

Section 1 - Section 1

Question No.1

4.00

Bookmark

If $V(X) = 4$, $E(X) = 3$, then $V(2X+2)$

- 19
- 17
- 16
- 18

Question No.2

4.00

Bookmark

Ganga purchased an iron box at $\frac{9}{10}$ th of its selling price and sold it at 8% more than its selling price. Find her gain percent.

- $(x - 1)(x + 9)^2$
- $(x - 1)(x + 9)$
- $(x - 1)^2(x + 9)$
- 0

Question No.3

4.00

Bookmark

Among the following which is not a primitive data type?

- Char
- Float
- Struct
- Integer

Question No.4

4.00

Bookmark

If A+B means A is daughter of B,
A-B means A is husband of B
A × B means A is brother of B

From the statement $A \times B \times C \times D$, which of the following statement is not necessarily true?

- C is the brother of A
- B is the brother of A
- D is brother of C
- A, B, C are male

Question No.5

4.00

Bookmark

The odds in favour of a certain event are 5:4 and odds against another event are 4:3. the chance that at least one of them will happen is by assuming the events are independent

- 7/63
- 47/63
- 15/63
- 51/63

Question No.6

4.00

Bookmark

Which of the following words is spelled wrongly?

- Reffered
- Differed
- Offered
- Suffered

Question No.7

4.00

Bookmark

Pen drives are _____ based flash memory.

- RAM
- ROM
- EEPROM
- EPROM

Question No.8

4.00

Bookmark

Study the following information carefully and answer the question below it

The Director of an MBA college has decided that six guest lectures on the topics of Motivation, Decision Making, Quality Circle, Assessment Centre, Leadership and Group Discussion are to be organised on each day from Monday to Sunday.

- (i) One day there will be no lecture (Saturday is not that day), just before that day Group Discussion will be organised.
- (ii) Motivation should be organised immediately after Assessment Centre.

(iii) Quality Circle should be organised on Wednesday and should not be followed by Group Discussion

(iv) Decision Making should be organised on Friday and there should be a gap of two days between Leadership and Group Discussion

Which of the following information is not required for the above lecture arrangements?

- All are required
- Only (i)
- Only (ii)
- Only (iii)

Question No.9

4.00

Bookmark

If $x \in R$, then the range of $f(x) =$

$$\frac{x^2 - 3x + 4}{x^2 + 3x + 4}$$

- $(-\infty, \frac{1}{7}]$
- $(\frac{1}{7}, 7)$
- $[\frac{1}{7}, 7]$
- $(7, \infty)$

Question No.10

4.00

Bookmark

Expected value of sum of numbers of points, when two dies are thrown simultaneously is

- 12
- 7
- 6
- 8

Question No.11

4.00

Bookmark

A four member crew is painting Mr.Rohan's house. Mohan is painting the front of the house. Roshan is painting the back. John is painting the window frames on the north side, Sam is on the south. If Mohan switches places with John, and John then switches places with Sam, where is Sam?

- Front Side of the house
- Back side of the house
- South Side of the house
- North Side of the house

Question No.12

4.00

Bookmark

The value of "k" for which the equations $x + y + 3z = 0$; $4x + 3y + kz = 0$; and $2x + y + 2z = 0$ have a trivial solution

- $k \neq -8$
- $k = 8$
- $k \neq 8$
- $k = -8$

Question No.13

4.00

Bookmark

In the following question, a group of three interrelated words is given. Choose a word from the given alternatives, that belongs to the same group.

Liver: Heart:: Kidney

- Lung
- Blood
- Nose
- Urine

Question No.14

4.00

Bookmark

Study the following information carefully and answer the question below it

- (i) A, B, C, D, E and F are six students in a class
- (ii) B and C are shorter than F but heavier than A
- (iii) D is heavier than B and taller than C
- (iv) E is shorter than D but taller than F
- (v) F is heavier than D
- (vi) A is shorter than E but taller than F

Which of the following groups of friends is shorter than A?

- F, B, C only
- D, B, C only
- B, C only
- E, B, C only

Question No.15

4.00

Bookmark

Identify the algorithm which is not used by Operating System for process management.

