Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

DIPLOMA ENGINEERING – SEMESTER –1 (C2D)• EXAMINATION – WINTER - 2021

Subject Code:C300001 Date : 19-03-2022

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 SIMPLE CALCULATOR is permissible. (Scientific/Higher Version not allowed)**
6. **English version is authentic.**

No.	Question Text and Option.(પ્રશ્ન તેમજ વિકલ્પ)			
1.	$\log 16 \div \log 2 =$_____			
	A.	5	B.	3
	C.	4	D.	27
1	$\log 16 \div \log 2 =$_____			
	A.	5	B.	3
	C.	4	D.	27
2.	$\log 1.\log 2.\log 3.\log 4 \ldots\ldots.\log 2019 =$_____			
	A.	$\log(1.2.3.4 \ldots.2019)$	B.	$1.2.3.4 \ldots.2019$
	C.	0	D.	1
2.	$\log 1.\log 2.\log 3.\log 4 \ldots\ldots.\log 2019 =$_____			
	A.	$\log(1.2.3.4 \ldots.2019)$	B.	$1.2.3.4 \ldots.2019$
	C.	0	D.	1
3.	$\log a - \log b =$_____			
	A.	$\log(ab)$	B.	$\log(a+b)$
	C.	$\log(a-b)$	D.	$\log(a/b)$
3.	$\log a - \log b =$_____			
	A.	$\log(ab)$	B.	$\log(a+b)$
	C.	$\log(a-b)$	D.	$\log(a/b)$
4.	$8^{\log_2 7}=$_____			
	A.	9	B.	1
	C.	7	D.	49
4.	$8^{\log_2 7}=$_____			
	A.	9	B.	1
	C.	7	D.	49
5.	$\log_x y^3.\log_y x =$_____			
	A.	3	B.	2
	C.	1	D.	0
5.	$\log_x y^3.\log_y x =$_____			
	A.	3	B.	2
	C.	1	D.	0
6.	$\log_2(\log_3(\log_4 64)) =$_____			

	A.	1	B.	2
	C.	0	D.	3
6.	$\log_2(\log_3(\log_4 64)) =$_____			
	A.	1	B.	2
	C.	0	D.	3
7	$\log a + \log b =$_____			
	A.	$\log(ab)$	B.	$\log(a+b)$
	C.	$\log(a-b)$	D.	$\log(a/b)$
7	$\log a + \log b =$_____			
	A.	$\log(ab)$	B.	$\log(a+b)$
	C.	$\log(a-b)$	D.	$\log(a/b)$
8	If $\log\left(\frac{a-b}{2}\right) = \frac{1}{2}(\log a + \log b)$ then=_____			
	A.	$a^2 + b^2 = 1$	B.	$a^2 + b^2 = 6ab$
	C.	$a + b = 1$	D.	$a = b$
8	જો $\log\left(\frac{a-b}{2}\right) = \frac{1}{2}(\log a + \log b)$ તો=_____			
	A.	$a^2 + b^2 = 1$	B.	$a^2 + b^2 = 6ab$
	C.	$a + b = 1$	D.	$a = b$
9	$\log_{10}\frac{1}{1000} =$_____			
	A.	3	B.	4
	C.	-4	D.	-3
9	$\log_{10}\frac{1}{1000} =$_____			
	A.	3	B.	4
	C.	-4	D.	-3
10	$\log_8 64 =$_____			
	A.	4	B.	2
	C.	3	D.	5
10	$\log_8 64 =$_____			
	A.	4	B.	2
	C.	3	D.	5
11	If $A = \begin{bmatrix} 2 & -3 \\ 6 & -1 \end{bmatrix}$ then adjA=_____			
	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.	$\begin{bmatrix} -1 & -3 \\ 6 & 2 \end{bmatrix}$
11	જો $A = \begin{bmatrix} 2 & -3 \\ 6 & -1 \end{bmatrix}$ તો adjA=_____			
	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.	$\begin{bmatrix} -1 & -3 \\ 6 & 2 \end{bmatrix}$
12	If $A = \begin{bmatrix} 5 \\ 9 \end{bmatrix}$ then $A^T =$ _____			
	A.	$[9 \quad 5]$	B.	$[5 \quad 9]$
	C.	$\begin{bmatrix} 5 \\ 9 \end{bmatrix}$	D.	$\begin{bmatrix} 9 \\ 5 \end{bmatrix}$
12	જો $A = \begin{bmatrix} 5 \\ 9 \end{bmatrix}$ તો $A^T =$ _____			
	A.	$[9 \quad 5]$	B.	$[5 \quad 9]$
	C.	$\begin{bmatrix} 5 \\ 9 \end{bmatrix}$	D.	$\begin{bmatrix} 9 \\ 5 \end{bmatrix}$
13	Total member of $I_2 =$ _____			

