Gujarat Technological University

Diploma Engineering C to D Bridge Course Examination

Subject Code: C300001   **Date: 30 - 05-2015**
Subject Name: BASIC MATHEMATICS
Time: 02:30 PM TO 04:00 PM   **Total Marks: 70**
Instructions:
   1. Attempt all questions.
   2. Make suitable assumption wherever necessary.
   3. Each question is of 1 mark.
   4. Use of SIMPLE CALCULATOR is permissible. (Scientific/Higher Version not allowed)
   5. English version is authentic.

No.	Question Text and Option. પ્રશ્ન અને વિકલ્પો.

$\log_2 8 =$ _____

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

$\log_2 8 =$ _____

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

$\log_a a =$ _____

2.   A.   0   B.   1
     C.   a   D.   None of these

$\log_a a =$ _____

૨.   A.   0   B.   1
     C.   a   D.   એક પણ નહી.

$\log x^2 =$ _____

3.   A. $\log_2 x$ B. $\log 2x$
     C. $(\log x)^2$ D. $2\log x$

$\log x^2 =$ _____

૩.   A. $\log_2 x$ B. $\log 2x$
     C. $(\log x)^2$ D. $2\log x$

$\log_3(\log_2 8) =$ _____

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

$\log_3(\log_2 8) =$ _____

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

$$\log\left(\frac{2}{3}\right) + \log\left(\frac{6}{5}\right) + \log\left(\frac{5}{4}\right) = \underline{\quad\quad}$$

5. A. 1   B. 0

      C. $\frac{2}{3}$ D. 4

$$\log\left(\frac{2}{3}\right) + \log\left(\frac{6}{5}\right) + \log\left(\frac{5}{4}\right) = \underline{\quad\quad}$$

૫. A. 1   B. 0

      C. $\frac{2}{3}$ D. 4

$$\log_x y \times \log_y x = \underline{\quad\quad}$$

6. A. 1   B. $(\log_x y)^2$

      C. 0   D. $(\log_y x)^2$

$$\log_x y \times \log_y x = \underline{\quad\quad}$$

૬. A. 1   B. $(\log_x y)^2$

      C. 0   D. $(\log_y x)^2$

If $\log_2 a = 2$ then $a = \underline{\quad\quad}$

7. A. 1   B. 8

      C. 2   D. 4

જો $\log_2 a = 2$ તો $a = \underline{\quad\quad}$

૭. A. 1   B. 8

      C. 2   D. 4

$$3^{\log_3 2} = \underline{\quad\quad}$$

8. A. 3   B. 9

      C. 2   D. 1

$$3^{\log_3 2} = \underline{\quad\quad}$$

૮. A. 3   B. 9

      C. 2   D. 1

If $\log_a 0.01 = -2$ then $a = \underline{\quad\quad}$

9. A. 100   B. 10

      C. 1   D. 0.01

જો $\log_a 0.01 = -2$ તો $a = \underline{\quad\quad}$

૯. A. 100   B. 10

      C. 1   D. 0.01

If $\log x + \log(x-1) = \log 2$ then $x = \underline{\quad\quad}$

10. A. 3   B. 1

      C. 0   D. 2

૧૦. જો $\log x + \log(x-1) = \log 2$ તો $x = \underline{\quad\quad}$

A.   3   B.   1

C.   0   D.   2

11.
$$\begin{vmatrix} 1 & 0 & 2 \\ 2 & 1 & -1 \\ 1 & 1 & 3 \end{vmatrix} = \underline{\hspace{2cm}}$$

A.   6   B.   8

C.   7   D.   9

૧૧.
$$\begin{vmatrix} 1 & 0 & 2 \\ 2 & 1 & -1 \\ 1 & 1 & 3 \end{vmatrix} = \underline{\hspace{2cm}}$$

A.   6   B.   8

C.   7   D.   9

12. If $\begin{vmatrix} x & 3 \\ 4 & 2 \end{vmatrix} = 6$ then $x=$____

A.   6   B.   10

C.   9   D.   12

૧૨. જો $\begin{vmatrix} x & 3 \\ 4 & 2 \end{vmatrix} = 6$ તો $x=$____

A.   6   B.   10

C.   9   D.   12

13.
$$\begin{vmatrix} \sin\theta & \cos\theta \\ -\cos\theta & \sin\theta \end{vmatrix} = \underline{\hspace{2cm}}$$

