

Railway Recruitment Cell

Post Name : general

Exam Code : MASSZPG

Exam Date : 18-06-2024

Exam Time : 9:30AM

Question No. 1

According to the Indian Standard Institute (ISI), which among the following designation has the size 1000 x 700 (in mm)?

- A) B0
- B) B1
- C) B2
- D) B3

Answer Key: B

Question No. 2

An obtuse angle is-

- A) Less than 90°
- B) Equal to 90°
- C) Greater than 90° but less than 180°
- D) Greater than 180°

Answer Key: C

Question No. 3

Which of the following tools is used for drawing circles?

- A) Mini drafter
- B) Divider
- C) Compass
- D) French curve

Answer Key: C

Question No. 4

For drawing isometric views of solids, one should draw-

- A) 3 axes
- B) 2 axes
- C) 1 axis
- D) 4 axes

Answer Key: A

Question No. 5

When the axis of a solid is perpendicular to VP, the _____ view should be drawn first and _____ view then projected from it.

- A) Front, top
- B) Top, side
- C) Side, front
- D) Top, front

Answer Key: A

Question No. 6

The line of intersection of the picture plane with the ground plane is called the-

- A) Ground line
- B) Station point
- C) Perpendicular axis
- D) Centre of vision

Answer Key: A

Question No. 7

Which of the following lines is continuous, thin and light?

- A) Visible outline
- B) Center line
- C) Construction line
- D) Section line

Answer Key: C

Question No. 8

In orthographic projection, the elevation is obtained on a plane called-

- A) Horizontal plane
- B) Vertical plane
- C) Profile plane
- D) Auxiliary plane

Answer Key: B

Question No. 9

A straight line joining the ends of an arc is called-

- A) Sector
- B) Quadrant
- C) Chord
- D) Segment

Answer Key: C

Question No. 10

The _____ is a method for visually representing the three-dimensional objects in two dimensions in technical and engineering drawings.

- A) Oblique projection
- B) Isometric projection
- C) Perspective projection
- D) Clinography projection

Answer Key: B

Question No. 11

Conventions are the graphical symbols used while making drawings to indicate-

- A) Materials
- B) Equipments
- C) Instruments
- D) All of the options

Answer Key: D

Question No. 12

If a surface is labelled as 'S ϕ 50' in engineering drawing, what does it mean?

- A) Spherical radius of 50 mm
- B) Radius of 50 mm
- C) Diameter of 50 mm
- D) Spherical diameter of 50 mm

Answer Key: D

Question No. 13

Gauntlets are used to protect-

A) Eyes

B) Head

C) Ears

D) Hands

Answer Key: D

Question No. 14

Which of the following devices is/are used as safety devices in machines?

A) Fail safe

B) Safety interlocks

C) Limit switches

D) All of the options

Answer Key: D

Question No. 15

What is the full form of NDP in economics?

A) National Domestic Product

B) Net Domestic Product

C) National Domestic Price

D) Net Domestic Price

Answer Key: B

Question No. 16

With which of the following sports is the term 'double fault' associated?

A) Baseball

B) Golf

C) Tennis

D) Bridge

Answer Key: C

Question No. 17

Who among the following was the first woman to become the Chief Justice of a state High Court in India?

A) Fathima Beevi

B) Sujata V. Manohar

C) Leila Seth

D) Ranjana Prakash Desai

Answer Key: C

Question No. 18

Which of the following gases is NOT a Greenhouse gas?

A) Carbon dioxide

B) Nitrous oxide

C) Methane

D) Carbon monoxide

Answer Key: D

Question No. 19

Which of the following is the scientific study of trees?

A) Palynology

B) Mycology

C) Paleontology

D) Dendrology

Answer Key: D

Question No. 20

One byte is made of-

- A) 2 bits
- B) 4 bits
- C) 8 bits
- D) 16 bits

Answer Key: C

Question No. 21

What is the full form of EIA?

- A) Ecological Impact Assessment
- B) Ecological Influence Assurance
- C) Environmental Impact Assessment
- D) Environmental Impact Agency

Answer Key: C

Question No. 22

Which of the following festivals is Jallikattu (Bull taming) associated with?