	A.	3	B.	4
	C.	6	D.	9
13	I_2 માં કુલ સભ્યો= _____			
	A.	3	B.	4
	C.	6	D.	9
14	If $A = \begin{bmatrix} 2 & 4 \\ 5 & 7 \end{bmatrix}$ and $B = \begin{bmatrix} 1 & 9 \\ 4 & 1 \end{bmatrix}$ then A+B=_____			
	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.	$\begin{bmatrix} 3 & 13 \\ 6 & 8 \end{bmatrix}$
14	જો $A = \begin{bmatrix} 2 & 4 \\ 5 & 7 \end{bmatrix}$ અને $B = \begin{bmatrix} 1 & 9 \\ 4 & 1 \end{bmatrix}$ તો A+B=_____			
	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.	$\begin{bmatrix} 3 & 13 \\ 6 & 8 \end{bmatrix}$
15	If $\begin{bmatrix} x-3 & 4 \\ 3 & 0 \end{bmatrix} = \begin{bmatrix} 1 & 4 \\ 3 & 0 \end{bmatrix}$ then x = _____			
	A.	2	B.	1
	C.	4	D.	3
15	જો $\begin{bmatrix} x-3 & 4 \\ 3 & 0 \end{bmatrix} = \begin{bmatrix} 1 & 4 \\ 3 & 0 \end{bmatrix}$ તો x = _____			
	A.	2	B.	1
	C.	4	D.	3
16	The order of the matrix $\begin{bmatrix} 5 & -7 \\ 0 & 1 \\ 7 & 6 \end{bmatrix}$ is_____			
	A.	2×3	B.	3×3
	C.	3×2	D.	2×2
16	શ્રેણિક $\begin{bmatrix} 5 & -7 \\ 0 & 1 \\ 7 & 6 \end{bmatrix}$ ની કક્ષા _____			
	A.	2×3	B.	3×3
	C.	3×2	D.	2×2
17	Matrix $A = [8 \quad 25 \quad 9]$ is _____matrix			
	A.	Square	B.	Row
	C.	Column	D.	Identity
17	શ્રેણિક $A = [8 \quad 25 \quad 9]$ એ _____ શ્રેણિક છે.			
	A.	ચોરસ	B.	હાર
	C.	સ્તંભ	D.	એકમ
18	If A is a square matrix then, $A - A^T$ is _____ matrix			
	A.	Diagonal	B.	Symmetric
	C.	Skew -symmetric	D.	Row
18	જો A ચોરસ શ્રેણિક હોય તો , $A - A^T$ _____ શ્રેણિક છે.			
	A.	સંમિત	B.	સંમિત
	C.	હાર	D.	હાર
19	If $A = \begin{bmatrix} 4 & 6 \\ -7 & -2 \end{bmatrix}$ then adj(adjA) = _____			
	A.	-A	B.	I
	C.	A	D.	0
19	જો $A = \begin{bmatrix} 4 & 6 \\ -7 & -2 \end{bmatrix}$ તો adj(adjA) = _____			
	A.	-A	B.	I

