Post Name   : general   **Exam Code**   : MASSXAGE

Exam Date   : 21-06-2024   **Exam Time**   : 9:30AM

Question No. 1

Which of the following grades of leads is the hardest?

A) 6B

B) 5H

C) 4B

D) 6H

Answer Key: D

Question No. 2

Which type of solid has a polygon for a base and triangular lateral faces that intersect at a vertex?

A) Pyramid

B) Prism

C) Cone

D) Torus

Answer Key: A

Question No. 3

What type of line is used for centre lines in engineering drawings?

A) Continuous thick lines

B) Continuous thin lines

C) Dashed thick lines

D) Chain thin lines

Answer Key: D

Question No. 4

A T-square is mainly used for-

A) Measuring angles

B) Drawing horizontal lines

C) Drawing arcs

D) Measuring the dimensions

Answer Key: B

Question No. 5

A/An _____ view is an orthographic view that is projected onto any plane other than the frontal, horizontal or profile plane.

A) Auxiliary

B) Isometric

C) Three-dimensional

D) Perspective

Answer Key: A

Question No. 6

In an orthographic projection, the plane upon which the top view is projected is-

A) Horizontal

B) Frontal

C) Profile

D) Base

Question No. 7

A straight line which is neither horizontal nor vertical is called the-

A) Inclined line only

B) Curved line only

C) Oblique line only

D) Both inclined and oblique lines

Answer Key: D

Question No. 8

In third angle projection method, the object is assumed to be placed in the-

A) First quadrant

B) Second quadrant

C) Third quadrant

D) Fourth quadrant

Answer Key: C

Question No. 9

The interior angle of a regular pentagon is-

A) 72°

B) 108°

C) 120°

D) 150°

Answer Key: B

Question No. 10

If the projection of an object is shown using three views, then it is known as-

A) Perspective projection

B) Isometric projection

C) Oblique projection

D) Orthographic projection

Answer Key: D

Question No. 11

The radius is represented in dimensioning using the-

A) Symbol 'R'

B) Symbol 'SR'

C) Symbol 'Sφ'

D) Symbol 'φ'

Answer Key: A

Question No. 12

The spherical diameter of 75 mm is represented as-

A) SR75

B) Sφ75

C) φ75

D) R75

Answer Key: B

Question No. 13

Which of these is/are NOT a chemical hazard?

A) Fumes

B) Vapours

C) Vibration

D) Gasoline

Answer Key: C

Question No. 14

Which artificial respiration method should NOT be performed on the victim with injuries on the chest and belly?

A) Schafer's method

B) Mouth-to-mouth method

C) Mouth-to-nose method

D) Nelson's arm-lift back pressure method

Answer Key: D

Question No. 15

Which of the following festivals in India is celebrated in the month of January?

A) Pongal

B) Lohri

C) Makar Sankranti

D) All of the options

Answer Key: D

Question No. 16

Which of these is NOT a term used in tennis?

A) Volley

B) Slam Dunk

C) Deuce

D) Second Serve

Answer Key: B

Question No. 17

Kamala Nehru was the mother of-

A) Atal Bihari Vajpayee

B) Indira Gandhi

C) Lal Bahadur Shastri

D) Morarji Desai

Answer Key: B

Question No. 18

Which of the following is NOT a biodegradable waste?

A) Rotting fruit

B) Vegetable peel

C) Dead leaves

D) Polythene bag

Answer Key: D

Question No. 19

What is the term used for the removal of trees from forests?

A) Afforestation

B) Deforestation

C) Desalination

D) Reforestation

Answer Key: B

Question No. 20

Which of the following is considered the brain of the computer?

A) Software   B) Output device

C) Input device   D) CPU

Answer Key: D

Question No. 21

Smog is a mixture of-

A) Snow and Fog   B) Snow and Dust

C) Sulphur dioxide and Fog   D) Smoke and Fog

Answer Key: D

Question No. 22

Dollu Kunitha—a traditional dance form is associated with the worship of-

A) Lord Vishnu   B) Lord Shiva

C) Lord Brahma   D) Lord Murugan

Answer Key: B

Question No. 23

Identify the state(s) that have Legislative Council?

A) Andhra Pradesh   B) Telangana

C) Karnataka   D) All of the options

Answer Key: D

Question No. 24

Which of the following are a type of Microsoft Access database object?

