





NIMCET 8th Jun 2024

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Section : **Mathematics****Q.1** The value of the limit

$$\lim_{x \rightarrow 0} \left(\frac{1^x + 2^x + 3^x + 4^x}{4} \right)^{\frac{1}{x}} \text{ is}$$

- A. 1
- B. $3^{1/3!}$
- C. $3^{1/4}$
- D. $4^{1/4}$


Ans  1. C
 2. D
 3. B
 4. A

Question ID : **691186638**Status : **Answered**

Chosen Option : 4

Q.2 The vector $\vec{A} = (2x + 1)\hat{i} + (x^2 - 6y)\hat{j} + (xy^2 + 3z)\hat{k}$ is a

- A. sink field
- B. solenoidal field
- C. source field
- D. none of these

Ans  1. A
 2. D
 3. C
 4. B

Question ID : **691186640**Status : **Answered**

Chosen Option : 2

Q.3 Consider the function $f(x) = x^{2/3}(6 - x)^{1/3}$. Which of the following statement is FALSE?

- A. f is increasing in the interval $(0, 4)$
- B. f is decreasing in the interval $(6, \infty)$
- C. f has a point of inflection at $x = 0$
- D. f has a point of inflection at $x = 6$

Ans  1. B
 2. D
 3. C
 4. A

Question ID : 691186636

Status : Answered

Chosen Option : 3

Q.4

Consider the function $f(x) = \begin{cases} -x^3 + 3x^2 + 1, & \text{if } x \leq 2 \\ \cos(x), & \text{if } 2 < x \leq 4 \\ e^{-x}, & \text{if } x > 4 \end{cases}$

Which of the following statements about $f(x)$ is true:

- A. $f(x)$ has a local maximum at $x=1$, which is also the global maximum.
- B. $f(x)$ has a local maximum at $x=2$, which is not the global maximum.
- C. $f(x)$ has a local maximum at $x=\pi$, but it is not the global maximum.
- D. $f(x)$ has a global maximum at $x=0$.





Ans  1. D
 2. C
 3. A
 4. B

Question ID : 691186645

Status : Answered

Chosen Option : 3

Q.5 If the perpendicular bisector of the line segment joining $p(1,4)$ and $q(k,3)$ has y-intercept -4 , then the possible values of k are

Ans  1. -3 and 3
 2. -2 and 2
 3. -4 and 4
 4. -1 and 1

Question ID : 691186621

Status : Answered

Chosen Option : 3

Q.6 There are 9 bottle labelled 1, 2, 3, . . . , 9 and 9 boxes labelled 1, 2, 3, . . . , 9. The number of ways one can put these bottles in the boxes so that each box gets one bottle and exactly 5 bottles go in their corresponding numbered boxes is

- A. $9 \times {}^9C_5$
- B. $5 \times {}^9C_5$
- C. $25 \times {}^9C_5$
- D. $4 \times {}^9C_5$

Ans  1. A

 2. B

 3. D

 4. C

Question ID : 691186614

Status : Answered

Chosen Option : 1

Q.7 The number of one-one functions
 $f : \{1, 2, 3\} \rightarrow \{a, b, c, d, e\}$
is

- A. 125
- B. 60
- C. 243
- D. None of the above

Ans  1. B

 2. A

 3. C

 4. D

Question ID : 691186631

Status : Answered

Chosen Option : 4

Q.8

The value of $\tan\left(\frac{\pi}{4} + \theta\right) \tan\left(\frac{3\pi}{4} + \theta\right)$ is

- A. -2
- B. 2
- C. 1
- D. -1

Ans  1. D

 2. B

 3. C

 4. A


Question ID : 691186658

Status : Answered

Chosen Option : 3

Q.9 A critical orthopedic surgery is performed on 3 patients. The probability of recovering a patient is 0.6. Then the probability that after surgery, exactly two of them will recover is

Ans  1. 0.123

 2. 0.234

 3. 0.321

 4. 0.432

Question ID : 691186657

Status : Answered

Chosen Option : 4

Q.10 If three distinct numbers are chosen randomly from the first 100 natural numbers, then the probability that all three of them are divisible by both 2 and 3 is

Ans  1. 4/1155

 2. 4/25

 3. 4/33

 4. 4/35

Question ID : 691186616

Status : Answered

Chosen Option : 2

Q.11 If (4, 3) and (12, 5) are the two foci of an ellipse passing through the origin, then the eccentricity of the ellipse is

- A. $\frac{\sqrt{13}}{9}$
- B. $\frac{\sqrt{13}}{18}$
- C. $\frac{\sqrt{17}}{18}$
- D. $\frac{\sqrt{17}}{9}$

Ans  1. A
 2. D
 3. B
 4. C

Question ID : 691186653

Status : Answered

Chosen Option : 2

Q.12 Given a set A with median $m_1 = 2$ and set B with median $m_2 = 4$
What can we say about the median of the combined set?

- A. at most 1
- B. at most 2
- C. at least 1
- D. at least 2

Ans  1. A
 2. D
 3. C
 4. B

Question ID : 691186650

Status : Answered

Chosen Option : 3

Q.13 The number of distinct real values of λ for which the vectors
 $\lambda^2 \hat{i} + \hat{j} + \hat{k}, \hat{i} + \lambda^2 \hat{j} + \hat{k}$ and $\hat{i} + \hat{j} + \lambda^2 \hat{k}$
 are coplanar is

- A. 1
- B. 2
- C. 3
- D. 6

Ans  1. C
 2. A
 3. D
 4. B

Question ID : 691186628

Status : Answered

Chosen Option : 2

Q.14 If for non-zero x , $cf(x) + df\left(\frac{1}{x}\right) = |\log|x|| + 3$, where $c \neq d$, then
 $\int_1^e f(x)dx =$

- A. $\frac{(c-d)(2e-1)}{c^2-d^2}$
- B. $\frac{(c-d)(3e-2)}{c^2-d^2}$
- C. $\frac{(c-d)(3e+2)}{c^2-d^2}$
- D. $\frac{(c-d)(2e+1)}{c^2-d^2}$

