Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

DIPLOMA ENGINEERING – SEMESTER –1. C to D Bridge Course Examination – WINTER - 2020

Subject Code:C300001 Date: 16-03-2021

Subject Name: Basic Mathematics

Time:02:30 PM TO 04:00 PM Total Marks: 70

Instructions:

1. **Attempt all questions.**
2. **Make Suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Use of programmable & Communication aids are strictly prohibited.**
5. **Use of only simple calculator is permitted in Mathematics.**
6. **English version is authentic.**

No.	Question Text and Option.(પ્રશ્ન તેમજ વિકલ્પ)	
	$\log 32 \div \log 2 =$_____	
1.	A. 5	B. 3
	C. 4	D. 27
	$\log 32 \div \log 2 =$_____	
1	A. 5	B. 3
	C. 4	D. 27
	$\log 1.\log 2.\log 3.\log 4 \ldots\ldots.\log 2020 =$_____	
2.	A. $\log(1.2.3.4 \ldots.2020)$	B. $1.2.3.4 \ldots.2020$
	C. 0	D. 1
	$\log 1.\log 2.\log 3.\log 4 \ldots\ldots.\log 2020 =$_____	
2.	A. $\log(1.2.3.4 \ldots.2020)$	B. $1.2.3.4 \ldots.2020$
	C. 0	D. 1
	$\log a + \log b =$_____	
3.	A. $\log(ab)$	B. $\log(a+b)$
	C. $\log(a-b)$	D. $\log(a/b)$
	$\log a + \log b =$_____	
3.	A. $\log(ab)$	B. $\log(a+b)$
	C. $\log(a-b)$	D. $\log(a/b)$
	$9^{\log_3 7}=$_____	
4.	A. 9	B. 1
	C. 7	D. 49
	$9^{\log_2 7}=$_____	
4.	A. 9	B. 1
	C. 7	D. 49
	$\log_x y^2.\log_y x =$_____	
5.	A. 3	B. 2
	C. 1	D. 0
	$\log_x y^2.\log_y x =$_____	
5.	A. 3	B. 2
	C. 1	D. 0
	$\log_2(\log_3(\log_4 64)) =$_____	
6.	A. 1	B. 2
	C. 0	D. 3
6.	$\log_2(\log_3(\log_4 64)) =$_____	
	A. 1	B. 2

C. 0 D. 3

$\log(a/b) =$_____

7 A. $\log a - \log b$ B. $\log(a+b)$
C. $\log(a-b)$ D. $\log(a/b)$

$\log(a/b) =$_____

7 A. $\log a - \log b$ B. $\log(a+b)$
C. $\log(a-b)$ D. $\log(a/b)$

If $\log\left(\frac{a+b}{2}\right) = \frac{1}{2}(\log a + \log b)$ then=_____

8 A. $a^2 + b^2 = 1$ B. $a^2 + b^2 = 6ab$
C. $a + b = 1$ D. $a = b$

જો $\log\left(\frac{a+b}{2}\right) = \frac{1}{2}(\log a + \log b)$ તો=_____

8 A. $a^2 + b^2 = 1$ B. $a^2 + b^2 = 6ab$
C. $a + b = 1$ D. $a = b$

$\log_{10} \frac{1}{10000} =$_____

9 A. 3 B. 4
C. - 4 D. -3

$\log_{10} \frac{1}{10000} =$_____

9 A. 3 B. 4
C. - 4 D. -3

$\log_3 27 =$_____

10 A. 4 B. 2
C. 3 D. 5

$\log_3 27 =$_____

10 A. 4 B. 2
C. 3 D. 5

If $A = \begin{bmatrix} -1 & -3 \\ 6 & 2 \end{bmatrix}$ then adjA=_____

11 A. $\begin{bmatrix} 2 & -3 \\ 6 & -1 \end{bmatrix}$ B. $\begin{bmatrix} -1 & -3 \\ 6 & 2 \end{bmatrix}$
C. $\begin{bmatrix} -1 & 3 \\ -6 & 2 \end{bmatrix}$ D. $\begin{bmatrix} 2 & 3 \\ -6 & -1 \end{bmatrix}$

