

Banaras Hindu University

Question Paper Name: 492 15th May 2019 Shift 2
Subject Name: 492
Creation Date: 2019-05-15 18:11:04
Duration: 120
Total Marks: 360
Display Marks: Yes
Share Answer Key With Delivery Engine: Yes
Actual Answer Key: Yes

MCA

Group Number : 1
Group Id : 54310738
Group Maximum Duration : 0
Group Minimum Duration : 120
Revisit allowed for view? : No
Revisit allowed for edit? : No
Break time: 0
Group Marks: 360

MCA

Section Id : 54310738
Section Number : 1
Section type : Online
Mandatory or Optional: Mandatory
Number of Questions: 120
Number of Questions to be attempted: 120
Section Marks: 360
Display Number Panel: Yes
Group All Questions: No

Sub-Section Number: 1
Sub-Section Id: 54310738
Question Shuffling Allowed : Yes

Question Number : 1 Question Id : 5431073811 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The value of x in the inequation $\frac{5x-2}{3} - \frac{7x-3}{5} > \frac{x}{4}$ is :

Options :

1. $x \in (-\infty, 4)$

2. $x \in (4, \infty)$

3. $x \in (0, 4)$

4. $x \in [-4, 4)$

Question Number : 2 Question Id : 5431073812 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

A manufacturer has 600 litres of a 12% solution of acid. If x litres of a 30% acid solution to be added in the solution of 12% acid so that acid content in the resulting mixture will be more than 15% but less than 18%, the volume of added solution (x litre) is :

Options :

1. $120 < x < 300$ liters

2. $200 < x < 250$ liters

3. $150 < x < 200$ liters

4. $250 < x < 300$ liters

Question Number : 3 Question Id : 5431073813 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The solution set of :

$$\left| x + \frac{1}{x} \right| > 2, x \neq 0, \text{ is}$$

Options :

1. $\{1, 0, 2\}$

2. $\mathbb{R} - \{1, 0, 2\}$

3. $\{-1, 0, 1\}$

4. $\mathbb{R} - \{-1, 0, 1\}$

Question Number : 4 Question Id : 5431073814 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

A man wants to cut three lengths from a single piece of board of length 91 cm. The second length is to be 3 cm longer than the shortest and third length is to be twice as long as the shortest. What are the possible lengths for the shortest board if third piece is to be at least 5 cm longer than the second ?

Options :

1. More than 8 cm and less than 20 cm
2. More than 8 cm but less than 21 cm.
3. More than 6 cm but less than 20 cm
4. $8 \leq x \leq 22$, x is the length of shortest piece in cm.

Question Number : 5 Question Id : 5431073815 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The total number of ways of answering 5 objective type questions, each question having 4 choices, is :

Options :

1. 5^4
2. 1024
3. 20
4. 480

Question Number : 6 Question Id : 5431073816 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

It is required to seat 5 men and 4 women in a row so that the women occupy the even places. How many such arrangements are possible ?

Options :

1. $\frac{1}{2}(9!)$
2. 2880
3. $5 \times 4!$

4. 1240

Question Number : 7 Question Id : 5431073817 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

In how many ways can 9 examination papers be arranged so that the best and worst papers are never together ?

Options :

1. $9! - 8!$

2. 141120

3. $9! - (8! \times 2)$

4. $8 \times 9!$

Question Number : 8 Question Id : 5431073818 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

A box contains 5 different red and 6 different white balls. In how many ways can 6 balls be selected so that there are at least two ball of each colour ?

Options :

1. 425

2. 420

3. 360

4. ${}^{11}C_6$

Question Number : 9 Question Id : 5431073819 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

How many five-letter words containing 3 vowels and two consonants can be formed using the letters of the word "EQUATION" so that the two consonants occur together ?

Options :

1. ${}^5C_3 \times {}^3C_2$

2. 720

3. ${}^5C_3 \times {}^3C_2 \times 4! \times 3!$

4. 1440

Question Number : 10 Question Id : 5431073820 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

10th term in the binomial expansion of $\left(2x^2 + \frac{1}{x}\right)^{12}$ is :

Options :

1. $\frac{760}{x}$

2. $\frac{1760}{x^3}$

3. $\frac{1660}{x^3}$

4. $\frac{760}{x^3}$

Question Number : 11 Question Id : 5431073821 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

If the coefficient of x in $\left(x^2 + \frac{\lambda}{c}\right)^5$ is 270, then λ is equal to :

Options :

1. 3

2. 4

3. 5

4. 6

Question Number : 12 Question Id : 5431073822 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Constant term in the expansion of $\left(x - \frac{1}{x}\right)^{10}$ is :

Options :

1. 152
2. -152
3. -252
4. 252

Question Number : 13 Question Id : 5431073823 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The middle term in the expansion of $\left(\frac{2x^2}{3} + \frac{3}{2x^2}\right)^{10}$ is :

Options :

1. 251
2. 252
3. 250
4. 254

Question Number : 14 Question Id : 5431073824 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