Ans  1. D
 2. C
 3. A
 4. B

Question ID : 691186646

Status : Answered

Chosen Option : 2

Q.15 Find the cardinality of the set C which is defined as

$$C = \{x \mid \sin 4x = \frac{1}{2} \text{ for } x \in (-9\pi, 3\pi)\}.$$

- A. 24
- B. 48
- C. 36
- D. 12

Ans  1. A
 2. C
 3. B
 4. D




Question ID : **691186652**
 Status : **Answered**
 Chosen Option : **3**

Q.16 Let $f : \mathbb{R} \rightarrow \mathbb{R}$ be a function such that $f(0) = \frac{1}{\pi}$ and

$$f(x) = \frac{x}{e^{\pi x} - 1} \text{ for } x \neq 0$$

Then

- A. $f(x)$ is not continuous at $x = 0$
- B. $f(x)$ is continuous but not differentiable at $x = 0$
- C. $f(x)$ is differentiable at $x = 0$ and $f'(0) = -\frac{\pi}{2}$
- D. None of the above

Ans  1. A
 2. D
 3. C
 4. B

Question ID : **691186627**
 Status : **Answered**
 Chosen Option : **2**

Q.17 It is given that the mean, median and mode of a data set is $1, 3^x$ and 9^x respectively. The possible values of the mode is

- A. 1, 4
- B. 1, 9
- C. 3, 9
- D. 9, 8

Ans  1. A
 2. B
 3. D
 4. C

Question ID : 691186626
Status : Answered
Chosen Option : 4

Q.18 The equation $3x^2 + 10xy + 11y^2 + 14x + 12y + 5 = 0$ represents

- A. a circle
- B. an ellipse
- C. a hyperbola
- D. a parabola

Ans  1. A
 2. D
 3. C
 4. B

Question ID : 691186637
Status : Answered
Chosen Option : 4

Q.19

The value of $f(1)$ for $f\left(\frac{1-x}{1+x}\right) = x + 2$ is

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

Ans  1. D
 2. A
 3. C
 4. B

Question ID : 691186648
Status : Answered
Chosen Option : 3

Q.20 Which of the following is TRUE?

- A. If f is continuous on $[a, b]$, then $\int_a^b xf(x) dx = x \int_a^b f(x) dx$
- B. $\int_0^3 e^{x^2} dx = \int_0^5 e^{x^2} dx + \int_5^3 e^{x^2} dx$
- C. If f is continuous on $[a, b]$, then $\frac{d}{dx} \left(\int_a^b f(x) dx \right) = f(x)$
- D. Both (a) and (b)

Ans  1. A

 2. B

 3. C

 4. D

Question ID : 691186634

Status : Answered

Chosen Option : 4

Q.21

The value of $\sum_{r=1}^n \frac{1}{2^n} \frac{nP_r}{r!}$ is:

- A. 2^n
- B. $1 - 2^{-n}$
- C. $2^n - 1$
- D. $2^{2n} - 1$

Ans  1. C

 2. D

 3. A

 4. B

Question ID : 691186641

Status : Answered

Chosen Option : 1

Q.22 Out of a group of 50 students taking examinations in Mathematics, Physics, and Chemistry, 37 students passed Mathematics, 24 passed Physics, and 43 passed Chemistry. Additionally, no more than 19 students passed both Mathematics and Physics, no more than 29 passed both Mathematics and Chemistry, and no more than 20 passed both Physics and Chemistry. What is the maximum number of students who could have passed all three examinations?

Ans  1. 9

 2. 12

 3. 14

 4. 10

Question ID : 691186659

Status : Answered

Chosen Option : 1

Q.23 A committee of 5 is to be chosen from a group of 9 people. The probability that a certain married couple will either serve together or not at all is

- Ans  1. $\frac{5}{9}$
 2. $\frac{4}{9}$
 3. $\frac{1}{2}$
 4. $\frac{2}{3}$

Question ID : 691186617

Status : Answered

Chosen Option : 2

Q.24

If $x = 1 + \sqrt[6]{2} + \sqrt[6]{4} + \sqrt[6]{8} + \sqrt[6]{16} + \sqrt[6]{32}$, then $(1 + \frac{1}{x})^{24} =$

- A. 1
 B. 4
 C. 16
 D. 24

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

Question ID : 691186612

Status : Answered

Chosen Option : 1

Q.25 For what values of λ does the equation $6x^2 - xy + \lambda y^2 = 0$ represents two perpendicular lines and two lines inclined at an angle of $\pi/4$.

- A. -6 and -2
 B. 6 and 1
 C. -6 and -35
 D. -6 and 1

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

Question ID : 691186643

Status : Answered

Chosen Option : 4

Q.26 A speaks truth in 40% and B in 50% of the cases. The probability that they contradict each other while narrating some incident is:

- Ans ☒ 1. $1/3$
☒ 2. $1/2$
☒ 3. $1/4$
☒ 4. $2/3$

Question ID : 691186618

Status : Answered

Chosen Option : 1

Q.27

The value of $\lim_{x \rightarrow 0} \frac{e^x - e^{-x} - 2x}{1 - \cos x}$ is equal to

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

- Ans ☒ 1. C
☒ 2. D
☒ 3. A
☒ 4. B

Question ID : 691186654

Status : Answered

Chosen Option : 2

Q.28 If one AM (Arithmetic mean) 'a' and two GM's (Geometric means) p and q be inserted between any two positive numbers, the value of $p^3 + q^3$ is

- A. $2apq$
 B. pq/a
 C. $2pq/a$
 D. $p+q+a$

- Ans ☒ 1. A
☒ 2. C
☒ 3. D
☒ 4. B

Question ID : 691186620

Status : Answered

Chosen Option : 1

Q.29 If $|F| = 40\text{N}$ (Newtons), $|D| = 3\text{m}$, and $\theta = 60^\circ$, then the work done by F acting from P to Q is

- A. $60\sqrt{3}\text{J}$
- B. 120J
- C. $60\sqrt{2}\text{J}$
- D. 60J

Ans  1. D

 2. C

 3. A

 4. B

Question ID : 691186655

Status : Answered

Chosen Option : 3

Q.30 For an invertible matrix A , which of the following is not always true:

- A. $|\text{adj}(A)| \neq 0$
- B. $|A| \neq 0$
- C. $|AA^{-1}| = 1$
- D. $|A(\text{adj}(A))| \neq 1$

Ans  1. A

 2. B

 3. C

 4. D

Question ID : 691186613

Status : Answered

Chosen Option : 4

Q.31

Let
$$f(x) = \begin{cases} x^2 \sin \frac{1}{x}, & x \neq 0 \\ 0, & x = 0 \end{cases}$$