A) Forms   B) Queries

C) Reports   D) All of the options

Answer Key: D

Question No. 25

The ICAR-NBFGR, India's foremost institute for fish genetic resources, discovered a new species of catfish in May 2024 in the _____ stream of Brahmaputra, named Glyptothorax punyabratai.

A) Poonch River   B) Tons

C) Tung   D) Rishi Ganga Kunta

Answer Key: C

Question No. 26

The Spices Board of India clamped down strict measures in May 2024 to curb which chemical contamination in spices being exported abroad?

A) Ethylene oxide   B) Oxygen

C) Hydrogen Sulphide   D) Helium

Answer Key: A

Question No. 27

With which of the following games is Indian Premier League associated?

A) Cricket

B) Tennis

C) Kabaddi

D) Football

Answer Key: A

Question No. 28

Which of the following bodies regulates Mutual Funds in India?

A) RBI

B) SEBI

C) NABARD

D) AMFI

Answer Key: B

Question No. 29

Who is the famous sister of Asha Bhosle?

A) Alka Yagnik

B) Lata Mangeshkar

C) Anuradha Paudwal

D) Suman Kalyanpur

Answer Key: B

Question No. 30

Which of the following have the same unit, ms^{-1}?

A) Speed and momentum

B) Velocity and acceleration

C) Speed and velocity

D) Acceleration and momentum

Answer Key: C

Question No. 31

Electric charges attract and repel each other due to-

A) Gravitational force

B) Electrostatic force

C) Nuclear force

D) Aerodynamic force

Answer Key: B

Question No. 32

Specific heat capacity of lead is 125 $Jkg^{-1}K^{-1}$. If the temperature of a block of 250 g of lead rises by 10 °C on absorbing 5 kJ of heat, then find its heat capacity.

A) 250 $Jkg^{-1}K^{-1}$

B) 500 JK^{-1}

C) 200 JK^{-1}

D) 325 $Jkg^{-1}K^{-1}$

Answer Key: B

Question No. 33

A boy weighing 50 kg runs up a staircase of 40 steps, each of 16 height cm, in 10 s. Calculate his power (Take g = 10 m/s^2)

A) 80 W   B) 120 W

C) 320 W   D) 480 W

Answer Key: C

Question No. 34

The Celsius temperature (t_C) and the Fahrenheit temperature (t_F) are related as-

A) $t_F = (9/5)t_C + 32$ B) $t_F = (9/5)t_C$

C) $t_F = (5/9)t_C$ D) $t_F = (5/9)t_C + 32$

Answer Key: A

Question No. 35

A lady swims a total distance of 350 m in 150 seconds. What is her average speed?

A) 2.33 m /s   B) 2. 67 m /s

C) 2. 48 m / s   D) 2. 93 m /s

Answer Key: A

Question No. 36

If an athlete runs with uniform velocity, but runs in eight different directions to come around the track once, what could be the possibility of the shape of the track?

A) Rectangle   B) Circle

C) Hexagon   D) Octagon

Answer Key: D

Question No. 37

If the mass of a body on the moon is 40 kg, then what is the weight of the body on the earth?

A) 240 kg   B) 392 N

C) 240 N   D) 400 kg

Answer Key: B

Question No. 38

The mass of oil is 11040 kg and volume is 12 m^3, its density would be-

A) 92 kg.m^{-3} B) 920 kg.m^{-3}

C) 210 kg.m^{-3} D) 1.08 kg.m^{-3}

Answer Key: B

Question No. 39

Which of the following is another unit of power?

A) Horse power   B) Hertz

C) Candela   D) Pascal

Answer Key: A

Question No. 40

Which device is used to measure the flow speed of an incompressible fluid?

A) Barometer

B) Venturimeter

C) Thermometer

D) Anemometer

Answer Key: B

Question No. 41

A radio set of 60 watts runs for 50 hours. How many units of electrical energy are consumed in kWh?

A) 3 kWh

B) 7 kWh

C) 9 kWh

D) 11 kWh

Answer Key: A

Question No. 42

One hectare square metre is equal to-

A) $10^2 \ m^2$

B) $10^4 \ m^2$

C) $10^3 \ m^2$

D) $10^5 \ m^2$

Answer Key: B

Question No. 43

The SI unit of thermal conductivity is-

A) W/m^2K

B) mK/W

C) W/mK

D) Km^2/W

Answer Key: C

Question No. 44

How much work is done when one coulomb charge moves against a potential difference of 1 volt?