A. $\cos\theta$ B.   0

C. $\sin\theta$ D.   1

૧૩.
$$\begin{vmatrix} \sin\theta & \cos\theta \\ -\cos\theta & \sin\theta \end{vmatrix} = \underline{\hspace{2cm}}$$

A. $\cos\theta$ B.   0

C. $\sin\theta$ D.   1

14. If $\begin{vmatrix} a & 2 & 1 \\ 1 & 2 & 1 \\ 3 & 8 & 2 \end{vmatrix} = 0$ then $a=$____

A.   2   B.   0

C.   1   D.   5

૧૪. જો $\begin{vmatrix} a & 2 & 1 \\ 1 & 2 & 1 \\ 3 & 8 & 2 \end{vmatrix} = 0$ તો $a=$____

A.   2   B.   0

C.   1   D.   5

Order of matrix $\begin{bmatrix} 2 & 1 & 3 \\ 4 & 3 & 7 \end{bmatrix}$ is _____

15.
A.   3 X 2   B.   2 X 3

C.   6   D.   2 X 2

શ્રેણિક $\begin{bmatrix} 2 & 1 & 3 \\ 4 & 3 & 7 \end{bmatrix}$ નો ક્રમાંક _____ છે.

૧૫.
A.   3 X 2   B.   2 X 3

C.   6   D.   2 X 2

$\begin{bmatrix} 2 & 3 \\ 1 & 4 \end{bmatrix} + \begin{bmatrix} 1 & 2 \\ 4 & 3 \end{bmatrix} =$ _____

16.
A. $\begin{bmatrix} 3 & 5 \\ 5 & 7 \end{bmatrix}$ B. $\begin{bmatrix} 7 & 5 \\ 5 & 3 \end{bmatrix}$

C. $\begin{bmatrix} 3 & 7 \\ 7 & 5 \end{bmatrix}$ D. $\begin{bmatrix} 5 & 3 \\ 7 & 5 \end{bmatrix}$

$\begin{bmatrix} 2 & 3 \\ 1 & 4 \end{bmatrix} + \begin{bmatrix} 1 & 2 \\ 4 & 3 \end{bmatrix} =$ _____

૧૬.
A. $\begin{bmatrix} 3 & 5 \\ 5 & 7 \end{bmatrix}$ B. $\begin{bmatrix} 7 & 5 \\ 5 & 3 \end{bmatrix}$

C. $\begin{bmatrix} 3 & 7 \\ 7 & 5 \end{bmatrix}$ D. $\begin{bmatrix} 5 & 3 \\ 7 & 5 \end{bmatrix}$

If $A = \begin{bmatrix} 1 & 3 \\ 2 & 4 \end{bmatrix}$ then $A^T =$ _____

17.
A. $\begin{bmatrix} 1 & 3 \\ 2 & 4 \end{bmatrix}$ B. $\begin{bmatrix} 4 & 3 \\ 2 & 1 \end{bmatrix}$

C. $\begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix}$ D. $\begin{bmatrix} 1 & 4 \\ 3 & 2 \end{bmatrix}$

જો $A = \begin{bmatrix} 1 & 3 \\ 2 & 4 \end{bmatrix}$ તો $A^T =$ _____

૧૭.
A. $\begin{bmatrix} 1 & 3 \\ 2 & 4 \end{bmatrix}$ B. $\begin{bmatrix} 4 & 3 \\ 2 & 1 \end{bmatrix}$

C. $\begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix}$ D. $\begin{bmatrix} 1 & 4 \\ 3 & 2 \end{bmatrix}$

If $\begin{bmatrix} a & 2 & 5 \\ 1 & 3 & 7 \end{bmatrix} = \begin{bmatrix} 4 & 2 & 5 \\ 1 & 3 & 7 \end{bmatrix}$ then $a =$ ____

18.
A.   1   B.   2

C.   5   D.   4

૧૮. જો $\begin{bmatrix} a & 2 & 5 \\ 1 & 3 & 7 \end{bmatrix} = \begin{bmatrix} 4 & 2 & 5 \\ 1 & 3 & 7 \end{bmatrix}$ તો $a =$ ____