Then which of the following is true

- A. $f(x)$ is not continuous at $x=0$
- B. $f(x)$ is not differentiable at $x=0$
- C. $f'(x)$ is not continuous at $x=0$
- D. $f'(x)$ is continuous at $x=0$

Ans  1. B

 2. D

 3. C

 4. A

Question ID : 691186623

Status : Answered

Chosen Option : 4

Q.32 The two parabolas $y^2 = 4a(x + c)$ and $y^2 = 4bx$, $a > b > 0$ cannot have a common normal unless

- A. $c > 2(a + b)$
- B. $c > 2(a - b)$
- C. $c < 2(a - b)$
- D. $c < \frac{2}{a-b}$

Ans  1. D

 2. C

 3. B

 4. A

Question ID : 691186644

Status : Answered

Chosen Option : 1

Q.33 A coin is thrown 8 number of times. What is the probability of getting a head in an odd number of throw?

Ans  1. 1/8

 2. 1/2

 3. 3/4

 4. 1/4

Question ID : 691186630

Status : Answered

Chosen Option : 4

Q.34 The value of m for which volume of the parallelepiped is 4 cubic units whose three edges are represented by $a = mi + j + k$, $b = i - j + k$, $c = i + 2j - k$ is

Ans  1. -1

 2. 1

 3. 0

 4. -2

Question ID : 691186615

Status : Answered

Chosen Option : 3

Q.35 At how many points the following curves intersect

$$\frac{y^2}{9} - \frac{x^2}{16} = 1 \text{ and } \frac{x^2}{4} + \frac{(y-4)^2}{16} = 1$$

- A. 0
- B. 1
- C. 2
- D. 4





Ans  1. A
 2. B
 3. D
 4. C

Question ID : 691186625

Status : Answered

Chosen Option : 4

Q.36 Among the given numbers below, the smallest number which will be divided by 9, 10, 15 and 20, leaves the remainders 4, 5, 10, and 15, respectively

Ans  1. 355
 2. 85
 3. 265
 4. 535

Question ID : 691186611

Status : Answered

Chosen Option : 4

Q.37 The number of solutions of

$$5^{1 + |\sin x| + |\sin x|^2 + \dots} = 25$$

for $x \in (-\pi, \pi)$ is

- A. 2
- B. 0
- C. 4
- D. ∞

Ans  1. D
 2. A
 3. C
 4. B

Question ID : 691186629

Status : Answered

Chosen Option : 1

Q.38 A man starts at the origin O and walks a distance of 3 units in the north-east direction and then walks a distance of 4 units in the north-west direction to reach the point P . then \overline{OP} is equal to

- A. $\frac{1}{\sqrt{2}}(-\hat{i} + \hat{j})$
 B. $\frac{1}{2}(\hat{i} + \hat{j})$
 C. $\frac{1}{\sqrt{2}}(\hat{i} - 7\hat{j})$
 D. $\frac{1}{\sqrt{2}}(-\hat{i} + 7\hat{j})$

Ans  1. D

 2. C

 3. B

 4. A

Question ID : 691186660

Status : Answered

Chosen Option : 3

Q.39 If $\sin x = \sin y$ and $\cos x = \cos y$, then the value of $x - y$ is

- A. $\pi/4$
 B. $n\pi/2$
 C. $n\pi$
 D. $2n\pi$

Ans  1. B

 2. A

 3. C

 4. D

Question ID : 691186639

Status : Answered

Chosen Option : 2

Q.40 The system of equations $x+2y+2z=5$, $x+2y+3z=6$, $x+2y+\lambda z=\mu$ has infinitely many solutions if

- A. $\lambda \neq 2$
 B. $\lambda \neq 2, \mu \neq 5$
 C. $\lambda = 2, \mu = 5$
 D. $\mu \neq 5$

Ans  1. A

 2. B

 3. C

 4. D

Question ID : 691186619

Status : Answered

Chosen Option : 1

Q.41 Let C denote the set of all tuples (x,y) which satisfy $x^2 = 2^y$ where x and y are natural numbers. What is the cardinality of C?

- A. 0
- B. 1
- C. 2
- D. 3

Ans  1. A
 2. B
 3. C
 4. D

Question ID : 691186649
Status : Answered
Chosen Option : 4

Q.42 If $f(x) = \cos[\pi^2]x + \cos[-\pi^2]x$, where $[.]$ stands for the greatest integer function, then $f(\pi/2) =$

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

Ans  1. D
 2. C
 3. A
 4. B

Question ID : 691186622
Status : Answered
Chosen Option : 3

Q.43 If the line $a^2x + ay + 1 = 0$, for some real number a , is normal to the curve $xy = 1$ then

- A. $a < 0$
- B. $0 < a < 1$
- C. $a > 0$
- D. $-1 < a < 1$

Ans  1. D
 2. A
 3. B
 4. C

Question ID : 691186633
Status : Answered
Chosen Option : 3

Q.44 Region R is defined as region in first quadrant satisfying the condition $x^2 + y^2 < 4$. Given that a point $P=(r,s)$ lies in R, what is the probability that $r>s$?

- A. 1
- B. 0
- C. 1/2
- D. 1/3

Ans  1. B
 2. A
 3. D
 4. C

Question ID : 691186651

Status : Answered

Chosen Option : 2

Q.45 Lines L_1, L_2, \dots, L_{10} are distinct among which the lines $L_2, L_4, L_6, L_8, L_{10}$ are parallel to each other and the lines L_1, L_3, L_5, L_7, L_9 pass through a given point C. The number of point of intersection of pairs of lines from the complete set $L_1, L_2, L_3, \dots, L_{10}$ is

- A. 24
- B. 25
- C. 26
- D. 27

Ans  1. C
 2. B
 3. D
 4. A

Question ID : 691186647

Status : Answered

Chosen Option : 2

Q.46 Let A and B be two events defined on a sample space Ω . Suppose A^c denotes the complement of A relative to the sample space Ω . Then the probability $P((A \cap B^c) \cup (A^c \cap B))$ equals

- A. $P(A)+P(B)+P(A \cap B)$
- B. $P(A)+P(B)-P(A \cap B)$
- C. $P(A)+P(B)+2P(A \cap B)$
- D. $P(A)+P(B)-2P(A \cap B)$

Ans  1. A
 2. B
 3. D
 4. C

Question ID : 691186656

Status : Answered

Chosen Option : 1

Q.47 How much work does it take to slide a crate for a distance of 25 m along a loading dock by pulling on it with a 180 N force where the dock is at an angle of 45° from the horizontal?