A) 1 ampere

B) 1 coulomb

C) 1 joule

D) 1 watt

Answer Key: C

Question No. 45

The distance covered per unit time is the _____ of an object.

A) Velocity

B) Speed

C) Momentum

D) Mass

Answer Key: B

Question No. 46

The density of a substance is defined as-

A) Mass per unit volume

B) Mass per unit area

C) Volume per unit mass

D) Weight per unit volume

Question No. 47

The distance between the two consecutive threads of a screw is called the _____ of the screw.

A) Zero error

B) Least count

C) Pitch

D) Fundamental interval

Question No. 48

Two resistors of R Ω and 60 Ω are connected in parallel to get an effective resistance of 24 Ω. Find R.

A) 48

B) 56

C) 40

D) 64

Question No. 49

The lever, pulley, wedge, wheel and axle are types of-

A) Simple machines

B) Complex machines

C) Simple and complex machines

D) None of the options

Question No. 50

An object with its one slanting side ending as a sharp edge is a-

A) Pulley

B) Screw

C) Lever

D) Wedge

Question No. 51

The circumference of the edge of a hemispherical bowl is 132 cm. Find the capacity of the bowl.

A) 19.4 litres

B) 22.1 litres

C) 18.4 litres

D) 20 litres

Question No. 52

A, B, C, D and E are 5 consecutive numbers in increasing order. When one of them is excluded, the sum of the other 4 is decreased by 20%. Which number is excluded?

A) B

B) C

C) A

D) E

Question No. 53
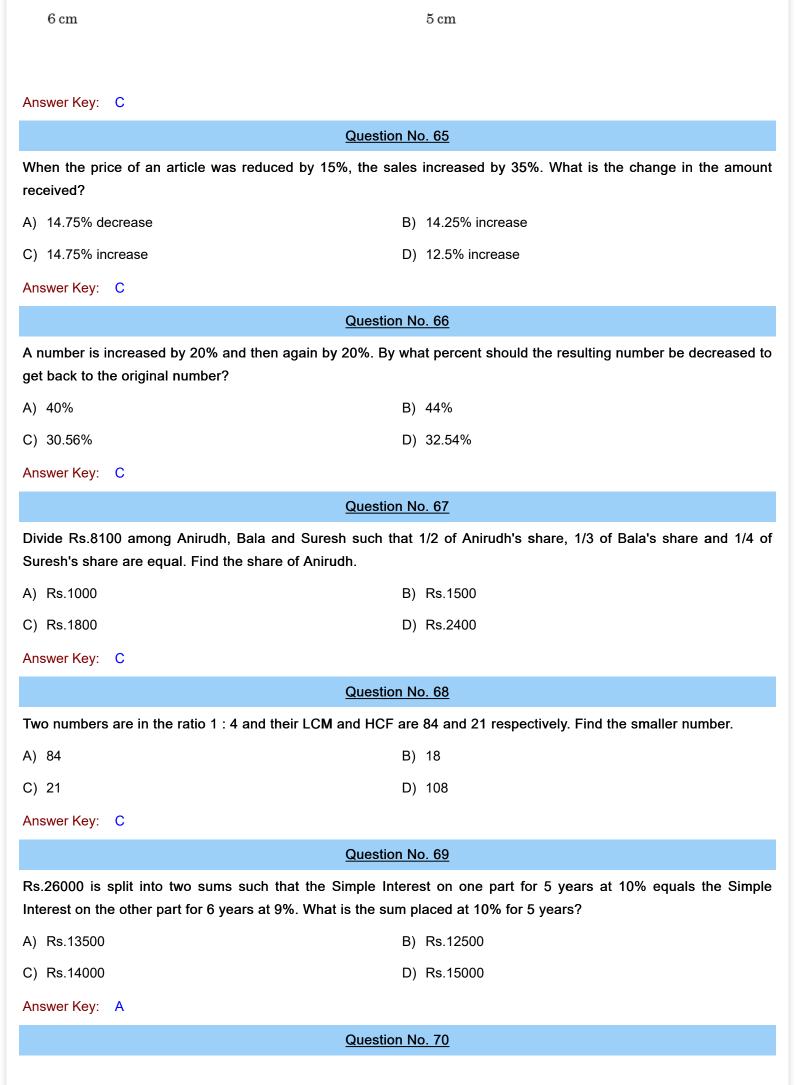
The product of two co-prime numbers is 117. Find their HCF.