	C.	A	D.	0
20	If $A = \begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$ then $A^2 =$ _____			
	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.	$\begin{bmatrix} 0 & 1 \\ 1 & 0 \end{bmatrix}$
20	જો $A = \begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$ તો $A^2 =$ _____			
	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.	$\begin{bmatrix} 0 & 1 \\ 1 & 0 \end{bmatrix}$
21	If $A = [4 \quad 3 \quad 5]$ and $B = \begin{bmatrix} 1 \\ 2 \\ 3 \end{bmatrix}$ then A.B=_____			
	A.	$[4 \quad 16 \quad 15]$	B.	$[1 \quad 8 \quad 9]$
	C.	$[25]$	D.	$[52]$
21	જો $A = [4 \quad 3 \quad 5]$ અને $B = \begin{bmatrix} 1 \\ 2 \\ 3 \end{bmatrix}$ તો A.B=_____			
	A.	$[4 \quad 16 \quad 15]$	B.	$[1 \quad 8 \quad 9]$
	C.	$[25]$	D.	$[52]$
22	If order of matrices A and B are $p \times q$ and $q \times r$ respectively then AB is of order____			
	A.	$p \times q$	B.	$q \times r$
	C.	$r \times p$	D.	$p \times r$
22	જો શ્રેણિક A અને B ની કક્ષા અનુક્રમે $p \times q$ અને $q \times r$ હોય તો AB ની કક્ષા ____			
	A.	$p \times q$	B.	$q \times r$
	C.	$r \times p$	D.	$p \times r$
23	The inverse of square matrix A is exist if_____			
	A.	$\lvert A \rvert \neq 0$	B.	$\lvert A \rvert = 0$
	C.	$A = I$	D.	$A = A^{-1}$
23	શ્રેણિક A નો વ્યસ્ત શ્રેણિક અસ્તિત્વ ધરાવે જો_____			
	A.	$\lvert A \rvert \neq 0$	B.	$\lvert A \rvert = 0$
	C.	$A = I$	D.	$A = A^{-1}$
24	If $A = \begin{bmatrix} 1 & 3 \\ 3 & 5 \end{bmatrix}$ then $A + A^T =$_____			
	A.	2A	B.	A
	C.	I	D.	0
24	જો $A = \begin{bmatrix} 1 & 3 \\ 3 & 5 \end{bmatrix}$ તો $A + A^T =$_____			
	A.	2A	B.	A
	C.	I	D.	0
25	If A is non-singular matrix then _____			
	A.	$A^T = A$	B.	$A^T = -A$
	C.	$\lvert A \rvert \neq 0$	D.	$\lvert A \rvert = 0$
25	જો A અસામન્ય શ્રેણિક હોય તો _____			
	A.	$A^T = A$	B.	$A^T = -A$
	C.	$\lvert A \rvert \neq 0$	D.	$\lvert A \rvert = 0$
26	$(AB)^T =$ _____			
	A.	$A^T B^T$	B.	$A^T B$
	C.	AB^T	D.	$B^T A^T$
26	$(AB)^T =$ _____			
	A.	$A^T B^T$	B.	$A^T B$

	C.	AB^T	D.	B^TA^T
27	_____is symmetric matrix.			
	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.	$\begin{bmatrix} 3 & 3 \\ 5 & 5 \end{bmatrix}$
28	Principal diagonal element of $\begin{bmatrix} 7 & 5 \\ 1 & 3 \end{bmatrix}$=_____			
	A.	(3,5)	B.	(1,5)
	C.	(5,3)	D.	(7,3)
28	શ્રેણિક $\begin{bmatrix} 7 & 5 \\ 1 & 3 \end{bmatrix}$ ના મુખ્યવિકર્ણ પરના ઘટક =_____			
	A.	(3,5)	B.	(1,5)
	C.	(5,3)	D.	(7,3)
29	270^o =_____radian			
	A.	$\frac{2\pi}{3}$	B.	$\frac{3\pi}{2}$
	C.	π	D.	4π
29	270^o =_____ રેડિયન			
	A.	$\frac{2\pi}{3}$	B.	$\frac{3\pi}{2}$
	C.	π	D.	4π
30	$\sin^2 37\left(\frac{1}{2}\right)^{\circ} - \sin^2 7\left(\frac{1}{2}\right)^{\circ}$ = _____			
	A.	1	B.	$\frac{1}{2\sqrt{2}}$
	C.	$\frac{1}{2}$	D.	$\frac{1}{\sqrt{2}}$
30	$\sin^2 37\left(\frac{1}{2}\right)^{\circ} - \sin^2 7\left(\frac{1}{2}\right)^{\circ}$ = _____			
	A.	1	B.	$\frac{1}{2\sqrt{2}}$
	C.	$\frac{1}{2}$	D.	$\frac{1}{\sqrt{2}}$
31	Principal period of $\cos(2x + 7)$ = _____			
	A.	2π	B.	5π
	C.	π	D.	7π
31	$\cos(2x + 7)$નુ મુખ્ય આવર્તમાન = _____			
	A.	2π	B.	5π
	C.	π	D.	7π
32	$\cos(-\theta)$ = _____			
	A.	$\cos\theta$	B.	$\sin\theta$
	C.	$-\sin\theta$	D.	$-\cos\theta$
32	$\cos(-\theta)$ = _____			
	A.	$\cos\theta$	B.	$\sin\theta$
	C.	$-\sin\theta$	D.	$-\cos\theta$
33	$\cos(\pi - \theta)$ = _____			
	A.	$\sin\theta$	B.	$\cos\theta$