જો $A = \begin{bmatrix} -1 & -3 \\ 6 & 2 \end{bmatrix}$ તો adjA=_____

11 A. $\begin{bmatrix} 2 & -3 \\ 6 & -1 \end{bmatrix}$ B. $\begin{bmatrix} -1 & -3 \\ 6 & 2 \end{bmatrix}$
C. $\begin{bmatrix} -1 & 3 \\ -6 & 2 \end{bmatrix}$ D. $\begin{bmatrix} 2 & 3 \\ -6 & -1 \end{bmatrix}$

If $A = \begin{bmatrix} 9 \\ 5 \end{bmatrix}$ then $A^T =$ _____

12 A. $[9 \quad 5]$ B. $[5 \quad 9]$
C. $\begin{bmatrix} 5 \\ 9 \end{bmatrix}$ D. $\begin{bmatrix} 9 \\ 5 \end{bmatrix}$

જો $A = \begin{bmatrix} 9 \\ 5 \end{bmatrix}$ તો $A^T =$ _____

12 A. $[9 \quad 5]$ B. $[5 \quad 9]$
C. $\begin{bmatrix} 5 \\ 9 \end{bmatrix}$ D. $\begin{bmatrix} 9 \\ 5 \end{bmatrix}$

Total member of $I_3 =$ _____

13 A. 3 B. 4
C. 6 D. 9

I_3 માં કુલ સભ્યો= _____

13 A. 3 B. 4
C. 6 D. 9

If $A = \begin{bmatrix} 2 & 4 \\ 5 & 7 \end{bmatrix}$ and $B = \begin{bmatrix} 1 & 9 \\ 4 & 1 \end{bmatrix}$ then A+B=_____

14
A. $\begin{bmatrix} 3 & 13 \\ 1 & 6 \end{bmatrix}$ B. $\begin{bmatrix} 3 & 13 \\ 9 & 6 \end{bmatrix}$
C. $\begin{bmatrix} 3 & 13 \\ 9 & 8 \end{bmatrix}$ D. $\begin{bmatrix} 3 & 13 \\ 6 & 8 \end{bmatrix}$

જો $A = \begin{bmatrix} 2 & 4 \\ 5 & 7 \end{bmatrix}$ અને $B = \begin{bmatrix} 1 & 9 \\ 4 & 1 \end{bmatrix}$ તો A+B=_____

14
A. $\begin{bmatrix} 3 & 13 \\ 1 & 6 \end{bmatrix}$ B. $\begin{bmatrix} 3 & 13 \\ 9 & 6 \end{bmatrix}$
C. $\begin{bmatrix} 3 & 13 \\ 9 & 8 \end{bmatrix}$ D. $\begin{bmatrix} 3 & 13 \\ 6 & 8 \end{bmatrix}$

If $\begin{bmatrix} x-3 & 4 \\ 3 & 0 \end{bmatrix} = \begin{bmatrix} 0 & 4 \\ 3 & 0 \end{bmatrix}$ then x = _____

15
A. 2 B. 1
C. 4 D. 3

જો $\begin{bmatrix} x-3 & 4 \\ 3 & 0 \end{bmatrix} = \begin{bmatrix} 0 & 4 \\ 3 & 0 \end{bmatrix}$ તો x = _____

15
A. 2 B. 1
C. 4 D. 3

The order of the matrix $\begin{bmatrix} 5 & -7 \\ 0 & 1 \\ 7 & 6 \end{bmatrix}$ is_____

16
A. 2×3 B. 3×3
C. 3×2 D. 2×2

શ્રેણિક $\begin{bmatrix} 5 & -7 \\ 0 & 1 \\ 7 & 6 \end{bmatrix}$ ની કક્ષા _____

16
A. 2×3 B. 3×3
C. 3×2 D. 2×2

Matrix $A = [3 \quad -4 \quad 9]$ is _____matrix

17
A. Square B. Row
C. Column D. Identity

શ્રેણિક $A = [3 \quad -4 \quad 9]$ એ _____ શ્રેણિક છે.

17
A. ચોરસ B. હાર
C. સ્તંભ D. એકમ

If A is a square matrix then, $A - A^T$ is _____ matrix

18
A. Diagonal B. Symmetric
C. Skew –symmetric D. Row

જો A ચોરસ શ્રેણિક હોય તો , $A - A^T$ _____ શ્રેણિક છે.