- A. 3.18198×10^3 J
- B. 3.18198×10^2 J
- C. 3.4341×10^3 J
- D. 3.4341×10^4 J

Ans  1. B
 2. D
 3. C
 4. A

Question ID : **691186635**

Status : **Answered**

Chosen Option : 4

Q.48 The value of series

$$\frac{2}{3!} + \frac{4}{5!} + \frac{6}{7!} + \dots, \text{ is}$$

- A. $2e^{-2}$
- B. e^{-2}
- C. e^{-1}
- D. $2e^{-1}$





Ans  1. C
 2. B
 3. A
 4. D

Question ID : **691186624**

Status : **Answered**

Chosen Option : 3

Q.49 The points $(1, 1/2)$ and $(3, -1/2)$ are

Ans  1. On the same side of the line $2x+3y = 6$
 2. On the opposite side of the line $2x+3y = -6$
 3. In between the lines $2x+3y=6$ and $2x+3y = -6$
 4. On the same side of the line $2x+3y = -6$

Question ID : **691186632**

Status : **Answered**

Chosen Option : 3

Q.50 Let Z be the set of all integers, and consider the sets $X = \{(x, y): x^2 + 2y^2 = 3, x, y \in Z\}$ and $Y = \{(x, y): x > y, x, y \in Z\}$. Then the number of elements in $X \cap Y$ is:

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

Ans  1. D

 2. C

 3. A

 4. B

Question ID : 691186642

Status : Answered

Chosen Option : 3

Section : Analytical Ability & Logical Reasoning

Q.1 Study the following information carefully and answer the given question:
Eight friends A, B, C, D, E, F, G, and H are sitting on a round table facing the centre. A sits second to the left of D, who sits third to the left of E. C sits third to the right of G, who is not an immediate neighbour of E. H sits opposite to the E. B is between A and C.
Who sits opposite to A?

Ans  1. E

 2. F

 3. D

 4. G

Question ID : 691186661

Status : Answered

Chosen Option : 4

Q.2 A cat climbs a 21-meter pole. In the first minute it climbs 3 meter and in the second minute it descends one meter. In how minutes the cat would reach the top of the pole?

Ans  1. 20 minutes

 2. 21 minutes

 3. 19 minutes

 4. 18 minutes

Question ID : 691186685

Status : Answered

Chosen Option : 3

Q.3 Select the one which is different from the other three.

- Ans ☒ 1. NKS
☒ 2. OLT
☒ 3. HEM
☒ 4. JGP

Question ID : **691186668**
Status : **Answered**
Chosen Option : **4**

Q.4 In a reality show, two judges independently provided marks based on the performance of the participants. If the marks provided by the second judge are given by $Y = 10.5 + 2X$, where X is the marks provided by the first judge. If the variance of the marks provided by the second judge is 100, then the variance of the marks provided by the first judge is:

- Ans ☒ 1. 99
☒ 2. 25
☒ 3. 49.5
☒ 4. 50

Question ID : **691186672**
Status : **Answered**
Chosen Option : **3**

Q.5 Arrange the words given below in a meaningful sequence.
(1)Software (2) Code (3) Data (4) Analysis (5) Report

- Ans ☒ 1. 3, 1, 2, 5, 4
☒ 2. 5, 4, 3, 1, 2
☒ 3. 2, 1, 5, 3, 4
☒ 4. 3, 1, 2, 4, 5

Question ID : **691186675**
Status : **Answered**
Chosen Option : **4**

Q.6 This question contains six statements followed by four sets of combinations of three. Choose the set in which the combinations are most logically related.

- A. All falcons fly high.
B. All falcons are blind
C. All falcons are birds
D. All birds are yellow
E. All birds are thirsty
F. All falcons are yellow

- Ans ☒ 1. DEF
☒ 2. CDF
☒ 3. BCA
☒ 4. ABC

Question ID : **691186677**
Status : **Answered**
Chosen Option : **1**

Q.7 In the half yearly exam only 60% of the students were passed. Out of these (passed in half-yearly) only 70% students are passed in annual exam, out of remaining students (who fail in half-yearly exam) 80% passed in annual exam. What percent of the students passed the annual exam?

- Ans** ☒ 1. 72%
☒ 2. 76%
☒ 3. 65%
☒ 4. 74%

Question ID : **691186662**

Status : **Answered**

Chosen Option : **3**

Q.8 What is the value of $x^2 + y^2 = ?$

Statement I: $xy = 5$

Statement II: $x + y = 10$

- A. Choose this option if the question can be answered by using one of the statements alone, but cannot be answered using the other statement
 B. Choose this option if the question can be answered by using both the statements together, but cannot be answered using either statement alone.
 C. Choose this option if the question can be answered by using either statement alone
 D. Choose this option if the question cannot be answered even by using both the statements together

- Ans** ☒ 1. D
☒ 2. C
☒ 3. A
☒ 4. B

Question ID : **691186665**

Status : **Answered**

Chosen Option : **1**

Q.9 Which pairs of bits can be joined together to form two words that have opposite meanings?

ERT	UCE	DES	END	EXP	EAR	AND	SIP	RED	GOS
1	2	3	4	5	6	7	8	9	10

- A. (9, 2), (5, 7)
 B. (1, 3), (8, 10)
 C. (1, 5), (10, 8)
 D. (4, 2), (7, 8)

- Ans** ☒ 1. D
☒ 2. C
☒ 3. A
☒ 4. B

Question ID : **691186670**

Status : **Not Attempted and Marked For Review**

Chosen Option : **--**

Q.10 Two cars, Car A and Car B, are traveling on a highway. Car A starts from point X and travels at a constant speed of 60 km/h, while Car B starts from the same point X but travels at a constant speed of 80 km/h. If both cars travel for 1.5 hours, what is the difference in distance covered by Car B compared to Car A?

