article for Rs.100, the profit earned will be 50% more than the profit earned by selling it for Rs.90. What is the cost price?

- A) Rs.60  
B) Rs.70  
C) Rs.65  
D) Rs.75

Answer Key: B

### Question No. 61

If  $p : q = 4 : 1$ , then what is the value of  $(p^3 - q^3)/(p^3 + q^3)$ ?

- A) 61 : 63                      B) 57 : 59  
C) 63 : 65                      D) 15 : 17

Answer Key: C

### Question No. 62

P, Q and R receive money in the ratio 6 : 5 : 7 respectively. If R gives Rs.200 to Q, then the share of P and that of R are equal. What is the total sum?

- A) Rs.4000                      B) Rs.3600  
C) Rs.4200                      D) Rs.1500

Answer Key: B

### Question No. 63

What is the rate percent per annum if Rs.8000 amounts to Rs.10000 in 5 years of Simple Interest?

- A) 4%    B) 6%
- C) 8%    D) 5%

Answer Key: D

### Question No. 64

Which of these expressions will represent four hundred-thousandths?

- A)  $4 \times 100000$  B)  $4/100000$   
C)  $400 \times (1/1000)$  D)  $400 \times (1/100000)$

Answer Key: B

### Question No. 65

Two tanks are of height 12 m each. One is cylindrical with a base radius of 3.5 m, and the other has a square base of side 3.5 m. Find the difference in their capacities.

- A) 300 m<sup>3</sup>  
B) 275 m<sup>3</sup>  
C) 315 m<sup>3</sup>  
D) 320 m<sup>3</sup>

Answer Key: C

### Question No. 66

The pair of equations  $3x - 5y = 20$  and  $6x - 10y = 40$  have-

- A) A unique solution
- B) No solution
- C) Infinitely many solutions
- D) Two solutions

Answer Key: C

Question No. 67

The angle of elevation of a kite is  $30^\circ$  and the vertical height of the kite from the ground is 40 m. What is the length of the string attached to the kite?

- A) 80 m
- B) 20 m
- C) 40 m
- D) 10 m

Answer Key: A

Question No. 68

From the top of a lighthouse, the angle of depression of a boat moving towards the shore is  $30^\circ$ . After some time, the angle of depression changes to  $45^\circ$ . How far has the boat moved towards the shore if the height of the lighthouse is 100 m?

- A) 73.2 m
- B) 60.4 m
- C) 45.8 m
- D) 90.5 m

Answer Key: A

Question No. 69

A person goes uphill at 35 km/h and comes down the same distance at 45 km/h. What is the average speed for the entire journey?

- A)  $(261/8)$  km/h
- B) 42 km/h
- C)  $(315/8)$  km/h
- D) 40 km/h

Answer Key: C

Question No. 70

Working individually, P takes thrice as much time as Q and half as much time as R. When they work together, a job gets done in 6 days. If the total payment for the work is Rs.7200, then what is the share of Q?

- A) Rs.4200
- B) Rs.4800
- C) Rs.3600
- D) Rs.3000

Answer Key: B

Question No. 71

The square root of 5184 is-

- A) 72
- B) 74
- C) 76
- D) 82

Answer Key: A

Question No. 72

If 3 dozens guavas cost Rs.90, how many guavas can be bought for Rs.240?

A) 90

B) 96

C) 98

D) 102

Answer Key: B

Question No. 73

A number when divided by 2, 3 and 4 leaves a remainder of 1. Find the largest 3 digit number that satisfies this requirement.

A) 991

B) 993

C) 997

D) 995

Answer Key: C

Question No. 74

Evaluate:  $(2.6^2 - 2.4^2)/(2.6 - 2.4)$

A) 10

B) 5

C) 15

D) 20

Answer Key: B

Question No. 75

The difference between 58% of a number and 39% of the same number is 247. What is 77% of that number?

A) 758

B) 806

C) 931

D) 1001

Answer Key: D

Question No. 76

P, Q, R, S, T and U are the members of a family. Out of these, two are ladies (one is mother and another is daughter). U is the brother of R, P is the brother of the husband of T, S is the father-in-law of T and the grandfather of R, and P is unmarried.

What is the relation between T and R?

A) Mother and son

B) Sister and brother

C) Mother and daughter

D) Daughter-in-law and son-in-law

Answer Key: C

Question No. 77

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

Statements:

1) Coals are atoms of carbon.

2) Diamonds are atoms of carbon.

Conclusion:

Diamonds are coal.

A) The conclusion drawn is definitely true

B) The conclusion drawn is false

C) The conclusion drawn is probably true

D) The conclusion drawn is irrelevant

Answer Key: B

Question No. 78

Complete the series.

17, 39, 83, 171, (...)

A) 198

B) 238

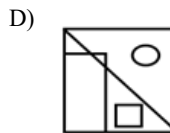
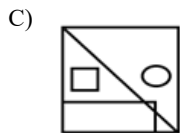
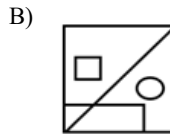
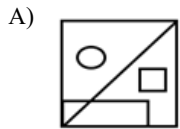
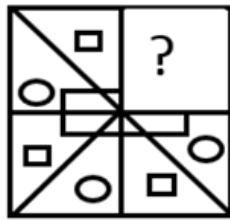
C) 347

D) 359

Answer Key: C

Question No. 79

Choose from the alternatives the figure that best completes the pattern given below.