- Shortest Job First
- First in First Out
- Last in First Out
- Round Robin

Question No.16

4.00

Bookmark

In inheritance, the following type of derivation is not included.

- Private
- Auto
- Public
- Protected

Question No.17

4.00

Bookmark

The one's complement representation of -55 is _____.

- 11001000
- 10101010
- 1010101
- 110111

Question No.18

4.00

Bookmark

The median of 10 observations is equal to 50 if 3 is added to each observation, then the new median value is

- 53
- 50
- 10
- 13

Question No.19

4.00

Bookmark

The ability of an object to respond differently to different messages is called as _____.

- Polymorphism
- Data hiding
- Inheritance
- Encapsulation

Question No.20

4.00

Bookmark

The number of non-zero integral solutions of the equation $|1 - i|^x = 2^x$ is

- $\frac{5\vec{a} + 3\vec{b}}{4}$
- $\frac{3\vec{a} + 5\vec{b}}{2}$
- $\frac{3\vec{a} + \vec{b}}{4}$
- $\frac{5\vec{a} + 3\vec{b}}{0}$

Question No.21

4.00

Bookmark

JPEG image files use _____.

- Encryption
- Watermarking
- Lossy compression
- Lossless compression

Question No.22

4.00

Bookmark

If $f:R \rightarrow R$; $g:R \rightarrow R$ are defined respectively by $f(x) = 2x + 1$ and $g(x) = \frac{x-1}{2}$, then $f \circ g$ is

- $-x$
- $\frac{x}{2}$
- x
- $-\frac{x}{2}$

Question No.23

4.00

Bookmark

In a programming language user defined name is called _____.

- Identifier
- Constant
- Syntax
- Expression

Question No.24

4.00

Bookmark

A box contains 'a' white balls and 'b' black balls; If 'c' balls are drawn from the box then the expected number of white balls among the c balls is $C * \left(\frac{a}{a+b}\right)$

- $c * \left(\frac{a}{a+b}\right)$
- $c * \left(\frac{a-b}{a+b}\right)$
- $c * \left(\frac{ab}{a+b}\right)$
- $c * \left(\frac{a}{a-b}\right)$

Question No.25

4.00

Bookmark

OSI provided a network architecture with _____ layers

- 7
- 5
- 6
- 8

Question No.26

4.00

Bookmark

$\lim_{x \rightarrow \infty} \left(\frac{x+3}{x-1}\right)^{x+3}$ is

- e^2

e^{-2}

e^3

e^4

Question No.27

4.00

Bookmark

The language Python uses _____ approach.

- Object oriented
- Procedure oriented
- Logic oriented
- Procedure oriented and object oriented

Question No.28

4.00

Bookmark

Scarcely had I reached the railway station when the New Delhi Express took off.
The underlined words are

- pronouns
- adverbs
- verbs
- conjunctions

Question No.29

4.00

Bookmark

ASCII stands for _____.

- American Standard Code for Instruction Interaction
- All purpose String Code for Information Interchange
- American Standard Code for Instruction Interchange
- American Standard Code for Information Interchange

Question No.30

4.00

Bookmark

Which concept of Object Oriented Programming is implemented in the following figure



- Inheritance
- Encapsulation
- Polymorphism
- Abstraction

Question No.31

4.00

Bookmark

Which of the following measure can make use of the 100% data

- Mean
- Minimum
- Median
- Maximum

Question No.32

4.00

Bookmark

If $P(E) = 1$ the event is called

- certain event
- impossible event
- independent event
- exclusive event

Question No.33

4.00

Bookmark

Mean of 10 observations is 5, if a constant 4 is added to every observation, then the new mean is

- New Mean is no way related to Old Mean
- New Mean < Old Mean
- New Mean = Old Mean
- New Mean > Old Mean

Question No.34

4.00

A simple flip-flop has ____ stable states.

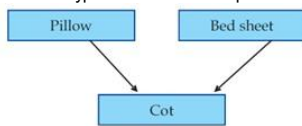
- 1
- 2
- 3
- 4

Question No.35

4.00

Bookmark

Write the type of inheritance depicted in the following figure.