- A) Onam
- B) Pongal
- C) Vishu
- D) Shivaratri

Answer Key: B

Question No. 23

Which Indian religion is associated with 24 Tirthankaras?

- A) Jainism
- B) Buddhism
- C) Sikhism
- D) Hinduism

Answer Key: A

Question No. 24

What is another name for badminton that originated in India?

- A) Racket
- B) Rugger
- C) Poona
- D) Pasture pool

Answer Key: C

Question No. 25

"Happiness is when what you think, what you say, and what you do are in harmony." - is the quote of-

- A) Osho
- B) Mahatma Gandhi
- C) J Krishnamurti
- D) Annie Besant

Answer Key: B

Question No. 26

Which of the following output devices of a computer is used for training presentations?

- A) Plotter
- B) Projector
- C) Mouse
- D) GPS

Answer Key: B

Question No. 27

In May 2024, phycologists from a _____-based college have found a new species of algae in the Western Ghats.

- | | |
|--------------|-------------------|
| A) Tamilnadu | B) Kerala |
| C) Karnataka | D) Andhra Pradesh |

Answer Key: B

Question No. 28

Who among these clinched the 2023 UN Military Gender Advocate Award for her outstanding service to and active participation in gender-sensitive projects?

- | | |
|----------------------|--------------------------------------|
| A) Shaliza Dhami | B) Squadron Leader Avani Chaturvedi. |
| C) Major Radhika Sen | D) P.T. Usha |

Answer Key: C

Question No. 29

With which of the following was Nobel Laureate Professor Subrahmanyan Chandrasekhar associated?

- | | |
|---------------|--------------|
| A) Physics | B) Chemistry |
| C) Literature | D) Medicine |

Answer Key: A

Question No. 30

The resistance of a conductor is inversely proportional to its-

- | | |
|--------------------------|-----------------------|
| A) Length | B) Temperature |
| C) Area of cross-section | D) All of the options |

Answer Key: C

Question No. 31

The rate at which velocity changes with time is known as-

- | | |
|-------------|-----------------|
| A) Momentum | B) Displacement |
| C) Mass | D) Acceleration |

Answer Key: D

Question No. 32

Which of the following sets are the best insulators?

- | | |
|---|--|
| A) Rubber, glass, plastics, ebonite, cotton, copper | B) Plastics, ebonite, paper, cotton, Bakelite, dry air, rubber |
| C) Silver, copper, gold, iron | D) Bakelite, dry air, paper, ebonite, aluminium |

Answer Key: B

Question No. 33

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

- | | |
|--------------|---------------------|
| A) Decreases | B) Remains constant |
|--------------|---------------------|

C) Is zero

D) Increases

Answer Key: A

Question No. 34

What is the formula for the average velocity of an object whose velocity is changing in a uniform rate?

A) $(\text{initial velocity} \times \text{final velocity}) / 2$

B) $(\text{initial velocity} - \text{final velocity}) / 2$

C) $(\text{initial velocity} + \text{final velocity}) / 2$

D) $(\text{initial velocity} + \text{final velocity})^2 / 2$

Answer Key: C

Question No. 35

Which of the following is an example of acceleration against the direction of motion ?

A) A slowing down train

B) A speeding car

C) A speeding truck

D) A flight at take off

Answer Key: A

Question No. 36

The SI unit of capacitance is-

A) Volt

B) Ohm

C) Pascal

D) Farad

Answer Key: D

Question No. 37

In the _____, the fulcrum lies between the effort and the load.

A) Class 1 lever

B) Class 2 lever

C) Class 3 lever

D) None of the options

Answer Key: A

Question No. 38

If effort is greater than load, then the mechanical advantage is-

A) Zero

B) More than one

C) Less than one

D) Equal to one

Answer Key: C

Question No. 39

The _____ always acts at the centre of gravity of a body.

A) Force

B) Velocity

C) Weight

D) Speed

Answer Key: C

Question No. 40

A _____ is a device used to measure the heat flow of a chemical reaction or physical change.

- A) Tachometer
- C) Calorimeter

- B) Anemometer
- D) Hygrometer

Answer Key: C

Question No. 41

Which of the following coloured bodies absorbs and emits the radiant energy to the best?