A. 1   B. 2
C. 5   D. 4

If AB=BA=I then B=_____
19.   A. B^{-1} B.   I
      C. A^{-1} D.   A

જો AB=BA=I તો B=_____
૧૯.   A. B^{-1} B.   I
      C. A^{-1} D.   A

For matrix A, AI=_____
20.   A.   A   B. A^{-1}
      C. I^{-1} D.   I

શ્રેણિક A માટે, AI=_____
૨૦.   A.   A   B. A^{-1}
      C. I^{-1} D.   I

If order of A and B are 2X3 and 3X2 then order of AB is _____
21.   A.   3X3   B.   2X2
      C.   2X3   D.   3X2

A અને B ના ક્રમાંક 2X3 અને 3X2 તો AB નો ક્રમાંક _____ છે.
૨૧.   A.   3X3   B.   2X2
      C.   2X3   D.   3X2

Matrix A=[2   3   4] is called _____ matrix
22.   A.   Square   B.   Column
      C.   Raw   D.   Unit

શ્રેણિક A=[2   3   4] ને _____ શ્રેણિક કહે છે.
૨૨.   A.   ચોરસ   B.   સ્તંભ
      C.   હાર   D.   એકમ

If A=[1   3   2] and B=[2   -1   1] then AB^T=_____
23.   A.   [2 -3   2]   B.   [5]
      C.   [3]   D.   [1]

જો A=[1   3   2] અને B=[2   -1   1] તો AB^T=_____
૨૩.   A.   [2 -3   2]   B.   [5]
      C.   [3]   D.   [1]

If $A = \begin{bmatrix} 1 & 2 \\ 3 & 7 \end{bmatrix}$ then $A^{-1} =$ _____

24.
A. $\begin{bmatrix} -1 & 3 \\ 2 & -7 \end{bmatrix}$
B. $\begin{bmatrix} 1 & -2 \\ -3 & 7 \end{bmatrix}$

C. $\begin{bmatrix} 7 & -2 \\ -3 & 1 \end{bmatrix}$
D. $\begin{bmatrix} 7 & 2 \\ 3 & 1 \end{bmatrix}$

જો $A = \begin{bmatrix} 1 & 2 \\ 3 & 7 \end{bmatrix}$ તો $A^{-1} =$ _____

૨૪.
A. $\begin{bmatrix} -1 & 3 \\ 2 & -7 \end{bmatrix}$
B. $\begin{bmatrix} 1 & -2 \\ -3 & 7 \end{bmatrix}$

C. $\begin{bmatrix} 7 & -2 \\ -3 & 1 \end{bmatrix}$
D. $\begin{bmatrix} 7 & 2 \\ 3 & 1 \end{bmatrix}$

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

25.
A. $\begin{bmatrix} 4 & 1 \\ 9 & 1 \end{bmatrix}$
B. $\begin{bmatrix} 7 & 1 \\ 3 & 4 \end{bmatrix}$

C. $\begin{bmatrix} 5 & 5 \\ 5 & 10 \end{bmatrix}$
D. $\begin{bmatrix} 7 & 3 \\ 1 & 4 \end{bmatrix}$

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

૨૫.
A. $\begin{bmatrix} 4 & 1 \\ 9 & 1 \end{bmatrix}$
B. $\begin{bmatrix} 7 & 1 \\ 3 & 4 \end{bmatrix}$

C. $\begin{bmatrix} 5 & 5 \\ 5 & 10 \end{bmatrix}$
D. $\begin{bmatrix} 7 & 3 \\ 1 & 4 \end{bmatrix}$

If A=[2 4] , B=[1 3] and C=[3 -1] then 2A-3B+C= _____

26.
A. [4 -2]
B. [3 7]

C. [4 2]
D. [5 -2]

જો A=[2 4] , B=[1 3] અને C=[3 -1] તો 2A-3B+C=_____

૨૬.
A. [4 -2]
B. [3 7]

C. [4 2]
D. [5 -2]

$\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$ is called _____ matrix

27.
A. Null
B. Inverse

C. Unit
D. None of these

$\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$ ને _____ શ્રેણિક કહે છે.