A) 1   B) 117

C) 13   D) 7

Answer Key: A

Question No. 54

Find the least number that leaves a remainder 11 when divided by 15, 12 and 16?

A) 251   B) 229

C) 491   D) 500

Answer Key: A

Question No. 55

A trader buys a bag of 25 kg rice and another bag of 30 kg rice both at Rs.30 per kg. He mixes the two varieties and sells it at Rs.40 per kg. What is his profit percent?

A) 4.23%   B) 20.45%

C) 25.78%   D) 33.33%

Answer Key: D

Question No. 56

Find the smallest possible decimal between 0 and 1 using the digits 0, 6, 8, 7, 2 and 1 only once without repetition.

A) 0.087621   B) 0.26781

C) 0.026781   D) 0.012678

Answer Key: D

Question No. 57

The product of two fractions is 14/15 and their quotient is 35/24. Find the larger fraction.

A) 5/4   B) 7/12

C) 5/12   D) 7/6

Answer Key: D

Question No. 58

Find the remainder when 15^{18} is divided by 16.

A) 13   B) 1

C) 0   D) 8

Answer Key: B

Question No. 59

The probability of a question being solved by two students A and B individually are 1/5 and 2/15 respectively. What is the probability that the question is solved by both of them?

A) 2/75   B) 7/15

C) 1/3   D) 23/75

Answer Key: D

Question No. 60

Simplify: 111 ÷ [-5² - 4 + {32 ÷ (22 ÷ (-22 ÷ -2))}].

A) -37   B) 3

C) -5   D) 37

Answer Key: B

Question No. 61

A train overtakes two persons walking along a railway track. The first one walks at 4.5 km/h. The other one walks at 6 km/h. The train needs 4 and 4.2 seconds, respectively, to overtake them. What is the speed of the train, if both persons walk in the same direction as the train?

A) 32 km/h   B) 36 km/h

C) 40 km/h   D) 42 km/h

Answer Key: B

Question No. 62

The ratio of the ages of A and B is 3 : 4 and the difference between their ages is 4 years. What will be their ages four years hence (in years)?

A) 16 and 20   B) 21 and 28

C) 18 and 24   D) 33 and 44

Answer Key: A

Question No. 63

'P' and 'Q' can do a piece of work in 10 days, 'Q' and 'R' in 12 days and 'R' and 'P' in 15 days, If 'Q' alone works for 15 days and then joined by 'P' and 'R', then in how many days will the work be finished?

A) 16 days   B) 14 days

C) 12 days   D) 10 days

Answer Key: A

Question No. 64

In $\triangle ABC$, E is a point on CB such that $\angle CED = \angle CAB$. If CD = 8 cm, CE = 10 cm, DA = 7 cm and AB = 9 cm, then find DE.

A)   B)

8 cm   7.5 cm

C)

6 cm

D)

5 cm

Answer Key: C

| Question No. 65 |

When the price of an article was reduced by 15%, the sales increased by 35%. What is the change in the amount received?

A) 14.75% decrease

B) 14.25% increase

C) 14.75% increase

D) 12.5% increase

Answer Key: C

| Question No. 66 |

A number is increased by 20% and then again by 20%. By what percent should the resulting number be decreased to get back to the original number?

A) 40%

B) 44%

C) 30.56%

D) 32.54%

Answer Key: C

| Question No. 67 |

Divide Rs.8100 among Anirudh, Bala and Suresh such that 1/2 of Anirudh's share, 1/3 of Bala's share and 1/4 of Suresh's share are equal. Find the share of Anirudh.

A) Rs.1000

B) Rs.1500

C) Rs.1800

D) Rs.2400

Answer Key: C

| Question No. 68 |

Two numbers are in the ratio 1 : 4 and their LCM and HCF are 84 and 21 respectively. Find the smaller number.

A) 84

B) 18

C) 21

D) 108

Answer Key: C

| Question No. 69 |

Rs.26000 is split into two sums such that the Simple Interest on one part for 5 years at 10% equals the Simple Interest on the other part for 6 years at 9%. What is the sum placed at 10% for 5 years?

A) Rs.13500

B) Rs.12500

C) Rs.14000

D) Rs.15000

Answer Key: A

| Question No. 70 |

If (x - 1) and (x + 3) are the factors of x² + ax + b, then find the values of 'a' and 'b', respectively.