Answer Key: A

Question No. 80

In a certain code, 'LANDMINE' is written as 'PYRBQGRC'. How will 'HOMEMADE' be written in that code?

A) LMPCPZID

B) LMPCOYHC

C) LMQCQYHC

D) LMOCOZID

Answer Key: C

Question No. 81

Find the ODD one out from the given options.

A) 137

B) 731

C) 317

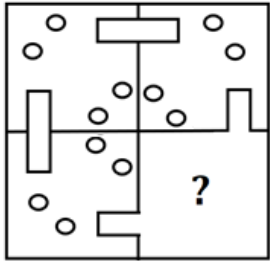
D) 153

Answer Key: D

Question No. 82

### Question No. 86

Choose from the alternative the figure that best completes the pattern given below.



- A) 
- B) 
- C) 
- D) 

Answer Key: B

Question No. 87

If 'Q' means '+', 'J' means '×', 'T' means '-' and 'K' means '÷', then  
 60 K 4 Q 3 J 9 T 5 = ?

- A) 32
- B) 31
- C) 37
- D) 25

Answer Key: C

Question No. 88

Which word will best complete the relationship given below?

Player : Coach :: Pupil : ?

- A) Word
- B) School
- C) Academy
- D) Teacher

Answer Key: D

Question No. 89

Choose the figure that best represents the relationship among the classes given below.

Pigeon, Bird and Cat

- A) 
- B) 

C)



D)



Answer Key: D

### Question No. 90

Choose the figure that best represents the relationship among the classes given below.  
Professor, Doctors and Scientist

A)



B)



C)



D)



Answer Key: C

### Question No. 91

If 'R' means '+', 'T' means 'x', 'U' means '÷', and 'W' means '-', then  $30 R 6 U 2 W 4 T 3 = ?$

A) 21

B) 34

C) 78

D) 39

Answer Key: A

### Question No. 92

In a certain code, a number 13479 is written as 'AQFJL' and 5268 is written as 'DMPN'. How is 396824 written in that code?

A) QLPMKJ

B) QLPNMF

C) QLPMNF

D) QLPNDF

Answer Key: B

### Question No. 93

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

Statements:

- 1) Some cartoons are boys.
- 2) All boys are windows.
- 3) All jokers are windows.



Conclusions:

- I. All jokers are boys.
- II. Some cartoons are windows.
- III. Some jokers are cartoons.

- A) Only conclusion I follows
- B) Only conclusion II follows
- C) Only conclusion I and III follows
- D) None of the conclusion follows

Answer Key: B

Question No. 94

If Mohan is the brother of the son of Yogi's son. How is Mohan related to Yogi?

- A) Son
- B) Cousin
- C) Grandson
- D) Brother

Answer Key: C

Question No. 95

Nithya walks 10 m towards west and then she turns right and walks 7 m. Then she turns right and walks 10 m. How far and in which direction is she from the starting point?

- A) 10 m, north
- B) 7 m, north
- C) 6 m, east
- D) 9 m, west

Answer Key: B

Question No. 96

Which word will best complete the relationship given below?

Seismometer : Earthquake :: Thermometer : ?

- A) Temperature
- B) Atmospheric pressure
- C) Wind speed
- D) Mercury

Answer Key: A

Question No. 97

A man is facing North-west. He turns 45° in the clockwise direction, then 90° in the anticlockwise direction and then another 90° in the same direction. Which direction is he facing now?

- A) South
- B) West
- C) Southwest
- D) East

Answer Key: A

Question No. 98

Select the pair of words from the given options that represents a relationship similar to the one expressed in the following pair of words.

Numerator : Denominator

- A) Ratio : Proportion
- B) Dividend : Divisor

C) Fraction : Decimal

D) Divisor : Quotient

Answer Key: B

Question No. 99

Study the following information carefully and answer the question based on the scenario.

The following are the criteria for the Company Secretary post in ABC Company Limited.

- (i) The candidate must be an Associate Member of Institute of Company Secretaries of India (ICSI).
- (ii) The candidate must not be more than 30 years of age as on 1.12.2016.
- (iii) The candidate should have experience of at least 5 years in the related field, in a Public Limited company
- (iv) The candidate should have excellent communication skills in both Hindi and English.

If the candidate satisfies all the criteria from (i) to (iv), he/she can be selected.

In case the candidate fulfills all the eligibility criteria, EXCEPT (ii) but is not more than 32 years of age and has experience of at least 6 years in the related field, the case is to be referred to the Managing Director of the company.

In case candidate fulfills all the eligibility criteria, EXCEPT (iii) but is also a member of Institute of Chartered Accountants of India (ICAI), the case may be referred to the CEO of the company.

If any information is missing in the candidate details, it should be treated as Data inadequate.

Scenario: Kishore is an Associate Member of ICSI, and he has worked as a Company Secretary in a Public Limited company from 1st January 2010 to 5th September 2016, and was born on August 15, 1985. He has excellent communication skills in Hindi and English.

- A) The candidate can be appointed
- B) The candidate cannot be appointed
- C) The case is to be referred to the Managing Director of the company
- D) Data inadequate

Answer Key: C

Question No. 100

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

Five boys are sitting in a row to be photographed.

- (i) S is to the left of R and to the right of B.
- (ii) M is to the right of R.
- (iii) E is between R and M.

Who is sitting immediate right to E?

- A) B
- B) M
- C) S
- D) R

Answer Key: B