18
A. વિકર્ણ B. સંમિત
C. વિસંમિત D. હાર

If $A = \begin{bmatrix} 9 & 5 \\ -4 & 3 \end{bmatrix}$ then adj(adjA) = _____

19
A. -A B. I
C. A D. 0

જો $A = \begin{bmatrix} 9 & 5 \\ -4 & 3 \end{bmatrix}$ તો adj(adjA) = _____

19
A. -A B. I
C. A D. 0

If $A = \begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$ then A^2 = _____

20
A. $\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$ B. $\begin{bmatrix} 1 & 0 \\ 1 & 1 \end{bmatrix}$
C. $\begin{bmatrix} 1 & 0 \\ 1 & 0 \end{bmatrix}$ D. $\begin{bmatrix} 0 & 1 \\ 1 & 0 \end{bmatrix}$

જો $A = \begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$ તો $A^2 =$ _____

20
A. $\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$ B. $\begin{bmatrix} 1 & 0 \\ 1 & 1 \end{bmatrix}$
C. $\begin{bmatrix} 1 & 0 \\ 1 & 0 \end{bmatrix}$ D. $\begin{bmatrix} 0 & 1 \\ 1 & 0 \end{bmatrix}$

If $A = [2 \quad 1 \quad 4]$ and $B = \begin{bmatrix} 1 \\ 3 \\ 0 \end{bmatrix}$ then A.B=_____

21
A. 5 B. 0
C. -5 D. 9

જો $A = [2 \quad 1 \quad 4]$ અને $B = \begin{bmatrix} 1 \\ 3 \\ 0 \end{bmatrix}$ તો A.B=_____

21
A. 5 B. 0
C. -5 D. 9

If order of matrices A and B are $p \times q$ and $q \times r$ respectively then AB is of order____

22
A. $p \times q$ B. $q \times r$
C. $r \times p$ D. $p \times r$

જો શ્રેણિક A અને B ની કક્ષા અનુક્રમે $p \times q$ અને $q \times r$ હોય તો AB ની કક્ષા ____

22
A. $p \times q$ B. $q \times r$
C. $r \times p$ D. $p \times r$

The inverse of square matrix A is exist if_____

23
A. $|A| \neq 0$ B. $|A| = 0$
C. $A = I$ D. $A = A^{-1}$

શ્રેણિક A નો વ્યસ્ત શ્રેણિક અસ્તિત્વ ધરાવે જો_____

23
A. $|A| \neq 0$ B. $|A| = 0$
C. $A = I$ D. $A = A^{-1}$

If $A = \begin{bmatrix} 2 & 4 \\ 4 & -1 \end{bmatrix}$ then $A + A^T =$_____

24
A. 2A B. A
C. I D. 0

જો $A = \begin{bmatrix} 2 & 4 \\ 4 & -1 \end{bmatrix}$ તો $A + A^T =$_____

24
A. 2A B. A
C. I D. 0

If A is non-singular matrix then _____

25
A. $A^T = A$ B. $A^T = -A$
C. $|A| \neq 0$ D. $|A| = 0$

જો A અસામન્ય શ્રેણિક હોય તો _____

25
A. $A^T = A$ B. $A^T = -A$
C. $|A| \neq 0$ D. $|A| = 0$

$(BA)^T =$ _____

26
A. $A^T B^T$ B. $A^T B$
C. AB^T D. $B^T A^T$

$(BA)^T =$ _____

26
A. $A^T B^T$ B. $A^T B$
C. AB^T D. $B^T A^T$

_____is symmetric matrix.

27
A. $\begin{bmatrix} 5 & 3 \\ -3 & 5 \end{bmatrix}$ B. $\begin{bmatrix} 5 & 3 \\ 3 & 5 \end{bmatrix}$
C. $\begin{bmatrix} 5 & -3 \\ 3 & -5 \end{bmatrix}$ D. $\begin{bmatrix} 3 & 3 \\ 5 & 5 \end{bmatrix}$

27 _____ એ સંમિત શ્રેણિક છે.