If the coefficients of three consecutive terms in the expansion of $(1+x)^n$ are in ratio 1 : 7 : 42; then the value of n is :

Options :

1. $n = 50$

2. $n = 53$

3. $n = 52$

4. $n = 55$

Question Number : 15 Question Id : 5431073825 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The value of : $(i^{77} + i^{70} + i^{87} + i^{414})^3$, is :

Options :

1. -8

2. 8

3. -1

4. 1

Question Number : 16 Question Id : 5431073826 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The amplitude of $\frac{1+i\sqrt{3}}{\sqrt{3}+i}$ is :

Options :

1. $\frac{\pi}{3}$

2. $-\frac{\pi}{3}$

3. $\frac{\pi}{6}$

4. $-\frac{\pi}{6}$

Question Number : 17 Question Id : 5431073827 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

If $x + iy = (1 + i)(1 + 2i)(1 + 3i)$, then value of $x^2 + y^2$, is :

Options :

1. 0
2. 100
3. 50
4. 25

Question Number : 18 Question Id : 5431073828 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

If $\frac{3 + 2i \sin \theta}{1 - 2i \sin \theta}$ is a real number and $0 < \theta < 2\pi$, then θ is equal to :

Options :

1. π
2. $\frac{\pi}{2}$
3. $\frac{\pi}{3}$
4. $\frac{\pi}{6}$

Question Number : 19 Question Id : 5431073829 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The polar form of $z = \frac{1 + 3i}{1 - 2i}$, is :

Options :

1. $z = \sqrt{2} \left(\cos \frac{\pi}{4} + i \sin \frac{\pi}{4} \right)$
2. $z = 2 \left(\cos \frac{\pi}{3} + i \sin \frac{\pi}{3} \right)$

3. $z = \sqrt{2} \left(\cos \frac{3\pi}{4} + i \sin \frac{3\pi}{4} \right)$

4. $z = 2 \left(\cos \frac{\pi}{4} + i \sin \frac{\pi}{4} \right)$

Question Number : 20 Question Id : 5431073830 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The least integral value of k which makes the roots of the equation $x^2 + 5x + k = 0$ imaginary, is :

Options :

1. 5

2. 4

3. 7

4. 6

Question Number : 21 Question Id : 5431073831 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The value of 'a' such that $x^2 - 11x + a = 0$ and $x^2 - 14x + 2a = 0$ may have a common root, is :

Options :

1. 12

2. 24

3. 16

4. 32

Question Number : 22 Question Id : 5431073832 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

If 'a' and 'b' are roots of the equation $x^2 - x + 1 = 0$, then value of $a^2 + b^2$ is :

Options :

1. -1
2. 1
3. 3
4. -3

Question Number : 23 Question Id : 5431073833 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The smallest positive integral value of 'n' for which $\frac{(1+i)^n}{(1-i)^{n-2}}$ is a real number

is :

Options :

1. $n = 0$
2. $n = 4$
3. $n = 2$
4. $n = 1$

Question Number : 24 Question Id : 5431073834 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

By reduction of Rs. 1 per kg in the price of sugar Mohan can buy one kg sugar more for Rs. 56. The original price of sugar per kg is :

Options :

1. Rs. 6 per kg
2. Rs. 7 per kg
3. Rs. 8 per kg
4. Rs. 10 per kg

Question Number : 25 Question Id : 5431073835 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

One year ago, a man was 8 times as old as his son. Now, his age is equal to the square of his son's age. The present age of the man is :

Options :

1. 50 years
2. 49 years
3. 48 years
4. 36 years

Question Number : 26 Question Id : 5431073836 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The sum of two numbers is 15. If the sum of their reciprocals is $\frac{3}{10}$ then the smallest number is :

Options :

1. 3
2. 4
3. 5
4. 6

Question Number : 27 Question Id : 5431073837 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The speed of a boat in still water is 11 km/hr. It can go 12 km upstream and return down stream to the original point in 2 hours 45 minutes. The speed of the stream is :

Options :

1. 5 km/hr
2. 10 km/hr
3. 4 km/hr

4. 8 km/hr

Question Number : 28 Question Id : 5431073838 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

8 men and 12 boys can do a piece of work in 10 days while 6 men and 8 boys can do the same work in 14 days. The time taken by a single man to do the same work, is :

Options :

1. 120 days
2. 130 days
3. 140 days
4. 150 days

Question Number : 29 Question Id : 5431073839 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

A and B each have certain number of oranges. A says to B "If you give me 10 of your oranges, I will have twice the number of oranges left with you." B replies, "If you give me 10 of your oranges, I will have the same number of oranges as left with you." The number of oranges with A, is :

Options :

1. 60 oranges
2. 70 oranges
3. 80 oranges
4. 75 oranges

Question Number : 30 Question Id : 5431073840 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

If $a_1, a_2, a_3, \dots, a_n$ be an A. P. of non-zero terms, then

$$\frac{a_n}{a_1 a_2} + \frac{1}{a_2 a_3} + \frac{1}{a_3 a_4} + \dots + \frac{1}{a_{n-1} a_n} \text{ is equal to :}$$