A) -2, -3

B) -2, 3

C) 2, -3

D) 2, 3

Answer Key: C

Question No. 71

Tap P can fill a tank in 4 hours while tap Q can empty it in 9 hours. What portion of the tank is left unfilled in 6 hours, if both taps are opened?

A) 1/4

B) 1/5

C) 1/6

D) 1/2

Answer Key: C

Question No. 72

Find the greatest number that will divide 36, 75, and 88, so as to leave the same remainder in each case.

A) 9

B) 7

C) 12

D) 13

Answer Key: D

Question No. 73

Two investments, P and Q, are made for 6 years and 10 years at 10% and 12%, respectively. If the interest received from the two investments is equal, then find P : Q.

A) 2 : 1

B) 3 : 1

C) 1 : 3

D) 4 : 1

Answer Key: A

Question No. 74

A clock gains 30 minutes per day. If it is set right at 12 noon, what time will it show at 4 AM?

A) 4:05 AM

B) 4:10 AM

C) 4:20 AM

D) 4:35 AM

Answer Key: C

Question No. 75

Find the least number which when multiplied with 37044 will make it a perfect square.

A) 16

B) 21

C) 25

D) 28

Answer Key: B

Question No. 76

Read the question below followed by two statements. Based on the information, select the option that applies.

Question:
How many children does A have?

Statements:

I. S is the daughter of E who is wife of A.

II. U and Q are brothers of S.

A) Statement I alone is sufficient while II alone is not sufficient to answer the question

B) Statement II alone is sufficient while 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. 77

Which of the following will best complete the relationship given below?

EFH : IJL :: OPR : ?

A) STU

B) TUW

C) STV

D) TUV

Answer Key: C

Question No. 78

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

Statements:

1) All boys are girls.
2) All girls are monkeys.

Conclusions:

I. All monkeys are boys.

II. Some girls are monkeys.

A) Only conclusion I follows

B) Only conclusion II follows

C) Both conclusions I and II follow

D) Either conclusion I or II follows

Answer Key: B

Question No. 79

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

Question:

In which year was Rohan born?

Statements:

I. Rohan's sister, who was born in 1974, is 35 years younger than his father.

II. Rohan at present is 25 years younger than his father.

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

D) Either statement I or II is sufficient to answer the question

Answer Key: C

Question No. 80

Two friends X and Y start from a place A. X moves 20 km towards south and Y moves 15 km towards east. What is the shortest distance between X and Y?

A) 15 km

B) 45 km

C) 50 km

D) 25 km

Answer Key: D

Question No. 81

There are six members in a family, namely, P, Q, R, S, T and U. R is the father of Q but Q is not a female. R and P are a married couple. The sister of Q is U. The brother of R is T. S is the daughter of P.
How is U related to T?

A) Uncle

B) Nephew

C) Niece

D) Brother

Answer Key: C

Question No. 82

Complete the series.

DF, HJ, LN, PR, (…)

A) TV

B) UW

C) VX

D) UV

Answer Key: A

Question No. 83

Find the ODD one out from the given options.

A) BCD

B) AEI

C) FGH

D) JKL

Answer Key: B

Question No. 84

In a certain code language, 'we try to make' is written as '16 63 46 29', 'make it for good' is written as '54 78 63 25', 'we are good boys' is written as '54 65 66 29' and 'boys try it for' is written as '78 46 25 66'.

How can 'boys make' be written in the same code language?

A) 66 63

B) 63 65

C) 78 65

D) 63 78

Answer Key: A

Complete the series.

3, 6, 9, 18, 27, 54, (...)

A) 92

B) 63

C) 81

D) 72

Answer Key: C

If '+' means '÷', '–' means '=', '×' means '+', '÷' means '>', '=' means '<', '>' means '×' and '<' means '–', then which one of the following options is true?

A) 5 + 2 × 1 = 3 + 4 > 1

B) 5 > 2 × 1 – 3 > 4 < 1

C) 5 × 2 < 1 – 3 < 4 × 1

D) 5 < 2 × 1 ÷ 3 > 4 × 1

Answer Key: B

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

Eight persons—Anu, Babu, Sudha, Deepa, Hari, Ravi, Vasu and Gopi—are sitting around a square table in such a way that four of them sit at four corners of the square while four sit in the middle of each of the four sides. The ones who sit at the four corners face the center while those who sit in the middle of the sides face outside.