- Hierarchical inheritance
- Multi level inheritance
- Hybrid inheritance
- Multiple inheritance

Question No.36

4.00

Bookmark

Arithmetic Mean of 'n' numbers of a series is \bar{X} . After calculations, it was observed that two number 'a' and 'b' misread in the place of 'c' and 'd'. what is the corrected mean value

- $\frac{n\bar{X} - (a+b) + (c+d)}{(n+1)}$
- $\frac{n\bar{X} - (a+b) + (c+d)}{n}$
- $\frac{n\bar{X} - (a+b) + (c+d)}{(n-1)}$
- $\frac{\bar{X} - (a+b) + (c+d)}{n}$

Question No.37

4.00

Bookmark

Given that $P(A) = 1/3, P(B) = 3/4, P(A \cup B) = 11/12$, the probability, $P(B/A) =$

- 1/2
- 1/4
- 4/9
- 1/6

Question No.38

4.00

Bookmark

The domain of the rational function

$$f(x) = \frac{x^2 + x + 2}{x^2 - x}$$

- $R - \{0,1\}$
- $[0,1]$
- $R - \{1\}$
- $R - \{0\}$

Question No.39

4.00

Bookmark

In the interval $(-\infty, -2]$, the function $f(x) = 2x^3 + x^2 - 20x$ is

- Increasing
- Strictly increasing
- Strictly decreasing

Decreasing

Question No.40

4.00

Bookmark

Expected number of the outcome when a die is thrown =

- 5/2
- 7/2
- 9/2
- 11/2

Question No.41

4.00

Bookmark

If a coin is tossed until a head appears, then the approximate expected number of tosses required =

- 2
- 3
- 1
- 4

Question No.42

4.00

Bookmark

Identify the invalid statement.

- Constructors and destructors are executed automatically
- Constructors and destructors can be overloaded
- Constructors and destructors are defined as the member functions of the class
- Constructors and destructors have the same name of the class

Question No.43

4.00

Bookmark

$\frac{1}{n} \sum_{i=1}^n (x_i - A)^2$ is minimum when A=

- Median
- Geometric Mean
- Mean
- Mode

Question No.44

4.00

Bookmark

A cylindrical hole 4mm in diameter and 12mm deep in a metal block is rebored to increase the diameter to 4.12 mm . Estimate the amount of metal removed.

- $2.80\pi \text{ mm}^3$
- $2.00\pi \text{ mm}^3$
- $2.09\pi \text{ mm}^3$
- $2.89\pi \text{ mm}^3$

Question No.45

4.00

Bookmark

Which of the following is the modal social category in an area of residents

Social category	SC	ST	BC	OC
Number of residents	45	28	90	56

- OC
- SC
- ST
- BC

Question No.46

4.00

Bookmark



- 4
- 1
- 2
- 3

Question No.47

4.00

Bookmark

Based on the information given answer the following question.

1. In a family of six persons, there are people from three generations. Each has separate professions and they like different colours. There are two couples.
2. Shyam is an Engineer and his wife is not a doctor and she does not like Red colour.
3. Chartered Accountant likes green colour and his wife is a teacher.
4. Manisha is the mother-in-law of Sunita and she likes orange colour.
5. Vimal is the grand father of Tarun and tarun is the Principal and likes black colour.
6. Nyna is the grand daughter of Manisha and she likes blue colour. Nyna's Mother likes white colour.

What is the profession of Sunita?

- Cannot be determined
- Chartered Accountant
- Teacher
- Principal

Question No.48

4.00

Bookmark

The radius of a sphere was measured and found to be 21cm with a possible error in measurement of atmost 0.05cm. What would be the % of error produced in the Volume?