- A) White
- C) Black
- B) Red
- D) Blue

Answer Key: C

Question No. 42

Determine the thermal (heat) capacity of iron ball if it requires 5000 J heat energy to raise its temperature by 10°C.

- A) 600 JK⁻¹
- C) 450 JK⁻¹
- B) 500 JK⁻¹
- D) 210 JK⁻¹

Answer Key: B

Question No. 43

If the mass of a ball is 5 kg on Earth, then what would be its mass on Jupiter?

- A) 25 kg
- C) 5 kg
- B) 49 kg
- D) 125 kg

Answer Key: C

Question No. 44

An object of mass 50 kg is moving with a uniform velocity of 4 m/s. What is the kinetic energy possessed by the object?

- A) 200 J
- C) 400 J
- B) 300 J
- D) 500 J

Answer Key: C

Question No. 45

One joule is equivalent to _____ erg.

- A) 10⁻⁷
- C) 10⁵
- B) 10⁻⁵
- D) 10⁷

Answer Key: D

Question No. 46

One joule is equivalent to _____ calories.

- A) 0.02
- C) 2
- B) 0.24
- D) 24

Answer Key: B

Question No. 47

The ratio of the mean absolute error to the mean value of the quantity measured is called-

- A) Absolute error
- B) Relative error
- C) Least count error
- D) Personal error

Answer Key: B

Question No. 48

Conventionally, in an electric circuit the direction of electric current is taken as _____ the flow of electrons.

- A) Diagonal to the direction of
- B) Along the same direction of
- C) Opposite to the direction of
- D) None of the options

Answer Key: C

Question No. 49

A cuboid with length 14 cm and breadth 11 cm and a cylinder have the same height and volume. Find the radius of the base of the cylinder.

- A) 34 cm
- B) 9 cm
- C) 23 cm
- D) 7 cm

Answer Key: D

Question No. 50

A stiff bar that moves freely about a fixed point is a-

- A) Pulley
- B) Screw
- C) Lever
- D) Wedge

Answer Key: C

Question No. 51

The sum of three consecutive odd numbers is 20 more than the first of these numbers. Find the largest of these numbers.

- A) 7
- B) 9
- C) 11
- D) 13

Answer Key: C

Question No. 52

A chessboard has 64 equal squares, each of area 6.25 cm^2 . A border of 2 cm width is fixed around the board. Find the length of a side of the board.

- A) 14 cm
- B) 16 cm
- C) 20 cm
- D) 24 cm

Answer Key: D

Question No. 53

The coefficients of x and y in the equations of parallel lines are-

- A) Unequal
C) Both positive

- B) Proportional
D) Both negative

Answer Key: B

Question No. 54

What is the sum of the reciprocals of two numbers whose sum is 55, their HCF and LCM are 5 and 120, respectively?

- A) $55/620$
C) $120/11$
B) $11/120$
D) $620/55$

Answer Key: B

Question No. 55

If the selling price is Rs.1680, there is a loss of 16%. What should be the marked price on this product, if after allowing discount of 8% there is a profit of 15%?

- A) Rs.2000
C) Rs.2600
B) Rs.2500
D) Rs.2200

Answer Key: B

Question No. 56

With P starting the work, working on alternate days, P and Q can finish a work in 17 days. If Q works on the first day and Q and P work alternately, the work is finished in $53/3$ days. How many days will each take individually to execute the work?

- A) P = $35/3$ days; Q = 35 days
C) P = 12 days; Q = 31 days
B) P = 18 days; Q = $29/5$ days
D) P = 27 days; Q = $23/4$ days

Answer Key: A

Question No. 57

A bus leaves Hyderabad at 5 AM and reaches Warangal at 12 noon. Another bus leaves Warangal at 8 AM and reaches Hyderabad at 3 PM. At what time do they meet?

- A) 9:30 AM
C) 1:30 PM
B) 11:30 AM
D) 10 AM

Answer Key: D

Question No. 58

Find the least number to be added to 57 so that it becomes exactly divisible by 10, 12 and 15.

- A) 3
C) 6
B) 4
D) 5

Answer Key: A

Question No. 59

Find the Arithmetic mean of 12, 19, 14, 23, 21, 16, 30.