- Ans ☒ 1. 30 KM
☐ 2. 20 KM
☐ 3. 35 KM
☐ 4. 25 KM

Question ID : 691186682

Status : Answered

Chosen Option : 4

Q.11 In a recent survey of 500 employees in a company, it was found that 60% of the employees prefer coffee over tea, 25% prefer tea over coffee, and the remaining 15% have no preference. If 20% of the employees who prefer coffee are also tea drinkers, how many employees prefer only tea?

- Ans ☒ 1. 65
☐ 2. 75
☐ 3. 50
☐ 4. 55

Question ID : 691186686

Status : Answered

Chosen Option : 1

Q.12 Which out of the following words will appear last in the dictionary

- Ans ☐ 1. Complete
☐ 2. Complicit
☐ 3. Compliment
☒ 4. Compline

Question ID : 691186690

Status : Answered

Chosen Option : 4

Q.13 Looking at the portrait of a man, Lucky (male) said, "This person is the only child of my paternal grandmother's daughter." Whose portrait was Lucky looking at?

- Ans ☐ 1. His brother
☒ 2. His cousin
☐ 3. His uncle
☐ 4. Himself

Question ID : 691186689

Status : Answered

Chosen Option : 4

Q.14 In which year was Arjun born?

Arjun at present is 25 years younger to his mother.

Arjun's brother, who was born in 1964, is 35 years younger to his mother.

Ans ☒ 1. 1954

☐ 2. 1964

☐ 3. 1974

☐ 4. 1944

Question ID : 691186664

Status : Answered

Chosen Option : 3

Q.15 You are on an island with two tribes. One tribe always tells the truth, and the other tribe always lies. You meet three individuals from the island: A, B, and C. Each individual belongs to one of the tribes. You ask each of them the same question: "Is B a truth-teller?"

Here are their responses:

A says, "Yes, B is a truth-teller."

B says, "No, I am not a truth-teller."

C says, "B is a liar."

Given that each individual is either a truth-teller or a liar, who is telling the truth?

Ans ☒ 1. C only

☐ 2. Both B and C

☐ 3. B only

☐ 4. A only

Question ID : 691186679

Status : Answered

Chosen Option : 2

Q.16 Odometer is to mileage as Compass is to

Ans ☒ 1. Direction

☐ 2. Hiking

☐ 3. Speed

☐ 4. Needle

Question ID : 691186683

Status : Answered

Chosen Option : 1

Q.17 If 30th September, 1991 was a Wednesday, then what was the day on 14th March 1992?

Ans ☐ 1. Wednesday

☐ 2. Saturday

☒ 3. Monday

☐ 4. Sunday

Question ID : 691186667

Status : Answered

Chosen Option : 1

Q.18 Select the pair of words, which are related in the same way as the capitalized words are related to each other.

DATA : GRAPH

- Ans**
- ☒ 1. Plant : Leaf
 - ☒ 2. Mother : Father
 - ☒ 3. Water : Glass
 - ☒ 4. Milk : Butter

Question ID : **691186692**

Status : **Answered**

Chosen Option : 4

Q.19 After allowing 20% cash discount, a trader still earns a profit of 11.11%. How much above the cost price, the trader marks his goods?

- Ans**
- ☒ 1. 38.88%
 - ☒ 2. 30.33%
 - ☒ 3. 28%
 - ☒ 4. 40%

Question ID : **691186684**

Status : **Answered**

Chosen Option : 1

Q.20 In the following question, three statements and three conclusions are given.

Statements: 1. All students are intelligent.

2. No intelligent person is lazy.

3. Some lazy people are poor

Conclusions: 1. No student is lazy.

2. Some poor people are not intelligent.

3. All poor people are lazy.

Find out the most appropriate conclusion(s) from the following options.

- Ans**
- ☒ 1. Only conclusion 2 follows
 - ☒ 2. Only conclusions 1 and 2 follow
 - ☒ 3. Only conclusion 1 follows
 - ☒ 4. Only conclusions 2 and 3 follow

Question ID : **691186666**

Status : **Answered**

Chosen Option : 2

Q.21 At what time between 2 pm and 3 pm, will the hour and minute hands of a clock point in opposite directions (diametrically opposite)?

- A. 2:45 pm
- B. 2:44 pm
- C. $2:43\frac{9}{11}$ pm
- D. $2:43\frac{7}{11}$ pm

Ans  1. A
 2. B
 3. D
 4. C





Question ID : **691186669**
Status : **Answered**
Chosen Option : 4

Q.22 Ramu visits Delhi on every 15 days and Samu goes to Delhi every 20 days. They met at Delhi 5 days back. After how many days, from today, they will meet at Delhi next time?

Ans  1. 60
 2. 35
 3. 55
 4. 65





Question ID : **691186674**
Status : **Answered**
Chosen Option : 2

Q.23 In certain languages, HEART is written as 2018010508, and LUNGS is written as 1907142112. If BRAIN is written in that language, what will be the last number?

Ans  1. 9
 2. 4
 3. 5
 4. 2

Question ID : **691186663**
Status : **Answered**
Chosen Option : 2

Q.24 From the given options, find the pair which is like the given pair 8:4

Ans  1. 72:24
 2. 45:5
 3. 27:9
 4. 216:32

Question ID : **691186676**
Status : **Answered**
Chosen Option : 1

Q.25 In a tournament, many teams participated. All teams in the tournament have 5 to 15 players. If a team has more than 10 players, then they have reversible t-shirts. Based only on the information above, which of the following must be true?

- Ans ☒ 1. Only people on teams can have reversible t-shirts.
- ☒ 2. Teams that have 13 players have reversible t-shirts.
- ☒ 3. Teams with 8 players do not have reversible t-shirts.
- ☒ 4. Teams that have 12 players do not have reversible t-shirts.

Question ID : 691186688

Status : Not Answered

Chosen Option : --

Q.26 This question contains six statements followed by four sets of combinations of three. Choose the set in which the combinations are most logically related.

- A. Some buildings are not skyscrapers
- B. Some skyscrapers are not buildings
- C. No structure is a skyscraper
- D. All skyscrapers are structures
- E. Some skyscrapers are buildings
- F. Some structures are not buildings

- Ans ☒ 1. FDA
- ☒ 2. BDF
- ☒ 3. ACF
- ☒ 4. ACE

Question ID : 691186678

Status : Answered

Chosen Option : 1

Q.27 Which one of the following is the odd one from the given alternative?