Options :

1. $\frac{n-1}{a_1 a_n}$

2. $\frac{n}{a_1 a_n}$

3. $\frac{n+1}{a_1 a_n}$

4. $\frac{n(n+1)}{2a_1 a_n}$

Question Number : 31 Question Id : 5431073841 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

If the sum of n terms of an A. P. is $3n^2 + 5n$ and its m^{th} term is 164, then value of m is :

Options :

1. $m = 25$

2. $m = 26$

3. $m = 28$

4. $m = 27$

Question Number : 32 Question Id : 5431073842 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The first, second and last term of an A. P. are a, b, c respectively. The sum of A. P., is :

Options :

1. $\frac{(a+c)(b+c-2a)}{2(b-a)}$

2. $\frac{(a+c)(b+c+2a)}{(b-a)}$

3. $\frac{(a-c)(b-c+2a)}{2(b-a)}$

4. $\frac{(a-c)(b+c+a)}{(a-b)}$

Question Number : 33 Question Id : 5431073843 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The first three of four given numbers are in G. P. and their last three are in A. P. with common difference 6. If the first and fourth numbers are equal, then the first number is :

Options :

1. 4

2. 8

3. 6

4. 2

Question Number : 34 Question Id : 5431073844 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

If $\log_x a$, $a^{x/2}$ and $\log_b x$ are in G. P., then value of x is :

Options :

1. $\log_a(\log_b a)$

2. $\log_a b$

3. $\log_b a$

4. $\log a^x$

Question Number : 35 Question Id : 5431073845 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The last value in the sequence $9^{1/3}, 9^{1/9}, 9^{1/27}, \dots$ up to infinity, is :

Options :

1. 1

2. 4

3. 2

4. 3

Question Number : 36 Question Id : 5431073846 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

If $\frac{a^{n+1} + b^{n+1}}{a^n + b^n}$ may be the geometric mean between a and b , then value of n is :

Options :

1. $n = \frac{1}{2}$

2. $n = 1/4$

3. $n = -\frac{1}{2}$

4. $n = -1/4$

Question Number : 37 Question Id : 5431073847 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

If the A. M. of two positive number a and b ($a > b$) is twice their G. M., then $a : b$ is :

Options :

1. $a : b = (2 - \sqrt{3}) : (4 + \sqrt{3})$

2. $a : b = (2 + \sqrt{3}) : (2 - \sqrt{3})$

3. $a : b = (2 + \sqrt{3}) : \sqrt{3}$

4. $a : b = \sqrt{2} : \sqrt{3}$

Question Number : 38 Question Id : 5431073848 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

If a, b, c are in G. P. and $a^{1/x} = b^{1/y} = c^{1/z}$, then x, y, z are in :

Options :

1. A. P.

2. H. P.

3. G. P.

4. Special sequence

Question Number : 39 Question Id : 5431073849 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Sum of n terms of the series

$$\frac{1^3}{1} + \frac{1^3 + 2^3}{1+3} + \frac{1^3 + 2^3 + 3^3}{1+3+5} + \dots n \text{ terms;}$$

is :

Options :

1. $\frac{3n^2 + 9n + 13}{24}$

2. $\frac{n}{12}(n^2 + 9n + 17)$

3. $\frac{n}{24}(2n^2 + 9n + 13)$

4. $\frac{n}{24}(n^2 + 9n + 10)$

Question Number : 40 Question Id : 5431073850 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The value of $\log_{16} 512$ is :

Options :

1. 32

2. 16

3. $\frac{9}{2}$

4. $\frac{9}{4}$

Question Number : 41 Question Id : 5431073851 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

If $\log_{10} 2 = a$ and $\log_{10} 3 = b$, then value of $\log_{10} \left(\frac{160}{729} \right)$, is :

Options :

1. $4a + 6b + 1$

2. $4a - 6b + 1$

3. $2a + 3b + 2$

4. $2a - 3b + 2$

Question Number : 42 Question Id : 5431073852 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

If $\log_{2\sqrt{3}} x = 6$, then the value of x is :

Options :

1. 3456

2. 864

3. 1728

4. 512

Question Number : 43 Question Id : 5431073853 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

If $\frac{\log_e a}{b-c} = \frac{\log_e b}{c-a} = \frac{\log_e c}{a-b}$ then value of $a^{b+c} \times b^{c+a} \times c^{a+b}$ is equal to :

Options :

1. 0

2. 1

3. 2

4. 3

Question Number : 44 Question Id : 5431073854 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

If $y = x - \frac{x^2}{2} + \frac{x^3}{3} - \frac{x^4}{4} + \dots \infty$, then value of x in term of y , is :

Options :

1. $x = e^y - 1$

2. $x = y + y^2 + y^3 + \dots \infty$

3. $x = 1 + e^y$

4. $x = y - \frac{y^2}{2} + \frac{y^3}{3} + \dots \infty$

Question Number : 45 Question Id : 5431073855 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Distance between the lines $5x + 3y - 7 = 0$ and $15x + 9y + 14 = 0$ is :