- A) 19.29
B) 16.46

C) 17.67

D) 20.12

Answer Key: A

Question No. 60

In a square, find the angle between a diagonal and any side.

A) 90°

B) 45°

C) 60°

D) 30°

Answer Key: B

Question No. 61

P, Q and R share some money such that for every 1 rupee that P gets, Q gets 75 paise and R gets 60 paise. What is the ratio, in which they shared the money?

A) 100 : 25 : 40

B) 25 : 15 : 12

C) 3 : 5 : 6

D) 20 : 15 : 12

Answer Key: D

Question No. 62

Three years ago, the average age of A, B and C was 27 years and that of B and C, 5 years ago, was 20. Find A's present age.

A) 30 years

B) 35 years

C) 40 years

D) 48 years

Answer Key: C

Question No. 63

$\angle AOC$ and $\angle BOC$ form a linear pair. OP and OQ are their bisectors, respectively. $\angle POQ = ?$

A)

B)

60°

100°

C)

D)

90°

None of the options

Answer Key: C

Question No. 64

If 25% of two-thirds of a number is 10, then find the number.

A) 120

B) 75

C) 60

D) 30

Answer Key: C

Question No. 65

Tap X fills a tank in 4 hours, tap Y fills in 6 hours and tap Z empties in 12 hours. If all the 3 taps are turned open, then how many hours will it take to fill the tank fully?

A) 1 hour

B) 2 hours

C) 3 hours

D) 4 hours

Answer Key: C

Question No. 66

A person borrows Rs.5000 for 2 years at 4% per annum Simple Interest. He immediately lends it to another person at 6.25% per annum for 2 years. Find his gain in the transaction per year.

A) Rs.112.50

B) Rs.125

C) Rs.150

D) Rs.167.50

Answer Key: A

Question No. 67

20 litres of a mixture contain milk and water in the ratio 5 : 3. If 4 litres of this mixture is replaced by 4 litres of milk, what is the ratio of milk to water in the new mixture?

A) 2 : 1

B) 7 : 3

C) 8 : 3

D) 4 : 3

Answer Key: B

Question No. 68

The product of two fractions is $\frac{1}{2}$. If one of them is $\frac{16}{23}$, find the other fraction.

A) $\frac{23}{8}$

B) $\frac{23}{32}$

C) $\frac{32}{23}$

D) $\frac{8}{23}$

Answer Key: B

Question No. 69

Which of these values can 'x' take if the given set of numbers has '6' as their HCF?

{18, x, 102, 78, 42, 66}

A) 30

B) 34

C) 44

D) 52

Answer Key: A

Question No. 70

Find the square root of $0.5 \times 11.2 \times 0.07 \times 5$.

A) 14.5

B) 1.96

C) 1.4

D) 2.05

Answer Key: C

Question No. 71

Simplify: $12 + 8 \div 4 - 2 \times 3$

- A) 16
B) 8
C) 12
D) -1

Answer Key: B

Question No. 72

Which of these numbers is a perfect square?

- A) 250
B) 1024
C) 1000
D) 25000

Answer Key: B

Question No. 73

Find the largest 4-digit number that can be exactly divided by 60, 90 and 80.

- A) 9800
B) 9360
C) 9280
D) 8640

Answer Key: B

Question No. 74

Find 0.008% of 120.

- A) 0.96
B) 0.016
C) 0.16
D) 0.0096

Answer Key: D

Question No. 75

What is the acute angle between the hour hand and the minute hand at quarter to five?

- A) 135.5°
B) 115.5°
C) 147.5°
D) 127.5°

Answer Key: D

Question No. 76

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

Statement:

To pass the examination, one must work hard.

Conclusions:

- I. Examination is related to only hard work.
II. All those who do not work hard pass.
III. Without hard work, one does not pass.

IV. Hard-working person is a satisfied person.

- A) Only conclusion I follows
- C) Only conclusion III follows

- B) Only conclusions I and II follow
- D) Only conclusion IV follows

Answer Key: C

Note: Translation error in Telugu and hence mark is awarded to candidates who have taken the exam in Telugu.

Question No. 77

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

Statements:

- 1) Some greens are whites.
- 2) All whites are reds.
- 3) All reds are pinks.
- 4) Some pinks are yellows.