- 8
- 6
- 5
- 7

Question No.49

4.00

Bookmark

Expectation is independent of change of

- Origin only
- both origin & scale
- neither origin nor scale
- scale only

Question No.50

4.00

Bookmark

Cov(X,Y) can be calculated for the paired data like (X_i, Y_j) ,

- $i = m, j \neq m$
- $i \neq j = \text{either } m \text{ or } n$
- $i = j = n$
- $i \neq n, j = n$

Question No.51

4.00

Bookmark

The solution of $\tan^{-1}(2x) + \tan^{-1}(3x) = \frac{\pi}{4}$ is

- $S - (150 - S)e^{kt}$
- $S - (150 + S)e^{kt}$
- $S + (150 + S)e^{kt}$
- $S + (150 - S)e^{kt}$

Question No.52

4.00

Bookmark

If a, b and c are in arithmetic progression then the value of the determinant

$$\begin{vmatrix} x+2 & x+3 & x+2a \\ x+3 & x+4 & x+2b \\ x+4 & x+5 & x+2c \end{vmatrix} \text{ is}$$

- $x = 2i;$
 $y = \pm 1$
- $x = \pm 2i;$
 $y = 1$
- $x = \pm 2i;$
 $y = \pm 1$
- $x = \pm 2i;$
 $y = -1$

Question No.53

4.00

Bookmark

Which of the following is an object oriented feature?

- Structure
- Union
- Data abstraction
- Macro processing

Question No.54

4.00

Bookmark

The shortest distance of the point $(2,10,1)$ from the plane $\vec{r} \cdot (3\vec{i} - \vec{j} + 4\vec{k}) = 2\sqrt{26}$ is

- 2
- $2\sqrt{26}$
- $\frac{1}{\sqrt{26}}$
- $\sqrt{26}$

Question No.55

4.00

Bookmark

One among the following is not a valid classification of computers with respect to the instruction set.

- WISC
- EPIC
- CISC
- RISC

Question No.56

4.00

Bookmark

"Divide by zero" is a _____ error.

- Syntax error
- Logical error
- Run time error
- Language error

Question No.57

4.00

Bookmark

Nidhi walks 10 metres in front and 10 metres to the right. Then every time turning to her left, she walks 5, 15 and 15 metres respectively. How far is Nidhi now from her starting point?

- 10 metres
- 5 metres
- 15 metres
- None of these

Question No.58

4.00

Bookmark

Which is not a network topology?

- Bus
- Tree
- Ring
- Star

Question No.59

4.00

Bookmark
 $\lim_{x \rightarrow 4} \frac{|x-4|}{x-4}$ is

- Does not exist
- 1
- 1
- 0

Question No.60

4.00

Bookmark The more appropriate value of $\sin^{-1}\left(\sin \frac{3\pi}{5}\right)$ is

- $\frac{9\pi}{5}$
- $\frac{2\pi}{5}$
- $\frac{3\pi}{5}$
- $\frac{8\pi}{5}$

Question No.61

4.00

Bookmark If A and B are exclusive events then $P(A/B) =$

- P(A)
- 0
- 1
- P(B)

Question No.62

4.00

Bookmark If $V(X) = 4$, $E(X) = 3$, then $E(X^2) =$

- 12
- 11
- 14
- 13

Question No.63

4.00

Bookmark

Sum of 9 numbers and unknown number 'x' is 90, then the mean value is

- 10
- 90
- 11
- 9

Question No.64

4.00

Bookmark

The equation of the plane passing through the point $(2, 1, -1)$ and the line of intersection of the planes $\vec{r} \cdot (\vec{i} + 3\vec{j} - \vec{k}) = 0$ and $\vec{r} \cdot (\vec{i} + 2\vec{k}) = 0$ is

- $2x - y + z = 0$
- $x + 9y + 11z = 0$
- $x + 4y - z = 0$
- $2x + y - z + 5 = 0$

Question No.65

4.00

Bookmark

Which of the following operator is having highest precedence?

- ()
- + (unary)
-
- *

Question No.66

4.00

Bookmark

SQL is expanded as _____.

- String Query Language
- Sequential Query Language
- Syntax Query Language
- Structured Query Language

Question No.67

4.00

Bookmark

Which is an invalid category of database?

- Formal database
- Network database
- Hierarchical database
- Relational database

Question No.68

4.00

Bookmark

The rank of the matrix

$$\begin{bmatrix} 1 & 1 & -1 \\ 2 & -3 & 4 \\ 3 & -2 & 3 \end{bmatrix} \text{ is}$$

- 2
- 0
- 1
- 3

Question No.69

4.00

Bookmark

If four coins are tossed simultaneously and Let X be random variable represent the number heads as outcome, then $E(X) =$

- 4
- 2
- 1
- 3

Question No.70

4.00

Bookmark

"sizeof" is a _____.