Options :

1. $\frac{35}{\sqrt{34}}$

2. $\frac{10}{3\sqrt{34}}$

3. $\frac{7}{3\sqrt{34}}$

4. $\frac{35}{3\sqrt{34}}$

Question Number : 46 Question Id : 5431073856 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Equation of the circle through origin and cuts intercepts of length a and b from the axes, is :

Options :

1. $x^2 + y^2 - ax - by + ab = 0$

2. $x^2 + y^2 + ax + by + a^2 + b^2 = 0$

3. $x^2 + y^2 - ax - by = 0$

4. $x^2 + y^2 + ax + by = 0$

Question Number : 47 Question Id : 5431073857 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Focus of the parabola $4y^2 + 12x - 12y + 39 = 0$, is :

Options :

1. $\left(-\frac{5}{2}, 0\right)$

2. $\left(-\frac{13}{4}, \frac{3}{2}\right)$

3. $\left(-\frac{5}{2}, \frac{3}{2}\right)$

4. $\left(-\frac{13}{4}, 0\right)$

Question Number : 48 Question Id : 5431073858 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The equation of an ellipse whose axes are along the coordinate axes, vertices are

$(0, \pm 10)$ and eccentricity $e = \frac{4}{5}$, is :

Options :

1. $\frac{x^2}{36} + \frac{y^2}{100} = 1$

2. $\frac{x^2}{100} + \frac{y^2}{36} = 1$

3. $\frac{x^2}{25} + \frac{y^2}{36} = 1$

4. $\frac{x^2}{25} + \frac{y^2}{100} = 1$

Question Number : 49 Question Id : 5431073859 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Eccentricity of a hyperbola $x^2 - 2y^2 - 2x + 8y - 1 = 0$, is :

Options :

1. $\sqrt{3}$

2. 3

3. $2\sqrt{3}$

4. $\sqrt{\frac{2}{3}}$

Question Number : 50 Question Id : 5431073860 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Let $A = \{1, 2, 3\}$ and $B = \{(1,2), (2,3), (1,3)\}$ be a relation on A , then the relation B is :

Options :

1. Neither symmetric nor transitive
2. Neither reflexive nor transitive
3. Reflexive
4. Transitive

Question Number : 51 Question Id : 5431073861 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Let $A = \{1, 2, 3\}$. The number of equivalence relations containing $(1, 2)$ is :

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 52 Question Id : 5431073862 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

If f and g be real functions defined by $f(x) = \frac{x}{x+1}$ and $g(x) = \frac{1}{x+3}$, then

Domain of the function $(f \circ g)$, is :

Options :

1. $\mathbb{R} - \{0\}$

2. $R - \{-1\}$

3. $R - \{-3, -4\}$

4. $R - \{-1, -3\}$

Question Number : 53 Question Id : 5431073863 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

If $g(x) = x^2 + x - 2$ and $\frac{1}{2}(g \circ f)(x) = 2x^2 - 5x + 2$, then $f(x)$ is equal to :

Options :

1. $2x + 3$

2. $2x - 3$

3. $2x^2 + 3x + 1$

4. $2x^2 - 3x + 1$

Question Number : 54 Question Id : 5431073864 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

If A and B are two events such that $P(A) = 0.25$ and $P(B) = 0.50$. The probability of both happening together is 0.14. The probability of happening of neither A nor B is :

Options :

1. 0.39

2. 0.86

3. 0.11

4. 0.25

Question Number : 55 Question Id : 5431073865 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

A bag contains 5 brown and 4 white socks. A man pulls out two socks. The probability that these are of the same colour is :

Options :

1. $\frac{1}{6}$

2. $\frac{5}{18}$

3. $\frac{5}{108}$

4. $\frac{4}{9}$

Question Number : 56 Question Id : 5431073866 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

A bag contains 4 white and 5 black balls. Another bag contains 6 white and 7 black balls. A ball is transferred from first bag to second bag and then a ball is drawn from the second bag. What is the probability that the ball drawn is white ?

Options :

1. $\frac{9}{21}$

2. $\frac{29}{63}$

3. $\frac{10}{63}$

4. $\frac{25}{126}$

Question Number : 57 Question Id : 5431073867 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Three positive integers are chosen at random without repetition from the first 20 positive integers. The probability that their product is even is :

Options :

1. $\frac{2}{19}$

2. $\frac{13}{19}$

3. $\frac{17}{19}$

4. $\frac{4}{19}$

Question Number : 58 Question Id : 5431073868 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The matrix $A = \begin{bmatrix} 0 & 5 & -7 \\ -5 & 0 & 11 \\ 7 & -11 & 0 \end{bmatrix}$ is :

Options :

1. Skew-symmetric matrix

2. Symmetric matrix

3. a diagonal matrix

4. an upper triangular matrix

Question Number : 59 Question Id : 5431073869 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