Conclusions:

- I. Some yellows are reds.
- II. Some yellows are whites.
- III. All reds are whites.
- IV. Some yellows are greens.

- A) Only conclusion I follows
- C) Only conclusion III follows

- B) Only conclusion II follows
- D) None of the conclusions follow

Answer Key: D

Question No. 78

Find the missing number in the following series.

25, 52, 27, (...), 29, 92

- A) 62
- C) 82

- B) 72
- D) 92

Answer Key: B

Question No. 79

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

P, Q, R, S and T are friends, and they use different cars—Maruti, Volkswagen, Jaguar, Porsche and Renault. Colours of these cars are—blue, white, black, red and green, but not necessarily in the same order.

- i) P has an Renault, but it is not green.
- ii) Q has a red colour Porsche.
- iii) R has a blue car, but not Maruti.
- iv) T has a black car, which is neither Volkswagen nor Jaguar.
- v) Those who have green car use Volkswagen.

What is the colour of Renault?

- A) Black
B) White
C) Green
D) Blue

Answer Key: B

Question No. 80

If 'LOSE' is coded as 1357 and 'GAIN' is coded as 2468, which of the following stands for 84615?

- A) NAILS
B) SNAIL
C) LANES
D) SLAIN

Answer Key: A

Question No. 81

Complete the series.

Z, W, T, Q, (...)

- A) P
B) O
C) S
D) N

Answer Key: D

Question No. 82

Find the ODD one out from the given options.

- A) R
B) Q
C) N
D) L

Answer Key: B

Question No. 83

Vinod is richer than Raju. Anand is richer than Ashok but not richer than Raju. Ashok is richer than Sanjay but not richer than Vinod. Who among them is the poorest?

- A) Raju
B) Vinod
C) Sanjay
D) Ashok

Answer Key: C

Question No. 84

Complete the series.

A, Z, X, B, V, T, C, R, (...), (...)

- A) P, D
B) E, O
C) Q, E
D) O, Q

Answer Key: A

Question No. 85

If + is replaced with \times and vice versa and 4 is replaced with 5 and vice versa, which alternative is correct?

A) $5 \times 4 + 20 = 40$

B) $5 \times 4 + 20 = 85$

C) $5 \times 4 + 20 = 104$

D) $5 \times 4 + 20 = 90$

Answer Key: C

Question No. 86

Sunny started walking from A and walked 40 m towards south. He then turned left and walked 30 m and reached point B. In which direction is Sunny with reference to the point A and what is the distance between A and B?

A) South-west, 70 m

B) North-west, 50 m

C) West, 70 m

D) South-east, 50 m

Answer Key: D

Question No. 87

Which number will best complete the relationship given below?

40 : 4 :: 60 : ?

A) 2

B) 3

C) 6

D) 8

Answer Key: C

Question No. 88

Find the missing number in the following series.

644, 609, 574, 539, (...), 469, 434

A) 545

B) 520

C) 514

D) 504

Answer Key: D

Question No. 89

A family consists of six members P, Q, R, A, B and C. Q is the son of R but R is not the mother of Q. P and R are married couple. B is the brother of R. A is the daughter of P and C is the brother of P.

How many female members are there in the family?

A) One

B) Two

C) Three

D) Four

Answer Key: B

Question No. 90

Study the following information carefully and choose the correct answer based on the scenario.

Following are the criteria for granting admission to the candidates in the UG course in Mechanical Engineering.

The candidate must:

- (i) Have HSC with 90% marks.
- (ii) Not be more than 18 years of age as on 21.3.2024.
- (iii) Have obtained at least 75% marks in the entrance test.
- (iv) Pay a sum of Rs. 50000 at the time of admission as course fee.

However, if the candidate fulfils all the above criteria except (iii) but have 95% in HSC and at least 70% marks in the entrance test, the case may be referred to the Director of the Institute.

If there is any loss of information in the candidate details, it should be treated as Data Inadequate.

Scenario: Aravind was born on 3rd January 2007. He has secured 72% marks in HSC as well as in the entrance test, and he is ready to pay Rs. 50,000 at the time of admission.