૨૭.
A. શૂન્ય
B. વ્યસ્ત

C. એકમ
D. એક પણ નહિં

$(A+B)^T =$ _____

28.
A. A+B
B. A^T+B

C. $A+B^T$ D. A^T+B^T

$(A+B)^T=$_____

૨૮. A. $A+B$ B. A^T+B
C. $A+B^T$ D. A^T+B^T

$\tan(45°)=$_____

29. A. 0   B. 1
C. $\sqrt{2}$ D. $\sqrt{3}$

$\tan(45°)=$_____

૨૯. A. 0   B. 1
C. $\sqrt{2}$ D. $\sqrt{3}$

$\sin^2\theta+\cos^2\theta=$_____

30. A. $\cos 2\theta$ B. 0
C. 1   D. -1

$\sin^2\theta+\cos^2\theta=$_____

૩૦. A. $\cos 2\theta$ B. 0
C. 1   D. -1

Period of $\sin\theta$ is _____

31. A. 2π B. 3π
C. π D. 1

$\sin\theta$ નુ આવર્તમાન _____ છે.

૩૧. A. 2π B. 3π
C. π D. 1

$270°=$____ radian

32. A. 3π B. 5π
C. $\dfrac{3\pi}{2}$ D. $\dfrac{2\pi}{3}$

$270°=$____ રેડિયન

૩૨. A. 3π B. 5π
C. $\dfrac{3\pi}{2}$ D. $\dfrac{2\pi}{3}$

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

33. A. $\cos\theta$ B. $-\cos\theta$
C. $-\sin\theta$ D. $\sin\theta$

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

૩૩. A. $\cos\theta$ B. $-\cos\theta$
C. $-\sin\theta$ D. $\sin\theta$

$\tan(225°) =$ _____

34. A. 1   B. -1

    C. 0   D. 2

$\tan(225°) =$ _____

۳٤. A. 1   B. -1

    C. 0   D. 2

$\sin^2 60° + \sin^2 30°$

35. A. ¾   B. -1

    C. 1   D. ½

$\sin^2 60° + \sin^2 30°$

۳۵. A. ¾   B. -1

    C. 1   D. ½

$\cos(\alpha + \beta) =$ _____

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

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

$\cos(\alpha + \beta) =$ _____

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

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

$\sin 2\theta =$ _____

37. A. $2\sin\theta\cos\theta$ B. $\sin\theta\cos\theta$

    C. $\sin^2\theta - \cos^2\theta$ D. $\cos^2\theta - \sin^2\theta$

$\sin 2\theta =$ _____

۳۷. A. $2\sin\theta\cos\theta$ B. $\sin\theta\cos\theta$

    C. $\sin^2\theta - \cos^2\theta$ D. $\cos^2\theta - \sin^2\theta$

$\cos^2 15° - \sin^2 15° =$ _____

38. A. 1   B. $\dfrac{1}{2}$

    C. $\dfrac{1}{\sqrt{2}}$ D. $\dfrac{\sqrt{3}}{2}$

$\cos^2 15° - \sin^2 15° =$ _____

۳۸. A. 1   B. $\dfrac{1}{2}$

    C. $\dfrac{1}{\sqrt{2}}$ D. $\dfrac{\sqrt{3}}{2}$

$\sin 75° + \sin 15° =$ _____

39. A. 1   B. 0

    C. $\sqrt{\dfrac{3}{2}}$ D. $\dfrac{\sqrt{3}}{2}$

$\sin 75° + \sin 15° =$ _____

3૬. A. 1   B. 0

C. $\sqrt{\dfrac{3}{2}}$ D. $\dfrac{\sqrt{3}}{2}$

$\cos^{-1} x + \sin^{-1} x =$ _____

40. A. $\dfrac{\pi}{4}$ B. $\dfrac{\pi}{2}$

C. $\dfrac{\pi}{6}$ D. π

$\cos^{-1} x + \sin^{-1} x =$ _____

૪૦. A. $\dfrac{\pi}{4}$ B. $\dfrac{\pi}{2}$

C. $\dfrac{\pi}{6}$ D. π

$\tan^{-1}\dfrac{1}{2} + \tan^{-1}\dfrac{1}{3} =$ _____

41. A. $\dfrac{\pi}{2}$ B. $\dfrac{\pi}{4}$

C. π D. 1