If $2 \begin{bmatrix} 1 & 3 \\ 0 & x \end{bmatrix} + \begin{bmatrix} y & 0 \\ 1 & 2 \end{bmatrix} = \begin{bmatrix} 5 & 6 \\ 1 & 8 \end{bmatrix}$, then value of x and y are :

Options :

1. $x = 2, y = 1$

2. $x = 1, y = 5$

3. $x = 1, y = 2$

4. $x = 3, y = 3$

Question Number : 60 Question Id : 5431073870 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The value of determinant $\begin{vmatrix} \log_3 512 & \log_4 3 \\ \log_3 8 & \log_4 9 \end{vmatrix}$ is :

Options :

1. $3\log_3 2$

2. $\frac{17}{2}$

3. $\frac{15}{2}$

4. 8

Question Number : 61 Question Id : 5431073871 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

If a, b, c are in A. P., then value of $\begin{vmatrix} 2y+4 & 5y+7 & 8y+a \\ 3y+5 & 6y+8 & 9y+b \\ 4y+6 & 7y+9 & 10y+c \end{vmatrix}$, is :

Options :

1. $10y^3$

2. 0

3. $x+y+z+2abc$

4. $y^2+3y+abc$

Question Number : 62 Question Id : 5431073872 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The value of $\begin{vmatrix} x+y & x & x \\ 5x+4y & 4x & 2x \\ 10x+8y & 8x & 3x \end{vmatrix}$, is :

Options :

1. x^3
2. $3xy$
3. $3x^2y + yx + x^2$
4. $x^2 + y^2 + xy$

Question Number : 63 Question Id : 5431073873 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

If $A = \begin{bmatrix} 2 & -3 \\ 3 & 4 \end{bmatrix}$, then A^{-1} is :

Options :

1. $\frac{1}{17} \begin{bmatrix} -4 & 2 \\ 3 & 3 \end{bmatrix}$
2. $\frac{1}{17} \begin{bmatrix} 4 & 3 \\ -3 & 2 \end{bmatrix}$
3. $\frac{1}{17} \begin{bmatrix} 2 & 3 \\ 3 & -4 \end{bmatrix}$
4. $\frac{1}{17} \begin{bmatrix} 1 & 3 \\ -3 & -4 \end{bmatrix}$

Question Number : 64 Question Id : 5431073874 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

If x, y, z are different and $\begin{vmatrix} x & x^2 & 1+x^3 \\ y & y^2 & 1+y^3 \\ z & z^2 & 1+z^3 \end{vmatrix} = 0$, then xyz is equal to :

Options :

1. $xyz = 2$

2. $xyz = 1$

3. $xyz = -1$

4. $xyz = -2$

Question Number : 65 Question Id : 5431073875 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The product of the matrices $\begin{bmatrix} 2 & 0 & 7 \\ 0 & 1 & 0 \\ 1 & -2 & 1 \end{bmatrix}$ and $\begin{bmatrix} -x & 14x & 7x \\ 0 & 1 & 0 \\ x & -4x & -2x \end{bmatrix}$ is an identity

matrix. Then the value of x is :

Options :

1. $x = \frac{1}{5}$

2. $x = -\frac{1}{5}$

3. $x = \frac{3}{5}$

4. $x = -\frac{2}{5}$

Question Number : 66 Question Id : 5431073876 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

If $y = \log \tan \left(\frac{\pi}{4} + \frac{x}{2} \right)$, then $\frac{dy}{dx}$ is equal to :

Options :

1. $\frac{1}{\tan \left(\frac{\pi}{4} + \frac{x}{2} \right)}$

2. $\frac{1}{2 \tan \left(\frac{\pi}{4} + \frac{x}{2} \right)}$

3. $\sec^2\left(\frac{\pi}{4} + \frac{x}{2}\right)$

4. $\sec x$

Question Number : 67 Question Id : 5431073877 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

If $y = \sin^{-1}\left(\frac{2x}{1+x^2}\right)$, $x \in (-1, 1)$, then $\frac{dy}{dx}$ is equal to :

Options :

1. $\frac{1}{1+x^2}$

2. $\frac{1}{2(1+x^2)}$

3. $\frac{2}{1+x^2}$

4. $\frac{1-x^2}{(1+x^2)^2}$

Question Number : 68 Question Id : 5431073878 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

If $\sin y = x \cos(a+y)$, then $\frac{dy}{dx}$ is equal to :

Options :

1. $\frac{\cos a}{\cos^2(a+y)}$

2. $\frac{\cos^2(a+y)}{\cos a}$

3. $\frac{\sin^2 y}{\sin a}$

4. $\frac{\cos a}{\sin^2 y}$

Question Number : 69 Question Id : 5431073879 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

A man 2m high, walks at a uniform speed of 6m per second away from a lamp post, 5 m high. What is the rate at which the length of his shadow increases ?

Options :

1. 4 m/sec.
2. 3 m/sec.
3. 5 m/sec.
4. 3.5 m/sec.