A. $\begin{bmatrix} 5 & 3 \\ -3 & 5 \end{bmatrix}$ B. $\begin{bmatrix} 5 & 3 \\ 3 & 5 \end{bmatrix}$

C. $\begin{bmatrix} 5 & -3 \\ 3 & -5 \end{bmatrix}$ D. $\begin{bmatrix} 3 & 3 \\ 5 & 5 \end{bmatrix}$

Principal diagonal element of $\begin{bmatrix} -1 & 5 \\ 1 & 0 \end{bmatrix}$=_____

28

A. (0,5) B. (1,5)

C. (5,0) D. (-1,0)

શ્રેણિક $\begin{bmatrix} -1 & 5 \\ 1 & 0 \end{bmatrix}$ ના મુખ્યવિકર્ણ પરના ઘટક =_____

28

A. (0,5) B. (1,5)

C. (5,0) D. (-1,0)

180^o =_____radian

29 A. $\frac{2\pi}{3}$ B. $\frac{3\pi}{2}$

C. π D. 4π

180^o =_____ રેડિયન

29 A. $\frac{2\pi}{3}$ B. $\frac{3\pi}{2}$

C. π D. 4π

$\sin^2 37\left(\frac{1}{2}\right)^{\circ} - \sin^2 7\left(\frac{1}{2}\right)^{\circ} =$ _____

30 A. 1 B. $\frac{1}{2\sqrt{2}}$

C. $\frac{1}{2}$ D. $\frac{1}{\sqrt{2}}$

$\sin^2 37\left(\frac{1}{2}\right)^{\circ} - \sin^2 7\left(\frac{1}{2}\right)^{\circ} =$ _____

30 A. 1 B. $\frac{1}{2\sqrt{2}}$

C. $\frac{1}{2}$ D. $\frac{1}{\sqrt{2}}$

Principal period of $\cos(5 - 2x) =$ _____

31 A. 2π B. 5π

C. π D. $-\pi$

$\cos(5 - 2x)$નુ મુખ્ય આવર્તમાન = _____

31 A. 2π B. 5π

C. π D. $-\pi$

$\sin(-\theta) =$ _____

32 A. $\cos\theta$ B. $\sin\theta$

C. $-\sin\theta$ D. $-\cos\theta$

$\sin(-\theta) =$ _____

32 A. $\cos\theta$ B. $\sin\theta$

C. $-\sin\theta$ D. $-\cos\theta$

$\tan(\pi - \theta) =$ _____

33 A. $\tan\theta$ B. $\cot\theta$

C. $-\cot\theta$ D. $-\tan\theta$

$\tan(\pi - \theta) =$ _____

33 A. $\tan\theta$ B. $\cot\theta$

C. $-\cot\theta$ D. $-\tan\theta$

$\sin 120^0 =$ _____

34 A. $\frac{\sqrt{3}}{2}$ B. $\frac{1}{2}$

C. 0 D. 1

$\sin 120^0 =$ _____

34 A. $\frac{\sqrt{3}}{2}$ B. $\frac{1}{2}$

C. 0 D. 1

$1 + tan^2\theta =$ _____

35 A. $sin^2\theta$ B. $cos^2\theta$

C. $sec^2\theta$ D. $cosec^2\theta$

$1 + tan^2\theta =$ _____

35 A. $sin^2\theta$ B. $cos^2\theta$

C. $sec^2\theta$ D. $cosec^2\theta$

$\sin(\alpha + \beta) =$

36 A. $\sin\alpha.\cos\beta + \cos\alpha.\sin\beta$ B. $\cos\alpha.\cos\beta - \sin\alpha.\sin\beta$

C. $\sin\alpha.\sin\beta + \cos\alpha.\cos\beta$ D. $\sin\alpha.\cos\beta - \cos\alpha.\sin\beta$

$\sin(\alpha + \beta) =$

36 A. $\sin\alpha.\cos\beta + \cos\alpha.\sin\beta$ B. $\cos\alpha.\cos\beta - \sin\alpha.\sin\beta$

C. $\sin\alpha.\sin\beta + \cos\alpha.\cos\beta$ D. $\sin\alpha.\cos\beta - \cos\alpha.\sin\beta$

$\cot 210^o =$_____

37 A. 1 B. -1

C. 0 D. $\sqrt{3}$

$\cot 210^o =$_____

37 A. 1 B. -1

C. 0 D. $\sqrt{3}$

For ΔABC , $\sin(B + C) =$_____

38 A. $\sin A$ B. $\sin B$

C. $\sin C$ D. π

ΔABC, માટે $\sin(B + C) =$, _____

38 A. $\sin A$ B. $\sin B$

C. $\sin C$ D. π

If $\alpha = \frac{\pi}{2}$ then $\cos 2\alpha =$ _____

39 A. 1 B. -1

C. $\frac{1}{\sqrt{2}}$ D. 0

જો $\alpha = \frac{\pi}{2}$ તો $\cos 2\alpha =$ _____

39 A. 1 B. -1

C. $\frac{1}{\sqrt{2}}$ D. 0

If $\tan\alpha = \frac{1}{2}$ and $\tan\beta = \frac{1}{3}$ then $\tan(\alpha + \beta) =$_____