	C.	$-\cos\theta$	D.	$-\sin\theta$
33	$\cos(\pi-\theta)=$ _____			
	A.	$\sin\theta$	B.	$\cos\theta$
	C.	$-\cos\theta$	D.	$-\sin\theta$
34	$\sin 60^0=$ _____			
	A.	$\frac{\sqrt{3}}{2}$	B.	$\frac{1}{2}$
	C.	0	D.	1
34	$\sin 60^0=$ _____			
	A.	$\frac{\sqrt{3}}{2}$	B.	$\frac{1}{2}$
	C.	0	D.	1
35	$1+tan^2\theta=$ _____			
	A.	$sin^2\theta$	B.	$cos^2\theta$
	C.	$sec^2\theta$	D.	$cosec^2\theta$
35	$1+tan^2\theta=$ _____			
	A.	$sin^2\theta$	B.	$cos^2\theta$
	C.	$sec^2\theta$	D.	$cosec^2\theta$
36	$\cos(\alpha+\beta)=$			
	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.	$\sin\alpha.\cos\beta-\cos\alpha.\sin\beta$
36	$\cos(\alpha+\beta)=$			
	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.	$\sin\alpha.\cos\beta-\cos\alpha.\sin\beta$
37	$\cot 210^o=$_____			
	A.	1	B.	-1
	C.	0	D.	$\sqrt{3}$
37	$\cot 210^o=$_____			
	A.	1	B.	-1
	C.	0	D.	$\sqrt{3}$
38	For ΔABC , $\sin(B+C)=$_____			
	A.	$\sin A$	B.	$\sin B$
	C.	$\sin C$	D.	π
38	ΔABC, માટે $\sin(B+C)=$, _____			
	A.	$\sin A$	B.	$\sin B$
	C.	$\sin C$	D.	π
39	If $\alpha=\frac{\pi}{2}$ then $\sin 2\alpha=$ _____			
	A.	1	B.	$\frac{1}{2}$
	C.	$\frac{1}{\sqrt{2}}$	D.	0
39	જો $\alpha=\frac{\pi}{2}$ તો $\sin 2\alpha=$ _____			
	A.	1	B.	$\frac{1}{2}$
	C.	$\frac{1}{\sqrt{2}}$	D.	0
40	If $\tan\alpha=\frac{1}{2}$ and $\tan\beta=\frac{1}{3}$ then $\tan(\alpha+\beta)=$_____			
	A.	1	B.	$\frac{\sqrt{3}}{2}$