Question Number : 70 Question Id : 5431073880 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The equation of the normal to the curve $y = 2x^2 + 3 \sin x$ at $x = 0$, is :

Options :

1. $x + 3y = 0$
2. $3x + y = 0$
3. $x - 3y = 0$
4. $3x - y = 0$

Question Number : 71 Question Id : 5431073881 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

If $y = 3 \cos(\log x) + 4 \sin(\log x)$, then $(x^2 y_2 + x y_1 + y)$ is equal to :

Options :

1. 1
2. 0
3. -1
4. 2

Question Number : 72 Question Id : 5431073882 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The real valued function

$$f(x) = \begin{cases} kx^2, & \text{if } x \leq 2 \\ 3, & \text{if } x > 2 \end{cases}, \text{ is continuous at } x = 2. \text{ Then the value of 'k' is :}$$

Options :

1. 1

2. $\frac{1}{2}$

3. $k = \frac{3}{4}$

4. $\frac{1}{4}$

Question Number : 73 Question Id : 5431073883 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The value of $\int \frac{1 + \sin x}{1 - \sin x} dx$ is :

Options :

1. $2 \tan x + x + \sec x + c$

2. $2 \tan x - x + 2 \sec x + c$

3. $\tan x - x + \sec^2 x + c$

4. $\sec x \cdot \tan x + \tan x + c$

Question Number : 74 Question Id : 5431073884 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Evaluate : $\int \sec^4 x \tan x dx$

Options :

1. $\tan^2 x + \tan^4 x + c$

2. $\tan^2 x - \tan^4 x + c$

3. $\frac{1}{2} \tan^2 x + \frac{1}{4} \tan^4 x + c$

4. $\tan x + \sec^2 x \tan x + c$

Question Number : 75 Question Id : 5431073885 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The value of $\int_0^{\sqrt{2}} \sqrt{2-x^2} dx$, is :

Options :

1. $\sqrt{2}$

2. 2

3. 0

4. $\frac{\pi}{2}$

Question Number : 76 Question Id : 5431073886 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The value of $\int_0^{\frac{\pi}{2}} (\sqrt{\tan x} + \sqrt{\cot x}) dx$, is :

Options :

1. 2π

2. $\sqrt{2}\pi$

3. π

4. $\frac{\pi}{2}$

Question Number : 77 Question Id : 5431073887 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
 Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
 No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The value of $\int_{\pi/5}^{3\pi/10} \frac{\sin x}{(\sin x + \cos x)} dx$, is :

Options :

1. $\frac{\pi}{20}$

2. $\frac{\pi}{10}$

3. $\frac{3\pi}{20}$

4. $\frac{3\pi}{10}$

Question Number : 78 Question Id : 5431073888 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
 Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
 No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The area of the region $\{(x, y) : x^2 + y^2 \leq 1 \leq x + y\}$, is :

Options :

1. $\frac{\pi}{4}$ sq. units

2. $\left(\frac{\pi}{2} + \frac{1}{4}\right)$ sq. units

3. $\left(\frac{\pi}{4} - \frac{1}{2}\right)$ sq. units

4. $\left(\frac{\pi}{2} - \frac{1}{4}\right)$ sq. units

Question Number : 79 Question Id : 5431073889 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
 Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
 No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Solution of differential equation $x \frac{dy}{dx} - y = \log x$, is :

Options :

1. $y = (\log x + 1) + c$
2. $y = cx - (\log x + 1)$
3. $y = \frac{c}{x} + (1 - \log x)$
4. $y = \log x + c$

Question Number : 80 Question Id : 5431073890 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The value of $(0.2) \log_{\sqrt{5}} \left(\frac{1}{4} + \frac{1}{8} + \frac{1}{16} + \dots + \infty \right)$ is :

Options :

1. 1
2. 2
3. 3
4. 4

Question Number : 81 Question Id : 5431073891 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

If 'A \$ B' means 'A is brother of B', 'A @ B' means 'A is wife of B', 'A # B' means 'A is daughter of B' and 'A & B' means 'A is father of B', then which of the following expressions indicates the relationship 'K is father-in-law of H' ?

Options :

1. $H @ J \$ L \# P \& K$
2. $H @ J \$ P \& L \# K$
3. $H @ J \$ L \# K \& P$

4. H@P\$J&L#K

Question Number : 82 Question Id : 5431073892 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

A is the son of B, C . B's sister has a son D and a daughter E. F is the maternal uncle of D. How many nephews does F have ?

Options :

1. 0
2. 1
3. 2
4. 3

Question Number : 83 Question Id : 5431073893 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Pointing to a man in a photograph, a women said, "His brother's father is the only son of my grandfather". How is the woman related to the man in the photograph ?

Options :

1. Mother
2. Aunt
3. Sister
4. Daughter

Question Number : 84 Question Id : 5431073894 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Arrange words given below in alphabetical order as they would appear in dictionary and find out the one that comes last :

Options :

1. Achieve

2. Actuate
3. Accumulate
4. Acquit

Question Number : 85 Question Id : 5431073895 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

In the following five names which name will come in the last in a telephone directory ?