- Ans ☒ 1. Highest education
- ☒ 2. Age
- ☒ 3. Salary
- ☒ 4. Years of experience

Question ID : 691186671

Status : Answered

Chosen Option : 2

Q.28 Aryan bought 100 shares of a company at ₹50 per share. He paid a brokerage fee of 2% on the purchase. Later, he sold all the shares at ₹55 per share and paid a brokerage fee of 2% on the sale. What is Aryan's net profit percentage on his investment?

- Ans ☒ 1. 6%
- ☒ 2. 6.1%
- ☒ 3. 5.69%
- ☒ 4. 5.5%

Question ID : 691186680

Status : Answered

Chosen Option : 2

Q.29 Four friends, Aditi, Bharat, Chandan, and Deepika, went to a restaurant for dinner. Each of them ordered a different dish from the menu: pizza, pasta, burger, and salad. Additionally, each friend ordered a different drink: cola, lemonade, orange juice, and water. Based on the following clues, determine the combination of friend, dish, and drink:

- ☐ Aditi didn't order pizza or cola.
- ☐ Bharat ordered salad but not lemonade.
- ☐ Chandan ordered pasta.
- ☐ Deepika didn't order burger or orange juice.
- ☐ Aditi ordered orange juice.

Who ordered the burger, and what drink did they order?

- Ans**
- ☒ 1. Deepika, cola
 - ☒ 2. Bharat, water
 - ☒ 3. Chandan, lemonade
 - ☒ 4. Aditi, orange juice

Question ID : **691186681**

Status : **Answered**

Chosen Option : 1

Q.30 The mean of consecutive positive integers from 2 to n is

- A. $\frac{n+2}{2}$
- B. $\frac{n(n+1)}{2}$
- C. $\frac{n+1}{2}$
- D. $\frac{n-1}{2}$

- Ans**
- ☒ 1. C
 - ☒ 2. A
 - ☒ 3. B
 - ☒ 4. D

Question ID : **691186691**

Status : **Answered**

Chosen Option : 1

Q.31 Rajesh will not go to the concert if Rakesh goes. Rakesh will go to the concert if his dog barks three times.

Based only on the information above, which of the following must be true?

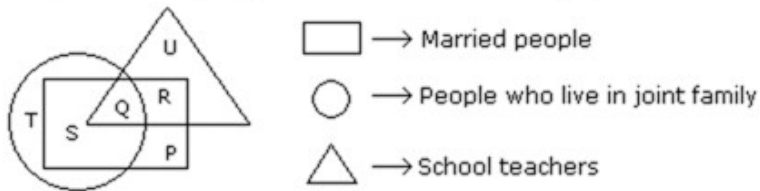
- Ans**
- ☒ 1. Rakesh will not go to the concert unless Rajesh goes.
 - ☒ 2. If Rakesh's dog does not bark three times, then Rakesh will not go to the concert.
 - ☒ 3. If Rajesh doesn't go to the concert, then Rakesh will go.
 - ☒ 4. If Rakesh's dog barks three times, then Rajesh will not go to the concert.

Question ID : **691186687**

Status : **Answered**

Chosen Option : 3

Q.32 Study the following diagram and answer the following question.



By which letter, the married teachers who do not live in joint family are represented?

- Ans
- ☒ 1. S
 - ☒ 2. P
 - ☒ 3. Q
 - ☒ 4. R

Question ID : **691186673**

Status : **Answered**

Chosen Option : 1

Q.33 If by rearranging the letters of the word NABMODINT, a name of a game is formed. What would be the first and last letter of the mirror image of the name of the game?

- Ans
- ☒ 1. B,N
 - ☒ 2. N,B
 - ☒ 3. B, T
 - ☒ 4. T,B

Question ID : **691186693**

Status : **Answered**

Chosen Option : 3

Comprehension:

Directions: A, B, C, D, E, F, and G are travelling in three different vehicles. There are at least two passengers in each vehicle—Swift, Creta, Nexon, and only one of them is a male. There are two engineers, two doctors and three teachers among them.

- i. C is a lady doctor and she does not travel with the pair of sisters A and F.
- ii. B, a male engineer, travels with only G, a teacher in a Swift.
- iii. D is a male doctor.
- iv. Two persons belonging to the same profession do not travel in the same vehicle.
- v. A is not an engineer and travels in a Creta.
- vi. The pair of sisters A and F travel in the same vehicle.

SubQuestion No : 34

Q.34 What is F's profession?

- Ans
- ☒ 1. Data inadequate
 - ☒ 2. Engineer
 - ☒ 3. Teacher
 - ☒ 4. Doctor

Question ID : **691186700**

Status : **Answered**

Chosen Option : 2

Comprehension:

Directions: A, B, C, D, E, F, and G are travelling in three different vehicles. There are at least two passengers in each vehicle—Swift, Creta, Nexon, and only one of them is a male. There are two engineers, two doctors and three teachers among them.

- i. C is a lady doctor and she does not travel with the pair of sisters A and F.
- ii. B, a male engineer, travels with only G, a teacher in a Swift.
- iii. D is a male doctor.
- iv. Two persons belonging to the same profession do not travel in the same vehicle.
- v. A is not an engineer and travels in a Creta.
- vi. The pair of sisters A and F travel in the same vehicle.

SubQuestion No : 35

Q.35 In which vehicle does C travel?

- Ans**
- ☒ 1. Nexon
 - ☐ 2. Swift
 - ☐ 3. Creta
 - ☐ 4. Data inadequate

Question ID : **691186701**

Status : **Not Answered**

Chosen Option : --

Comprehension:

Directions: A, B, C, D, E, F, and G are travelling in three different vehicles. There are at least two passengers in each vehicle—Swift, Creta, Nexon, and only one of them is a male. There are two engineers, two doctors and three teachers among them.

- i. C is a lady doctor and she does not travel with the pair of sisters A and F.
- ii. B, a male engineer, travels with only G, a teacher in a Swift.
- iii. D is a male doctor.
- iv. Two persons belonging to the same profession do not travel in the same vehicle.
- v. A is not an engineer and travels in a Creta.
- vi. The pair of sisters A and F travel in the same vehicle.

SubQuestion No : 36

Q.36 Which of the following represents the three teachers?