	C.	$\frac{1}{\sqrt{2}}$	D.	0
40	જો $\tan\alpha=\frac{1}{2}$ અને $\tan\beta=\frac{1}{3}$ તો $\tan(\alpha+\beta)=$_____			
	A.	1	B.	$\frac{\sqrt{3}}{2}$
	C.	$\frac{1}{\sqrt{2}}$	D.	0
41	$sin^{-1}(\frac{\sqrt{3}}{2})=$_____			
	A.	$\frac{\pi}{6}$	B.	$\frac{\pi}{3}$
	C.	$\frac{\pi}{2}$	D.	π
41	$sin^{-1}(\frac{\sqrt{3}}{2})=$_____			
	A.	$\frac{\pi}{6}$	B.	$\frac{\pi}{3}$
	C.	$\frac{\pi}{2}$	D.	π
42	The range of cos function is			
	A.	$[-1,1]$	B.	$(-1,1)$
	C.	R-$(-1,1)$	D.	R
42	cos વિધેયનો વિસ્તાર=_____			
	A.	$[-1,1]$	B.	$(-1,1)$
	C.	R-$(-1,1)$	D.	R
43	$2cos\theta.sin\theta=$_____			
	A.	$sin3\theta$	B.	$2sin\theta$
	C.	$sin2\theta$	D.	$sin4\theta$
43	$2cos\theta.sin\theta=$_____			
	A.	$sin3\theta$	B.	$2sin\theta$
	C.	$sin2\theta$	D.	$sin4\theta$
44	If $\sin\theta=\frac{3}{5}$ then $\cos 2\theta=$_____			
	A.	$\frac{16}{25}$	B.	$\frac{7}{25}$
	C.	$\frac{25}{7}$	D.	$\frac{4}{5}$
44	જો $\sin\theta=\frac{3}{5}$ તો $\cos 2\theta=$_____			
	A.	$\frac{16}{25}$	B.	$\frac{7}{25}$
	C.	$\frac{25}{7}$	D.	$\frac{4}{5}$
45	$3\pi^c=$_____			
	A.	180^o	B.	270^o
	C.	360^o	D.	540^o
45	$3\pi^c=$_____			
	A.	180^o	B.	270^o
	C.	360^o	D.	540^o
46	$\tan 315^0=$_____			
	A.	-1	B.	$\frac{1}{2}$
	C.	0	D.	$\frac{\sqrt{3}}{2}$

46	$\tan 315^0$=_____			
	A.	-1	B.	$\frac{1}{2}$
	C.	0	D.	$\frac{\sqrt{3}}{2}$
47	X and Y are mutually perpendicular if angle between them is_____			
	A.	0	B.	$\frac{\pi}{2}$
	C.	π	D.	2π
47	X અને Y પરસ્પર લંબ હોય તો તેમની વચ્ચે નો ખુણો_____			
	A.	0	B.	$\frac{\pi}{2}$
	C.	π	D.	2π
48	If $\bar{x}$=(1,2,3) , $\bar{y}$=(2,3,1) then $\bar{x}$ x $\bar{y}$ =			
	A.	(-7,5,-1)	B.	(7,-5,-1)
	C.	(7,-5,-1)	D.	None of the above
48	જો $\bar{x}$=(1,2,3) , $\bar{y}$=(2,3,1) તો $\bar{x}$ x $\bar{y}$ =			
	A.	(-7,5,-1)	B.	(7,-5,-1)
	C.	(7,-5,-1)	D.	None of the above
49	(3i+2j+4k).(-i+2j-3k)=_____			
	A.	-11	B.	-4
	C.	11	D.	4
49	(3i+2j+4k).(-i+2j-3k)=_____			
	A.	-11	B.	-4
	C.	11	D.	4
50	If the angle between two vectors $\bar{x}$ and $\bar{y}$ is θ then $\sin\theta$ =_____			
	A.	$\lvert\bar{x}.\bar{y}\rvert$	B.	$\lvert\bar{x}\times\bar{y}\rvert$
	C.	$\frac{\bar{x}\times\bar{y}}{\lvert\bar{x}\rvert\lvert\bar{y}\rvert}$	D.	$\frac{\bar{x}.\bar{y}}{\lvert\bar{x}\rvert\lvert\bar{y}\rvert}$
50	જો બે સદિશો $\bar{x}$ અને $\bar{y}$ વચ્ચેનો ખુણો θ હોય તો $\sin\theta$ =_____			
	A.	$\lvert\bar{x}.\bar{y}\rvert$	B.	$\lvert\bar{x}\times\bar{y}\rvert$
	C.	$\frac{\bar{x}\times\bar{y}}{\lvert\bar{x}\rvert\lvert\bar{y}\rvert}$	D.	$\frac{\bar{x}.\bar{y}}{\lvert\bar{x}\rvert\lvert\bar{y}\rvert}$
51	If $\bar{x}$ is unit vector then $\lvert\bar{x}\rvert$ =_____			
	A.	1	B.	-1
	C.	0	D.	2
51	જો $\bar{x}$ એકમ સદિશ હોય તો $\lvert\bar{x}\rvert$ =_____			
	A.	1	B.	-1
	C.	0	D.	2
52	If $(2,-3,5).(m,-6,-8)=0$ then m = _____			
	A.	-11	B.	-22
	C.	22	D.	11
52	જો $(2,-3,5).(m,-6,-8)=0$ તો m = _____			
	A.	-11	B.	-22
	C.	22	D.	11
53	_____ is a unit vector			
	A.	$(\sin\theta,\cos\theta)$	B.	$(2\sin\theta,\cos\theta)$
	C.	$(-1,1)$	D.	$(2,-1)$
53	_____ એકમ સદિશ છે.			
	A.	$(\sin\theta,\cos\theta)$	B.	$(2\sin\theta,\cos\theta)$
	C.	$(-1,1)$	D.	$(2,-1)$