- Expression
- Operator

- Function
- Statement

Question No.71

4.00

Bookmark

The following relation holds good with Geometric Mean =

- (Arithmetic Mean * Harmonic Mean)^{1/2}
- (Arithmetic Mean * Harmonic Mean)²
- (Arithmetic Mean + Harmonic Mean)/2
- (Arithmetic Mean * Harmonic Mean)

Question No.72

4.00

Bookmark

Unsigned long integer ranges from ____ to ____.

- 0 to 65535
- 0 to 4294967295
- 0 to 32767
- 0 to 2147483647

Question No.73

4.00

Bookmark

A can finish a work in 18 days and B can do the same work in half the time taken by A. Then, working together, what part of the same work they can finish in a day?

- 0 1/8
- 0 1/6
- 0 1/2
- 0 1/4

Question No.74

4.00

Bookmark

The angle between the asymptotes of the hyperbola $\frac{x^2}{9} - \frac{y^2}{4} = 1$ is approximately

- 3 + 4i (OR) -3 -4i
- 3 + 4i (OR) 3 - 4i
- 3 - 4i (OR) -3 - 4i
- 3 + 4i (OR) 3 - 4i

Question No.75

4.00

Bookmark

Statement: Ten Candidates, who were on the waiting list could finally be admitted to the course.

Assumptions:

- I. A large of number of candidates were on the waiting list.
- II. Wait listed candidates do not ordinarily get admission.

- If only assumption II is implicit
- If only assumption I is implicit
- If both I and II are implicit
- If neither I nor II is implicit

Question No.76

4.00

Bookmark

These poultry belong to Mr. Kishen, our new neighbor

The underlined word is a _____ noun.

- common
- collective
- proper
- abstract

Question No.77

4.00

Bookmark

If $\bar{x}_1 = \bar{x}_2$ and $n_1 = n_2$ then $\sigma^2 =$

- $(s_1^2 - s_2^2)$
- $(s_1^2 + s_2^2)/2$
- $(s_1^2 - s_2^2)/2$
- $s_1^2 + s_2^2$

Question No.78

4.00

Bookmark

Which of the following operator is having right to left associativity?

- ()
- *
-
- + (unary)

Question No.79

4.00

Bookmark

For a given data set $\frac{1}{n} \sum_{i=1}^n (x_i - \bar{x}) =$

- 0
- 1
- 3
- 1

Question No.80

4.00

Bookmark

Probability of getting both dice shown the same number when pair of dice are rolled simultaneously

- 3/6
- 1/6
- 2/6
- 4/6

Question No.81

4.00

Bookmark

Crumb : Bread ::

- Flower : Vase
- Water : Bucket
- Tea : Cup
- Splinter : Wood

Question No.82

4.00

Bookmark

$\frac{1}{n} \sum_{i=1}^n |x_i - A|$ is minimum when A=

- Median
- Mode
- Mean
- Geometric Mean

Question No.83

4.00

Bookmark

The function $y = x^2$ over R is

- Injective
- Not injective
- Surjective
- Not surjective

Question No.84

4.00

Bookmark

The value of the argument is sent to the function in ____ method.

- Call by function
- Call by value
- Call by reference
- Call by name

Question No.85

4.00

Bookmark

Which of the following is true?

- $24\sqrt{5}$ m
- $20\sqrt{2}$ m
- $48\sqrt{2}$ m
- $24\sqrt{3}$ m

Question No.86

4.00

Bookmark

Expectation of random variable is usually referred as

- Range
- Mode
- Median
- Average

Question No.87

4.00

Bookmark

Find the odd one out?

- Deduction
- Deposit
- Debit
- Withdrawal

Question No.88

4.00

Bookmark

Statement: Apart from its entertainment value of Television, its educational value cannot be ignored

Assumptions: I. People take Television to be the means of entertainment only.