Vasu neither sits at a corner nor opposite to Gopi. Sudha sits third to the left of Babu. Only two persons sit between Ravi and Gopi, who sits to the immediate left of Sudha. Deepa sits second to the left of Anu, who sits third left of Vasu.

Who among the following sits in front of Deepa?

A) Anu

B) Sudha

C) Gopi

D) Hari

Answer Key: C

If the digits in the number 9678302 are written in descending order within the number, then how many digits will not change their place?

A) One

B) Two

C) Three

D) Four

Answer Key: C

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 PG diploma course.

The candidate must:

(i) Have engineering degree with 65% marks.

(ii) Not be more than 25 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 fulfills all the above criteria except (iii) but have 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: Mahendran was born on 3 September 1997. He has secured 72% marks in graduation in engineering and 75% in the entrance test, and he is ready to pay Rs. 50000 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. 90

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

Rain : Drizzle

A) Swim : Dive

B) Hop : Shuffle

C) Juggle : Bounce

D) Run : Jog

Answer Key: D

Question No. 91

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

Statements:
1) Oxygen is a gas.
2) Cylinders contain gas.

Conclusions:
I. Cylinders contain hydrogen.
II. Cylinders may contain oxygen.

A) Only conclusion I follows

B) Only conclusion II follows

C) Both conclusions I and II follow

D) Neither conclusion I nor II follows

Answer Key: B

Question No. 92

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

Statements:
1) Some reds are blues.

2) Some blues are blacks.

3) All blacks are greys.

Conclusions:

I. Some greys are reds.

II. Some greys are blues.

III. Some blacks are reds.

IV. No blue is red.

A) Only conclusion I follows

B) Only conclusion II follows

C) Only conclusions III and IV follow

D) Only conclusions I and IV follow

Answer Key: B

Question No. 93

Complete the series.

AC, DG, HL, MR, (…)

A) OP

B) GI

C) UV

D) SY

Answer Key: D

Question No. 94

In the following question, correct the equation by interchanging the two signs.

4 x 3 - 6 ÷ 2 + 7 = 8

A) x and ÷

B) + and -

C) + and ÷

D) - and x

Answer Key: B

Question No. 95

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

Twelve people are sitting in two parallel rows containing six people each, in such a way that there is an equal distance between adjacent persons. In row-1, T, U, V, W, X and Y are seated, and all of them are facing south. In row-2, A, B, C, R, S and D are seated, and all of them are facing north. Therefore, in the given seating arrangement each member seated in a row faces another member of the other row.

A sits third to the right of R. Neither A nor R sits at the extreme ends. X faces R. Y does not face A, and Y does not sit at any of the extreme ends. Y is not an immediate neighbour of X. B sits at one of the extreme ends. Only two people sit between B and S. S does not face Y. Two persons sit between V and U. V is not an immediate neighbour of X. C does not face Y. T is not an immediate neighbour of V.

Which of the following is TRUE regarding D?

A) D sits second to the right of C

B) D is not an immediate neighbour of A

C) D sits third to the left of R

D) D is facing Y

Answer Key: D

Question No. 96

In a certain code language, 'JUDICIAL' is written as 'UJIDICLA'. How will 'GLORIOUS' be written in that code language?

A) LGOORISU
B) GLOOIRSU
C) LOURSIGO
D) LGROOISU

Answer Key: D

Question No. 97

Selvam is on the 9th position from upwards and on the 38th position from downwards in a class. How many students are in the class?

A) 47
B) 45
C) 46
D) 48

Answer Key: C

Question No. 98

Complete the series.

31, 26, 21, 16, (…)

A) 10
B) 11
C) 13
D) 15

Answer Key: B

Question No. 99

From a point, Rajneesh started walking towards East and walked 35 metres. He then turned towards his right and walked 20 metres and he again turned right and walked 35 metres. Finally, he turned his left and walked 20 metres and reached his destination. Now, how far is he from his starting point?

A) 50 metres
B) 55 metres
C) 20 metres
D) 40 metres

Answer Key: D

Question No. 100

W is the sister of Y. Z is the brother of Y. S is the mother of Z. How is Y related to S?

A) Either 'nephew' or 'niece'
B) Either 'son' or 'daughter'
C) Either 'father' or 'mother'
D) Either 'grandfather' or 'grandmother'

Answer Key: B