54	Angle between vector x=(1,-1,0) and y=(1,0,1) is _____			
	A.	$\frac{\pi}{3}$	B.	$\frac{\pi}{2}$
	C.	π	D.	None of the above
54	સદિશો x=(1,-1,0) અને y=(1,0,1) વચ્ચે નો ખુણો _____			
	A.	$\frac{\pi}{3}$	B.	$\frac{\pi}{2}$
	C.	π	D.	None of the above
55	$\|(3,1,2)+(4,2,1)\|$ =_____			
	A.	$\sqrt{87}$	B.	$\sqrt{67}$
	C.	87	D.	67
55	$\|(3,1,2)+(4,2,1)\|$ =_____			
	A.	$\sqrt{87}$	B.	$\sqrt{67}$
	C.	87	D.	67
56	$\bar{a}=(7,2,5)$ and $\bar{b}=(1,-1,4,)$ then $\bar{a}.\bar{b}$ =_____			
	A.	0	B.	1
	C.	-1	D.	25
56	$\bar{a}=(7,2,5)$ અને $\bar{b}=(1,-1,4,)$ તો $\bar{a}.\bar{b}$ =_____			
	A.	0	B.	1
	C.	-1	D.	25
57	$\bar{x}=(1,-4,1)$ then $\|\bar{x}\|$ =_____			
	A.	$\sqrt{21}$	B.	$\sqrt{3}$
	C.	$3\sqrt{2}$	D.	21
57	$\bar{x}=(1,-4,1)$ તો $\|\bar{x}\|$ =_____			
	A.	$\sqrt{21}$	B.	$\sqrt{3}$
	C.	$3\sqrt{2}$	D.	21
58	If $\bar{a}$ and $\bar{b}$ are unit vector and $\bar{a}.\bar{b}=0$ then $\|\bar{a}+\bar{b}\|$ =_____			
	A.	2	B.	$\sqrt{2}$
	C.	1	D.	0
58	જો $\bar{a}$ અને $\bar{b}$ એકમ સદિશો હોય અને $\bar{a}.\bar{b}=0$ તો $\|\bar{a}+\bar{b}\|$ =_____			
	A.	2	B.	$\sqrt{2}$
	C.	1	D.	0
59	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 = _____			
	A.	$\bar{F}\times\bar{d}$	B.	$\bar{d}\times\bar{F}$
	C.	$\bar{d}.\bar{F}$	D.	None of the above
59	જો $\bar{F}$ કણ પર લાગતુ બળ હોય અને $\bar{d}$ એ બળ $\bar{F}$ ની દિશમાં થયેલુ સ્થાનાનંતર હોય તો થયેલ કાર્ય W = _____			
	A.	$\bar{F}\times\bar{d}$	B.	$\bar{d}\times\bar{F}$
	C.	$\bar{d}.\bar{F}$	D.	આમાંથી કોઈપણ નહિ
60	If $\bar{x}.\bar{y}=0$ then $\bar{x}$ and $\bar{y}$ are _____vectors			
	A.	Parallel	B.	perpendicular
	C.	Unit	D.	Parallel unit
60	If $\bar{x}.\bar{y}=0$ then $\bar{x}$ and $\bar{y}$ are _____vectors			
	A.	Parallel	B.	perpendicular
	C.	Unit	D.	Parallel unit
61	Area of circle made from 8π cm. Long wire is _____ *cm*2			
	A.	61π	B.	4π
	C.	16π	D.	2π