Options :

1. Mahinder
2. Mahindra
3. Mahendra
4. Mahender

Question Number : 86 Question Id : 5431073896 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Three of the following four are alike in a certain way and hence form a group.
Which is the one that does not belong to that group ?

Options :

1. Shirt
2. Shoe
3. Ring
4. Cobbler

Question Number : 87 Question Id : 5431073897 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Choose the number pair/group which is different from others ?

Options :

1. 7 : 22
2. 12 : 37
3. 8 : 33
4. 15 : 46

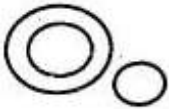
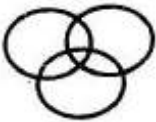
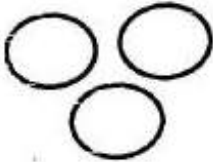

Question Number : 88 Question Id : 5431073898 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Select from four alternative diagrams, the one that best illustrates the relationship among the three classes : *Pigeons, Birds, Dogs*

Options :

1. 
2. 
3. 
4. 


Question Number : 89 Question Id : 5431073899 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which of the following Venn-diagram correctly illustrates the relationship among the classes : *Carrot, Food, Vegetables*

Options :

1. 



2.



3.



4.

Question Number : 90 Question Id : 5431073900 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Out of 120 students in a school, 5% can play all the three games Cricket, Chess and Carroms. If so happens that the number of players who can play any and only two games is 30. The number of students who can play the Cricket alone is 40. What is the total number of those who can play Chess alone or Carroms alone ?

Options :

1. 45

2. 44

3. 46

4. 24

Question Number : 91 Question Id : 5431073901 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

One morning Udai and Vishal were talking to each other face to face at a crossing. If Vishal's shadow was exactly to the left of Udai, which direction was Udai facing ?

Options :

1. North

2. South
3. South-East
4. None of these

Question Number : 92 Question Id : 5431073902 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
 Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
 No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

A man walks 5 km toward south and then turns to the right. After walking 3 km he turns to the left and walks 5 km. Now in which direction is he from the starting place ?

Options :

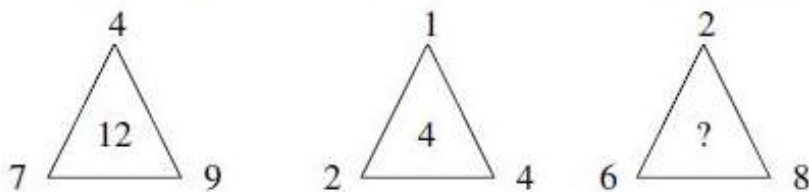
1. West
2. South
3. North-East
4. South-West

Question Number : 93 Question Id : 5431073903 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
 Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
 No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which number replaces the (?) in the following diagram :



Options :

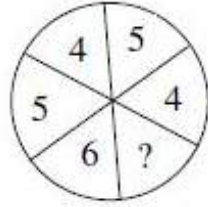
1. 6
2. 9
3. 8
4. 5

Question Number : 94 Question Id : 5431073904 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
 Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
 No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which number replaces the (?) in the following diagram :



Options :

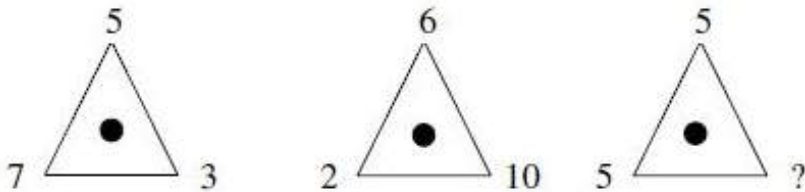
1. 3
2. 4
3. 5
4. 2

Question Number : 95 Question Id : 5431073905 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which number replaces the (?) in the following diagram ?



Options :

1. 3
2. 4
3. 2
4. 5

Question Number : 96 Question Id : 5431073906 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

It was Sunday on Jan 1, 2006. What was the day of the week Jan 1, 2010 ?

Options :

1. Sunday
2. Saturday
3. Friday
4. Wednesday

Question Number : 97 Question Id : 5431073907 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The calendar for the year 2007 will be the same for the year :

Options :

1. 2014
2. 2016
3. 2017
4. 2018

Question Number : 98 Question Id : 5431073908 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which of the following is *not* a leap year ?

Options :

1. 700
2. 800
3. 1200
4. 2000

Question Number : 99 Question Id : 5431073909 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

January 1, 2007 was Monday. What day of the week lies on January 1, 2008 ?

Options :

1. Monday
2. Tuesday
3. Wednesday
4. Sunday

Question Number : 100 Question Id : 5431073910 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

How many times in a day, the hands of a clock are straight ?

Options :

1. 22
2. 24
3. 44
4. 48

Question Number : 101 Question Id : 5431073911 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

A watch which gains uniformly is 2 minutes slow at noon on Monday and is 4 min. 48 sec fast at 2 p.m. on the following Monday. When was it correct ?