40 A. 1 B. $\frac{\sqrt{3}}{2}$

C. $\frac{1}{\sqrt{2}}$ D. 0

જો $\tan\alpha = \frac{1}{2}$ અને $\tan\beta = \frac{1}{3}$ તો $\tan(\alpha + \beta) =$_____

40 A. 1 B. $\frac{\sqrt{3}}{2}$

C. $\frac{1}{\sqrt{2}}$ D. 0

$cos^{-1}(\frac{\sqrt{3}}{2}) =$_____

41 A. $\frac{\pi}{6}$ B. $\frac{\pi}{3}$

C. $\frac{\pi}{2}$ D. π

$cos^{-1}(\frac{\sqrt{3}}{2}) =$_____

41 A. $\frac{\pi}{6}$ B. $\frac{\pi}{3}$

C. $\frac{\pi}{2}$ D. π

The range of cos function is

42 A. $[-1,1]$ B. $(-1,1)$

C. R-$(-1,1)$ D. R

cos વિધેયનો વિસ્તાર=_____

42 A. $[-1,1]$ B. $(-1,1)$

C. R-$(-1,1)$ D. R

$2cos\theta.sin\theta =$_____

43 A. $sin3\theta$ B. $2sin\theta$

C. $sin2\theta$ D. $sin4\theta$

$2cos\theta.sin\theta =$_____

43 A. $sin3\theta$ B. $2sin\theta$

C. $sin2\theta$ D. $sin4\theta$

If $sec\theta = \frac{3}{2}$ then $tan\,\theta =$_____

44 A. $\frac{\sqrt{13}}{2}$ B. $\frac{\sqrt{5}}{2}$

C. $\frac{9}{4}$ D. 2

જો $sec\theta = \frac{3}{2}$ તો $tan\,\theta =$_____

44 A. $\frac{\sqrt{13}}{2}$ B. $\frac{\sqrt{5}}{2}$

C. $\frac{9}{4}$ D. 2

$2\pi^c =$_____

45 A. 180^o B. 270^o

C. 360^o D. 540^o

$2\pi^c =$_____

45 A. 180^o B. 270^o

C. 360^o D. 540^o

$\tan 315^0$=_____

46 A. -1 B. $\frac{1}{2}$

C. 0 D. $\frac{\sqrt{3}}{2}$

$\tan 315^0$=_____

46 A. -1 B. $\frac{1}{2}$

C. 0 D. $\frac{\sqrt{3}}{2}$

X and Y are mutually perpendicular if angle between them is_____

47 A. 0 B. $\frac{\pi}{2}$

C. π D. 2π

X અને Y પરસ્પર લંબ હોય તો તેમની વચ્ચે નો ખુણો_____

47 A. 0 B. $\frac{\pi}{2}$

C. π D. 2π

If $\bar{x}$ =(1,2,-3) , $\bar{y}$ = (2,-1,4) then $\bar{x} \times \bar{y}$ =

48 A. (-5,-10,-5) B. (-5,10,-5)
C. (5,-10,-5) D. None of the above

જો $\bar{x}$ =(1,2,-3) , $\bar{y}$ = (2,-1,4) તો $\bar{x} \times \bar{y}$ =

48 A. (-5,-10,-5) B. (-5,10,-5)
C. (5,-10,-5) D. ઉપરના માંથી કોઈ પણ નહી.

$(\bar{\imath} - 2\bar{\jmath} + \bar{k}).(4\bar{\imath} - 4\bar{\jmath} + 7\bar{k}) =$ _____

49 A. -19 B. -5
C. 19 D. 5

$(\bar{\imath} - 2\bar{\jmath} + \bar{k}).(4\bar{\imath} - 4\bar{\jmath} + 7\bar{k}) =$ _____