61	8π cm લંબાઈના તારમાંથી બનાવેલ વર્તુળનું ક્ષેત્રફળ _____ *cm*2			
	A.	61π	B.	4π
	C.	16π	D.	2π
62	The total surface area of hemisphere is _____			
	A.	πr^2	B.	$2\pi r^2$
	C.	$3\pi r^2$	D.	$4\pi r^2$
62	અર્ધગોળાની કુલ સપાટીનું ક્ષેત્રફળ____			
	A.	πr^2	B.	$2\pi r^2$
	C.	$3\pi r^2$	D.	$4\pi r^2$
63	Volume of cylinder = _____ Volume of cone			
	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
64	If the area of base of cube is 9 cm^2 then the volume of cube is _____ cm3			
	A.	72	B.	27
	C.	8	D.	32
64	જો સમઘનના તળિતયાનું ક્ષેત્રફળ 9 ચો.સે.મી. છે તો તેનું ઘનફળ_____ ઘન.સે.મી			
	A.	72	B.	27
	C.	8	D.	32
65	The formula for the volume of a sphere is _____ .			
	A.	$4\pi r^2$	B.	$4\pi r^3$
	C.	$\frac{2}{3}\pi r^2$	D.	$2\pi r^2$
65	ગોળા નું ઘનફળ =_____ .			
	A.	$4\pi r^2$	B.	$4\pi r^3$
	C.	$\frac{2}{3}\pi r^2$	D.	$2\pi r^2$
66	If radius of a circle is 7 cm. Then area of circle is _____ sq. Cm			
	A.	154	B.	156
	C.	153	D.	150
66	જો વર્તુળનો ત્રિજ્યા 7 સે.મી. હોય તો તેનુ ક્ષેત્રફળ_____ચો. સે.મી.			
	A.	154	B.	156
	C.	153	D.	150
67	Area of rectangle with length 125 cm. And width 80 cm. is _____ sq.cm			
	A.	10,000	B.	1,000
	C.	1	D.	100
67	જો લંબચોરસની લંબાઈ 125 સે.મી અને પહોળાઈ 80 સે.મી હોય તેનું ક્ષેત્રફળ ___ ચો.સે.મી.			
	A.	10,000	B.	1,000
	C.	1	D.	100
68	The area of square is 625 sq. cm. then perimeter of square = _____			
	A.	10cm	B.	50cm
	C.	100cm	D.	20
68	The area of square is 625 sq. cm. then perimeter of square = _____			
	A.	10cm	B.	50cm
	C.	100cm	D.	20
69	If the circumference of circle is 88 cm then the area of circle is _____ cm^2 .			
	A.	661	B.	616

	C.	166	D.	161
69	જો વર્તુળ નો પરીઘ 88 સે.મી હોય તો તેનુ ક્ષેત્રફળ____ ચો.સે.મી.			
	A.	661	B.	616
	C.	166	D.	161
70	Volume of cylinder with radius *r* and height *h* is _____			
	A.	πr^2h	B.	r^2h
	C.	$2\pi r$h	D.	$2\pi r^2h$
70	જો નળાકારાની ત્રિજ્યા r અને ઊંચાઈ h તો તેનુ ઘનફળ_____			
	A.	πr^2h	B.	r^2h
	C.	$2\pi r$h	D.	$2\pi r^2h$