Options :

1. 2 p.m. on Tuesday
2. 2 p.m. on Wednesday
3. 3 p.m. on Thursday
4. 1 p.m. on Friday

Question Number : 102 Question Id : 5431073912 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Find the odd man out from following :

8, 27, 64, 100, 125, 216, 343

Options :

1. 27
2. 100
3. 125
4. 343

Question Number : 103 Question Id : 5431073913 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Find the odd man out from following :

3, 5, 7, 12, 17, 19

Options :

1. 19
2. 17
3. 5
4. 12

Question Number : 104 Question Id : 5431073914 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Preeti has a son, named Arun. Ram is Preeti's brother. Neeta too has a daughter named Reena. Neeta is Ram's sister. What is Arun's relationship with Reena ?

Options :

1. Brother
2. Nephew
3. Cousin

4. Uncle

Question Number : 105 Question Id : 5431073915 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Given sequence : N O P Q Y B Z A R S H I J K L M T U V G F E W X D C

What will come in place of (?) in the following series :

NDP, QWB, ZFR, ?

Options :

1. SVI

2. AFS

3. IVS

4. SFA

Question Number : 106 Question Id : 5431073916 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

In above series which letter is in the middle between the ninth letter from the right and eighth letter from the left in the given alphabets ?

Options :

1. N

2. O

3. L

4. M

Question Number : 107 Question Id : 5431073917 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

In a certain code language,

'134' means 'good and tasty' :

'478' means 'see good pictures' and

'729' means 'pictures are faint'.

Which of the following digits stands for 'see' ?

Options :

1. 9

2. 2

3. 1

4. 8

Question Number : 108 Question Id : 5431073918 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Statements :

(A) All books are pencils.

(B) All pencils are pens.

Inferences :

(i) All books are pens.

(ii) Some pencils are not books.

Options :

1. Inference (i) is true

2. Inference (ii) is true

3. Inference (i) and (ii) are true

4. Neither of the inferences are true

Question Number : 109 Question Id : 5431073919 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Statements :

(A) Some ministers are teachers.

(B) All teachers are scholar

Inferences :

(i) Some ministers are scholars.

(ii) All scholars are teachers

Options :

1. Inference (i) is true
2. Inference (ii) is true
3. Inference (i) and (ii) are true
4. Neither of the inferences are true

Question Number : 110 Question Id : 5431073920 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

What number is nearest to 99547 which is divisible by 687 ?

Options :

1. 98928
2. 99479
3. 99615
4. 100166

Question Number : 111 Question Id : 5431073921 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

A vendor bought toffees at 6 for a rupee. How many for a rupee must he sell to gain 20% ?

Options :

1. 3
2. 4

3. 5

4. 6

Question Number : 112 Question Id : 5431073922 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Identify missing letters to be filled up in the blank spaces provided in the following series:

a__bba__cab__ac__ab__ac

Options :

1. b, c, a, c, b

2. b, c, b, c, c

3. a, b, c, b, c

4. a, c, b, c, b

Question Number : 113 Question Id : 5431073923 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

If the code of DELHI is HIPLM, then QEHVEW would be the code of :

Options :

1. MUMBAI

2. MADRAS

3. NAGPUR

4. JAIPUR

Question Number : 114 Question Id : 5431073924 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Q is the father of R, P is the son of Q, T is the brother of S, S is the daughter of R. Who are the cousins of P ?

Options :

1. R and Q

2. R and T
3. S and T
4. S and Q

Question Number : 115 Question Id : 5431073925 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

If A is to South of B, C is to East of B, then in what direction is A with respect to C ?

Options :

1. South-East
2. South-West
3. North-East
4. North-West

Question Number : 116 Question Id : 5431073926 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

₹ 395 are divided among A, B and C in such a manner that B gets 25% more than A and 20% more than C. The share of A is :

Options :

1. ₹ 198
2. ₹ 120
3. ₹ 180
4. ₹ 195

Question Number : 117 Question Id : 5431073927 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

If 5 boys write 5 pages in 5 minutes, then 3 boys will write 3 pages in :

Options :

1. 1 minute
2. 3 minutes
3. 5 minutes
4. 9 minutes

Question Number : 118 Question Id : 5431073928 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

If A has more money than B has, but it is less than C has. D has lesser money than E has but more than A has. If C has lesser money than D has, who is richest among these five persons ?

Options :

1. E
2. D
3. C
4. B

Question Number : 119 Question Id : 5431073929 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The average age of 40 students of a class is 15 years. When 10 new students are admitted, the average age is increased by 0.2 years. The average age of the new students is :

Options :

1. 15.2 years
2. 16 years
3. 16.2 years
4. 16.4 years

Question Number : 120 Question Id : 5431073930 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The average of 50 numbers is 28. If two numbers, namely 25 and 35 are discarded, then the average of the remaining numbers is nearly :

Options :

1. 27.29
2. 27.92
3. 29.27
4. 29.72