II. The educational value of Television is not realized properly

- If neither I nor II is implicit
- If only assumption II is implicit
- If both I and II are implicit
- If only assumption I is implicit

Question No.89

4.00

Bookmark

The domain of the reciprocal function of $f(x) = x$ is

- $(-\infty, \infty)$
- $(-\infty, 0)$
- $(-\infty, 0) \cup (0, \infty)$
- $(0, \infty)$

Question No.90

4.00

Bookmark

$\lim_{x \rightarrow 0} \frac{\sin(\beta x)}{\sin(\alpha x)}, \alpha \neq 0$ is

- $\frac{\alpha}{\beta}$
- $\frac{\beta}{\alpha}$
- $\frac{-\alpha}{\beta}$
- $\frac{-\beta}{\alpha}$

Question No.91

4.00

Bookmark

Identify the invalid declaration statement.

- `int x[5] = {1,2,3,4,5}, y [5] = {5,4,3,2,1}, result [5] = { 0,0,0,0,0 };`

- int days [] = {1,2,3,4,5,6,7};
- char name[];
- consti = 10; double val [i];

Question No.92

4.00

Bookmark

The integrating factor of $(1 + y^2)dx = (\tan^{-1}y - x)dy$ is

- $e^{\tan x}$
- $e^{\tan^{-1}y}$
- $e^{\tan y}$
- $e^{\tan^{-1}x}$

Question No.93

4.00

Bookmark

The solution of $\frac{dy}{dx} + \frac{y}{x} = \frac{y^2}{x^2}$ is

- $(y - 2x) = cxy$
- $(y - 2x) = cxy^2$
- $(y + 2x) = cx^2y$
- $(y - 2x) = cx^2y$

Question No.94

4.00

Bookmark

Study the following information carefully and answer the question below it

Lakshman passes through seven lanes to reach his school. He finds that 'Truth lane' is between his house and 'Lie lane'. The third lane from his school is 'Karma lane'. 'Dharma lane' is immediately before the 'Yog lane'. He passes 'Salvation lane' at the end, 'Lie lane' is between 'Truth lane' and 'Dharma lane', the sixth lane from his house is 'Devotion lane'.

If Lakshman's house, each lane and his school are equidistant and he takes 2 minutes to pass one lane, then how long will he take to reach school from his house?

- 13 minutes
- 16 minutes
- 15 minutes
- 14 minutes

Question No.95

4.00

Bookmark

The point at which the tangent to the curve $y = \sqrt{4x - 3} - 1$ has its slope $2/3$ is

- $\theta = \frac{2\pi}{3}$
- $\theta = \frac{\pi}{3}$
- $\theta = \frac{\pi}{2}$
- $\theta = \frac{\pi}{4}$

Question No.96

4.00

Bookmark

Seeta lives in Chennai and her younger sister Geeta lives in Andaman. Geeta has visited Seeta several times and during the same period Seeta has visited Geeta only once. What Conclusion can be drawn from above?

- Seeta is older than Geeta
- Geeta wants to move to Chennai
- Geeta loves her sister Seeta
- Geeta lives in a boring place

Question No.97

4.00

Bookmark

Assertion: -Manmohan Singh is widely recognised as the chief architect of liberalisation in India

Reason: - Manmohan Singh was the finance minister who first started opening up the Indian economy in 1991.

- A is false but R is true
- Both A and R are true and R is not the correct explanation of A
- A is true but R is false
- Both A and R are true and R is the correct explanation of A

Question No.98

4.00

Bookmark

Select the Pair that best represents the relationship that is given in the question: Explore : Discover

- Tree : Wood
- Books : Knowledge
- Think : Relate
- Research : Learn

Question No.99

4.00

Bookmark

The Range of the following data is 23,1,21,24,43,51,15,26,13

- 50
- 51
- 1
- 25

Question No.100

4.00

Bookmark

If " P " represents the variable complex number " z " and if $\arg\left(\frac{z-1}{z+3}\right) = \frac{\pi}{2}$, then the locus of " P " is

- $\sqrt{3}:1$
- $\sqrt{2}:1$
- $3:1$
- $2:1$