49 A. -19 B. -5
C. 19 D. 5

If the angle between two vectors $\bar{x}$ and $\bar{y}$ is θ then $\sin\theta =$_____

50 A. $|\bar{x}.\bar{y}|$ B. $|\bar{x} \times \bar{y}|$
C. $\frac{\bar{x} \times \bar{y}}{|\bar{x}||\bar{y}|}$ D. $\frac{\bar{x}.\bar{y}}{|\bar{x}||\bar{y}|}$

જો બે સદિશો $\bar{x}$ અને $\bar{y}$ વચ્ચેનો ખુણો θ હોય તો $\sin\theta =$_____

50 A. $|\bar{x}.\bar{y}|$ B. $|\bar{x} \times \bar{y}|$
C. $\frac{\bar{x} \times \bar{y}}{|\bar{x}||\bar{y}|}$ D. $\frac{\bar{x}.\bar{y}}{|\bar{x}||\bar{y}|}$

If $\bar{a}$ is unit vector then $|\bar{a}| =$_____

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

જો $\bar{a}$ એકમ સદિશ હોય તો $|\bar{a}| =$_____

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

If $(2,-3,5).(m,-6,-8) = 0$ then m = _____

52 A. -11 B. -22
C. 22 D. 11

જો $(2,-3,5).(m,-6,-8) = 0$ તો m = _____

52 A. -11 B. -22
C. 22 D. 11

_____ is not a unit vector

53 A. (1,0,0) B. (0,1,0)
C. $\left(0,\frac{1}{2},\frac{1}{2}\right)$ D. (0,0,1)

_____ એકમ સદિશ નથી.

53 A. (1,0,0) B. (0,1,0)
C. $\left(0,\frac{1}{2},\frac{1}{2}\right)$ D. (0,0,1)

Angle between vector x=(1,-1,0) and y =(1,0,1) is _____

54 A. $\frac{\pi}{3}$ B. $\frac{\pi}{2}$
C. π D. None of the above

સદિશો x=(1,-1,0) અને y = (1,0,1) વચ્ચે નો ખુણો _____

54 A. $\frac{\pi}{3}$ B. $\frac{\pi}{2}$
C. π D. None of the above

$|(1,0,1) + (1,1,1)| =$_____

55 A. $\sqrt{9}$ B. $\sqrt{8}$
C. 9 D. 8

55 $|(1,0,1) + (1,1,1)| =$_____

A. $\sqrt{9}$ B. $\sqrt{8}$
C. 9 D. 8

$\bar{a} = 2\bar{\imath} - \bar{\jmath} + \bar{\mathrm{k}}$ and $\bar{b} = \bar{\imath} + \bar{\jmath} + \bar{\mathrm{k}}$ then $\bar{a}.\bar{b} =$_____

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

$\bar{a} = 2\bar{\imath} - \bar{\jmath} + \bar{\mathrm{k}}$ અને $\bar{b} = \bar{\imath} + \bar{\jmath} + \bar{\mathrm{k}}$ તો $\bar{a}.\bar{b} =$_____

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

$\bar{x} = (2, -3, 1)$ then $|\bar{x}| =$_____

57 A. $\sqrt{14}$ B. $\sqrt{41}$
C. 14 D. 41

$\bar{x} = (2, -3, 1)$ then $|\bar{x}| =$_____

57 A. $\sqrt{14}$ B. $\sqrt{41}$
C. 14 D. 41

If $\bar{a}$ and $\bar{b}$ are unit vector and $\bar{a}.\bar{b} = 0$ then $|\bar{a} + \bar{b}| =$_____

58 A. 2 B. $\sqrt{2}$
C. 1 D. 0

જો $\bar{a}$ અને $\bar{b}$ એકમ સદિશો હોય અને $\bar{a}.\bar{b} = 0$ તો $|\bar{a} + \bar{b}| =$_____

58 A. 2 B. $\sqrt{2}$
C. 1 D. 0

If $\bar{F}$ denotes the force applied to a particle and $\bar{d}$ denotes the displacement of the particle in the direction of $\bar{F}$ then work done W = _____