- Ans**
- ☐ 1. GEF
 - ☐ 2. Data inadequate
 - ☒ 3. GEA
 - ☐ 4. GBF

Question ID : **691186702**

Status : **Not Answered**

Chosen Option : --

Comprehension:

Direction: A, B, C, D and E are five different integer. When written in the ascending order of values, the difference between any two adjacent integers is 8. D is the greatest and A the least. B is greater than E but less than C. The sum of the integers is equal to E.

SubQuestion No : 37**Q.37 The value of A is:**

- Ans  1. -15
 2. None of these
 3. -17
 4. -18


Question ID : **691186695**Status : **Not Answered**

Chosen Option : --

Comprehension:

Direction: A, B, C, D and E are five different integer. When written in the ascending order of values, the difference between any two adjacent integers is 8. D is the greatest and A the least. B is greater than E but less than C. The sum of the integers is equal to E.

SubQuestion No : 38**Q.38 The sum of A and B is:**

- Ans  1. -30
 2. -15
 3. None of these
 4. -20

Question ID : **691186696**Status : **Not Answered**

Chosen Option : --

Comprehension:

Direction: A, B, C, D and E are five different integer. When written in the ascending order of values, the difference between any two adjacent integers is 8. D is the greatest and A the least. B is greater than E but less than C. The sum of the integers is equal to E.

SubQuestion No : 39**Q.39 The greatest number has the value:**

- Ans  1. 17
 2. 15
 3. 12
 4. 14

Question ID : **691186697**Status : **Not Answered**

Chosen Option : --

Comprehension:

Direction: A, B, C, D and E are five different integer. When written in the ascending order of values, the difference between any two adjacent integers is 8. D is the greatest and A the least. B is greater than E but less than C. The sum of the integers is equal to E.

SubQuestion No : 40**Q.40 The sum of the integers is:**

- Ans  1. None of these
-  2. -8
-  3. -6
-  4. -10

Question ID : **691186698**Status : **Not Answered**

Chosen Option : --

Section : **Computer Awareness****Q.1 The Boolean expression for the following truth table is ____**

x	y	z	f
0	0	0	0
0	0	1	0
0	1	0	1
0	1	1	0
1	0	0	0
1	0	1	1
1	1	0	0
1	1	1	1

- (A) $F = x'yz' + xy'z + x'y'z'$
- (B) $F = x'y'z' + xy'z + xyz'$
- (C) $F = x'yz' + xy'z + xyz$
- (D) None of these

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

Question ID : **691186704**Status : **Answered**

Chosen Option : 3

Q.2 Consider an arbitrary number system with independent digits as 0, 1 and A. If we generate first few numbers in sequence as 00, 01, 0A, 10, 11, 1A and if this process is continued to generate the numbers, then the position of 10A is ____

- Ans
- ☒ 1. 15
 - ☒ 2. 10
 - ☒ 3. 9
 - ☒ 4. 12

Question ID : 691186713

Status : Answered

Chosen Option : 1

Q.3 Consider the program below which uses six temporary variables a, b, c, d, e, and f.

```
a = 10
b = 20
c = 30
d = a+c
e = b+d
f = c+e
b = c+e
e = b+f
d = 5+e
return d+f
```

Assuming that all the above operations take their operands from registers, the minimum number of registers needed to execute this program without spilling is ____

- Ans
- ☒ 1. 4
 - ☒ 2. 5
 - ☒ 3. 6
 - ☒ 4. 3

Question ID : 691186719

Status : Answered

Chosen Option : 1

Q.4 A computer system has 16-bit wide address/data bus that uses RAM chips of 4K x 8-bit capacity. The number of RAM chips are needed to provide a memory capacity of 64 Kbytes memory is ____

- Ans
- ☒ 1. 16
 - ☒ 2. 32
 - ☒ 3. 8
 - ☒ 4. 64

Question ID : 691186709

Status : Answered

Chosen Option : 3

Q.5 Let the given numbers 11001, 1001 and 111001 be correspond to the 2's complement representation. Then with which one of the following decimal numbers, the given numbers match?

- Ans**
- ☒ 1. -6, -6, and -6, respectively
 - ☒ 2. 25, 9 and 57, respectively
 - ☒ 3. -7, -7, and -7, respectively
 - ☒ 4. -25, -9 and -57, respectively

Question ID : **691186721**
Status : **Answered**
Chosen Option : **2**

Q.6 Which of the following components is not a part of an instruction format in CPU processing?

- Ans**
- ☒ 1. Opcode
 - ☒ 2. Destination operand
 - ☒ 3. Register file
 - ☒ 4. Source operand

Question ID : **691186715**
Status : **Answered**
Chosen Option : **3**

Q.7 The quotient, if the binary number 11010111 is divided by 101, is ____

- Ans**
- ☒ 1. 101011
 - ☒ 2. 111001
 - ☒ 3. 101101
 - ☒ 4. 101010

Question ID : **691186720**
Status : **Answered**
Chosen Option : **2**

Q.8 Any given truth table can be represented by

- Ans**
- ☒ 1. a Karnaugh map
 - ☒ 2. a sum of product Boolean expression
 - ☒ 3. All of the options
 - ☒ 4. a product of sum Boolean expression

Question ID : **691186716**
Status : **Answered**
Chosen Option : **3**

Q.9 Which of the following interfaces perform the transfer of data between the memory and the I/O peripheral without involving the CPU?

- Ans ☒ 1. Serial Interface
- ☒ 2. DMA
- ☒ 3. DDA
- ☒ 4. Branch Interface

Question ID : **691186717**
Status : **Answered**
Chosen Option : **3**

Q.10 Which of the following do not affects CPU performance?

- Ans ☒ 1. Clock speed
- ☒ 2. Number of cores
- ☒ 3. Amount of RAM
- ☒ 4. Cache size

Question ID : **691186706**
Status : **Answered**
Chosen Option : **3**

Q.11 Given that numbers A and B are two 8 bit 2's Complement numbers with A=11111111; B=11111111. Then sum A+B is _____

- Ans ☒ 1. 00000010
- ☒ 2. 11111110
- ☒ 3. 11111100
- ☒ 4. 00000000

Question ID : **691186722**
Status : **Answered**
Chosen Option : **1**

Q.12 Which of the following components is used to establish a communication link between a CPU and the peripheral devices to transfer data?