- A) The candidate is to be admitted
- B) The candidate is not to be admitted
- C) This case is to be referred to the Director
- D) Data inadequate

Answer Key: B

Question No. 91

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

Knife: Cut

- A) Winter : summer
- B) Sword : Sharp
- C) Run : Fast
- D) Drill : Hole

Answer Key: D

Question No. 92

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

Statements:

- 1) Some lines are papers.
- 2) All notes are lines.
- 3) No book is paper.

Conclusions:

- I. Some papers are notes.
- II. No paper is note.

- A) Only conclusion I follows
- B) Only conclusion II follows
- C) Either conclusion I or II follows
- D) Both conclusions I and II follow

Answer Key: C

Question No. 93

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

Eight persons—L, M, N, O, P, Q, R and S are sitting around a circular table facing the center but not necessarily in

the same order. Each one of them holds a different post—Manager, Secretary, Chairman, President, Vice President, Group Leader, Financial Advisor and Managing Director.

L sits third to the right of the Managing Director, and only two people sit between the Managing Director and S. The Vice President and the Secretary are immediate neighbours. Neither L nor S is a Vice President or a Secretary. The Vice President is not an immediate neighbour of the Managing Director. The Manager sits second to the left of P. P is not an immediate neighbour of S. The Manager is an immediate neighbour of both the Group Leader and the Financial Advisor. The Financial Advisor sits third to the right of M. M is not the Vice President. N sits to the immediate right of the Chairman. L is not the Chairman. Q is not an immediate neighbour of L. R is not an immediate neighbour of the Manager.

Which of the following posts is held by M in the company?

- A) Chairman
B) Secretary
C) Managing Director
D) Manager

Answer Key: B

Question No. 94

If in a certain code language, 'ns pt kl ch' means 'siva gets marriage gift', 'pt ln wo ch' means 'wife gives marriage gift' and 'tt wo nh' means 'she gives nothing', then what would 'gives' be coded in the same code language?

- A) wo
B) pt
C) nh
D) ch

Answer Key: A

Question No. 95

Praveen is sixth from the left end and Prasanna is tenth from the right end in a row of boys. If there are eight boys between Praveen and Prasanna, how many boys are there in the row?

- A) 21
B) 23
C) 24
D) 25

Answer Key: C

Question No. 96

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

$$3 \times 6 + 2 - 4 \div 8 = 13$$

- A) \times and $-$
B) $+$ and \times
C) $+$ and $-$
D) \div and $+$

Answer Key: D

Question No. 97

A fishing boat sails 9 km south in still water. It then turns east and sails 8 km, turns north and sails 9 km, then turns to its right and sails 12 km. Where is the boat now with respect to its starting position?

- A) 20 km, west
B) 4 km, east
C) 4 km, west
D) 20 km, east

Answer Key: D

Question No. 98

Read the following question and decide which of the statements is sufficient to answer the question.

Question:

What was the grand total of Team A in today's match?

Statements:

I. Raman correctly remembers that team A scored a grand total of above 46 and below 55.

II. Mohan correctly remembers that team A scored a grand total of above 53 but below 63.

- A) Statement I alone is sufficient while statement II alone is not sufficient to answer the question
- B) Statement II alone is sufficient while statement I alone is not sufficient to answer the question
- C) Both statements I and II together are sufficient to answer the question
- D) Either statement I or II is sufficient to answer the question

Answer Key: C

Question No. 99

P has only two daughters Q and C. Q is the wife of D. R is the mother-in-law of D and S. H is the son of S. How is P related to H?

- A) Father
- B) Grandfather (Mother's father)
- C) Brother
- D) Father-in-law

Answer Key: B

Question No. 100

Read the following question and decide which of the statements is sufficient to answer the question.

Question:

Among the persons F, B, H, D, P and L, who is the oldest?

Statements:

I. F is younger than only two persons. P is older than L but younger than H. H is younger than F. B is younger than D.

II. H is older than only two persons. B is older than F but not the oldest. P is older than only L.

- A) Statement I alone is sufficient while statement II alone is not sufficient to answer the question
- B) Statement II alone is sufficient while statement I alone is not sufficient to answer the question
- C) Both statements I and II together are sufficient to answer the question
- D) Either statement I or II is sufficient to answer the question

Answer Key: D