59 A. $\bar{F} \times \bar{d}$ B. $\bar{d} \times \bar{F}$
C. $\bar{d}.\bar{F}$ D. None of the above

જો $\bar{F}$ કણ પર લાગતુ બળ હોય અને $\bar{d}$ એ બળ $\bar{F}$ ની દિશમાં થયેલુ સ્થાનાનંતર હોય તો થયેલ કાર્ય W = _____

59 A. $\bar{F} \times \bar{d}$ B. $\bar{d} \times \bar{F}$
C. $\bar{d}.\bar{F}$ D. આમાંથી કોઈપણ નહિ

If $\bar{x}.\bar{y} = 0$ then $\bar{x}$ and $\bar{y}$ are _____vectors

60 A. Parallel B. perpendicular
C. Unit D. Parallel unit

If $\bar{x}.\bar{y} = 0$ then $\bar{x}$ and $\bar{y}$ are _____vectors

60 A. Parallel B. perpendicular
C. Unit D. Parallel unit

Area of circle made from 4π cm. Long wire is _____ *cm*2

61 A. 61π B. 4π
C. 16π D. 2π

4π cm લંબાઈના તારમાંથી બનાવેલ વર્તુળનું ક્ષેત્રફળ _____ *cm*2

61 A. 61π B. 4π
C. 16π D. 2π

The total surface area of sphere is _____

62 A. πr^2 B. $2\pi r^2$
C. $3\pi r^2$ D. $4\pi r^2$

ગોળાની કુલ સપાટીનું ક્ષેત્રફળ____

62 A. πr^2 B. $2\pi r^2$
C. $3\pi r^2$ D. $4\pi r^2$

Volume of cylinder = _____ Volume of cone

63 A. 9 B. $\frac{1}{3}$
C. 6 C. 3

63 નળાકારનું ઘનફળ= _____ શંકુનું ઘનફળ

A. 9 B. $\frac{1}{3}$

C. 6 C. 3

If the area of base of cube is 16 cm^2 then the volume of cube is _____ cm3

64 A. 64 B. 16

C. 8 D. 32

જો સમઘનના તળિતયાનું ક્ષેત્રફળ 16 ચો.સે.મી. છે તો તેનું ઘનફળ_____ ઘન.સે.મી

64 A. 64 B. 16

C. 8 D. 32

The formula for the volume of a hemisphere is _____ .

65 A. $4\pi r^2$ B. $4\pi r^3$

C. $\frac{2}{3}\pi r^3$ D. $2\pi r^2$

અર્ધગોળા નું ઘનફળ =_____ .

65 A. $4\pi r^2$ B. $4\pi r^3$

C. $\frac{2}{3}\pi r^3$ D. $2\pi r^2$

If radius of a circle is 7 cm. Then area of circle is _____ sq. Cm

66 A. 154 B. 156

C. 153 D. 150

જો વર્તુળનો ત્રિજ્યા 7 સે.મી. હોય તો તેનુ ક્ષેત્રફળ_____ચો. સે.મી.

66 A. 154 B. 156

C. 153 D. 150

Area of rectangle with length 25 cm. And width 8 cm. is _____ sq.cm

67 A. 2,000 B. 20

C. 2 D. 200

જો લંબચોરસની લંબાઈ 25 સે.મી અને પહોળાઈ 8 સે.મી હોય તેનું ક્ષેત્રફળ ___ ચો.સે.મી.

67 A. 2,000 B. 20

C. 2 D. 200

The area of square is 625 sq. cm. then perimeter of square = _____

68 A. 10cm B. 50cm

C. 100cm D. 20 cm

The area of square is 625 sq. cm. then perimeter of square = _____

68 A. 10cm B. 50cm

C. 100cm D. 20 cm

If the circumference of circle is 88 cm then the area of circle is _____ cm^2 .

69 A. 661 B. 616

C. 166 D. 161

જો વર્તુળ નો પરીઘ 88 સે.મી હોય તો તેનુ ક્ષેત્રફળ____ ચો.સે.મી.

69 A. 661 B. 616

C. 166 D. 161

Volume of cone with radius *r* and height *h* is _____

70 A. $\frac{1}{3}\pi r^2$h B. r^2h

C. $2\pi r$h D. $2\pi r^2h$

જો શંકુની ત્રિજ્યા r અને ઊંચાઈ h તો તેનુ ઘનફળ_____

70 A. $\frac{1}{3}\pi r^2$h B. r^2h

C. $2\pi r$h D. $2\pi r^2h$