- Ans ☒ 1. Instruction register
- ☒ 2. Index register
- ☒ 3. Memory data register
- ☒ 4. Memory address register

Question ID : **691186718**
Status : **Answered**
Chosen Option : **4**

Q.13 The expression $P+QR$ is the reduced form of _____

- Ans
- ☒ 1. $(P+Q)R$
 - ☒ 2. $(P+Q)(P+R)$
 - ☒ 3. $PQ + QR$
 - ☒ 4. $(P+R)Q$

Question ID : 691186711
Status : Answered
Chosen Option : 1

Q.14 The primary purpose of cache memory in a computer system is

- Ans
- ☒ 1. to temporarily store frequently accessed data and instructions for faster access by the CPU
 - ☒ 2. to provide additional storage space when the main memory is full
 - ☒ 3. to permanently store data and programs
 - ☒ 4. to manage input and output operations between the CPU and peripherals

Question ID : 691186707
Status : Answered
Chosen Option : 1

Q.15 A CPU generates 32 bits virtual addresses. The page size is 4 KB. The processor has a translation look-aside buffer (TLB) which can hold a total of 128-page table entries and is 4-way set associate. The minimum size of the TLB tag is

- Ans
- ☒ 1. 13 bits
 - ☒ 2. 15 bits
 - ☒ 3. 20 bits
 - ☒ 4. 11 bits

Question ID : 691186705
Status : Answered
Chosen Option : 3

Q.16 Which of the following is the smallest unit of data in a computer?

- Ans
- ☒ 1. KB
 - ☒ 2. Nibble
 - ☒ 3. Bit
 - ☒ 4. Byte

Question ID : 691186708
Status : Answered
Chosen Option : 2

Q.17 The range of the exponent E in the IEEE754 double precision (Binary64) format is

- Ans ☒ 1. $-1023 \leq E \leq 1023$
☒ 2. $-1023 \leq E \leq 1022$
☒ 3. $-1022 \leq E \leq 1022$
☒ 4. $-1022 \leq E \leq 1023$

Question ID : 691186712

Status : Answered

Chosen Option : 1

Q.18 Consider the following 4-bit binary numbers represented in the 2's complement form:
 1101 and 0100.

What would be the result when we add them?

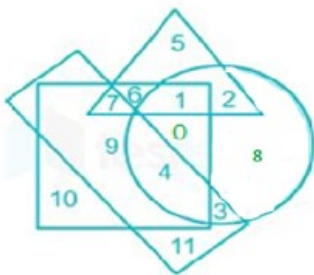
- Ans ☒ 1. 1001 and an overflow
☒ 2. 1001 and no overflow
☒ 3. 0001 and an overflow
☒ 4. 0001 and no overflow

Question ID : 691186710

Status : Answered

Chosen Option : 1

Q.19 In the figure, the circle stands for employed, the square stands for a social worker, the triangle stands for illiterate, and the rectangle stands for truthful. Study the figure with its regions and find the number of neither truthful nor illiterate people among the employed only.



- Ans ☒ 1. 1
☒ 2. 11
☒ 3. 8
☒ 4. 4

Question ID : 691186714

Status : Answered

Chosen Option : 2

Q.20 Cache memory functions as an intermediary between

- Ans ☒ 1. CPU and RAM
- ☐ 2. None of these
- ☐ 3. RAM and ROM
- ☐ 4. CPU and Hard Disk

Question ID : **691186703**
Status : **Answered**
Chosen Option : 1

Section : **General English**

Q.21 Choose the best option that indicates the change of voice for the sentence given below:
Did Alice invite you?

- Ans ☒ 1. Were you invited by Alice?
- ☐ 2. Was Alice invited you?
- ☐ 3. Had you invited Alice?
- ☐ 4. Did you invited by Alice?

Question ID : **691186727**
Status : **Answered**
Chosen Option : 2

Q.22 Write the antonym for 'Inscrutable':

- Ans ☐ 1. Obscure
- ☐ 2. Opaque
- ☒ 3. Comprehensible
- ☐ 4. Mysterious

Question ID : **691186725**
Status : **Answered**
Chosen Option : 2

Q.23 Identify the word that means the same as "ostentatious":

- Ans ☒ 1. Lavish
- ☐ 2. Unassuming
- ☐ 3. Simple
- ☐ 4. Modest

Question ID : **691186731**
Status : **Answered**
Chosen Option : 4

Q.24 Which sentence demonstrates correct preposition usage?

- Ans ☒ 1. They were surprised of the sudden announcement.
- ☒ 2. She arrived to the party at 8 PM.
- ☒ 3. He is interested on learning new languages.
- ☒ 4. I prefer coffee over tea.

Question ID : **691186730**
Status : **Answered**
Chosen Option : **3**

Q.25 Which of the following is an essential element of a technical report?

- Ans ☒ 1. Creative storytelling
- ☒ 2. Anecdotes and personal opinions
- ☒ 3. Emotional appeals
- ☒ 4. Statistical data and analysis

Question ID : **691186732**
Status : **Answered**
Chosen Option : **4**

Q.26 What does the idiom “jump on the bandwagon” mean?

- Ans ☒ 1. To repair a vehicle
- ☒ 2. To start a business
- ☒ 3. To join a popular trend or activity
- ☒ 4. To criticize something unfairly

Question ID : **691186726**
Status : **Answered**
Chosen Option : **3**

Q.27 Select the appropriate synonym for ‘coercive’:

- Ans ☒ 1. Forceful
- ☒ 2. Merciful
- ☒ 3. Corrective
- ☒ 4. Gentle

Question ID : **691186724**
Status : **Answered**
Chosen Option : **3**

Q.28 The company's _____ growth in revenue surprised analysts.

- Ans ☒ 1. gradual
- ☒ 2. stagnant
- ☒ 3. erratic
- ☒ 4. exponential

Question ID : **691186729**
Status : **Answered**
Chosen Option : **4**

Q.29 Select the correct meaning of 'Peruse':

- Ans ☒ 1. Continue
☒ 2. Rescue
☒ 3. Pursue
☒ 4. Examine

Question ID : **691186723**

Status : **Answered**

Chosen Option : 1

Q.30 Choose the correct combination of prepositions to complete the sentence:
"The cat jumped ____ the table ____ the chair."

- Ans ☒ 1. on, from
☒ 2. off, in
☒ 3. onto, towards
☒ 4. into, beside

Question ID : **691186728**

Status : **Answered**

Chosen Option : 1