$\tan^{-1}\dfrac{1}{2} + \tan^{-1}\dfrac{1}{3} =$ _____

૪૧. A. $\dfrac{\pi}{2}$ B. $\dfrac{\pi}{4}$

C. π D. 1

For $\triangle ABC$ $\sin(A+B) =$ _____

42. A. sinC   B. cosC

C. -sinC   D. -cosC

$\triangle ABC$ માટે $\sin(A+B) =$ _____

૪૨. A. sinC   B. cosC

C. -sinC   D. -cosC

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

43. A. $2\cos\alpha\sin\beta$ B. $2\cos\alpha\cos\beta$

C. $2\sin\alpha\cos\beta$ D. $2\sin\alpha\sin\beta$

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

૪૩. A. $2\cos\alpha\sin\beta$ B. $2\cos\alpha\cos\beta$

C. $2\sin\alpha\cos\beta$ D. $2\sin\alpha\sin\beta$

Graph of y=cosx passes through _____ point.

44. A. (0,0)   B. (30,0.5)

C. (45,1)   D. (0,1)

y=cosx નો આલેખ _____ બિન્દુ માથી પસાર થાય છે.

44. A. (0,0)　　　　　　　　B. (30,0.5)

　　 C. (45,1)　　　　　　　　D. (0,1)

If $\sin\theta = \dfrac{3}{5}$ then $\cos\theta =$ _____

45. A. $\dfrac{3}{5}$　　　　　　　　B. $\dfrac{2}{5}$

　　 C. $\dfrac{1}{5}$　　　　　　　　D. $\dfrac{4}{5}$

જો $\sin\theta = \dfrac{3}{5}$ તો $\cos\theta =$ _____

૪૫. A. $\dfrac{3}{5}$　　　　　　　　B. $\dfrac{2}{5}$

　　 C. $\dfrac{1}{5}$　　　　　　　　D. $\dfrac{4}{5}$

$\tan\left(\dfrac{\pi}{2} - \theta\right) =$ _____

46. A. $-\cot\theta$　　　　　　　　B. $\cot\theta$

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

$\tan\left(\dfrac{\pi}{2} - \theta\right) =$ _____

૪૬. A. $-\cot\theta$　　　　　　　　B. $\cot\theta$

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

$|2i-j+2k| =$ _____

47. A. 9　　　　　　　　B. 6

　　 C. 5　　　　　　　　D. 3

$|2i-j+2k| =$ _____

૪૭. A. 9　　　　　　　　B. 6

　　 C. 5　　　　　　　　D. 3

If $\bar{x} = (2,3,1)$ and $\bar{y} = (1,2,1)$ then $\bar{x} + \bar{y} =$ _____

48. A. (3,2,5)　　　　　　　　B. (3,5,2)

　　 C. (2,5,3)　　　　　　　　D. (2,5,2)

જો $\bar{x} = (2,3,1)$ અને $\bar{y} = (1,2,1)$ તો $\bar{x} + \bar{y} =$ _____

૪૮. A. (3,2,5)　　　　　　　　B. (3,5,2)

　　 C. (2,5,3)　　　　　　　　D. (2,5,2)

Direction cosine of (1,2,2) is _____

49. A. $1/3, 2/3, 2/3$　　　　　　　　B. $1/5, 2/5, 2/5$

　　 C. $-1/3, -2/3, -2/3$　　　　　　　　D. $-1/5, -2/5, -2/5$

૪૯. (1,2,2) ના દિક કોસાઈન _____ છે.

A. $1/3, 2/3, 2/3$ B. $1/5, 2/5, 2/5$

C. $-1/3, -2/3, -2/3$ D. $-1/5, -2/5, -2/5$

If (a,2,-3) and (1,2,2) are perpendicular to each other then a=_____

50. A. 1   B. 2

     C. -1   D. 0

જો (a,2,-3) અને (1,2,2) એક બીજાને પરસ્પર લંબ હોય તો a=_____

૫૦. A. 1   B. 2

     C. -1   D. 0

If $|\overline{a}| = 1$ then $\overline{a}$ is called _____ vector

51. A. Null   B. Perpendicular

     C. Unit   D. None of these

જો $|\overline{a}| = 1$ તો $\overline{a}$ ને _____ સદિશ કહે છે.

૫૧. A. શૂન્ય   B. લંબ

     C. એકમ   D. એક પણ નહિ.

If $\overline{a}$ and $\overline{b}$ are parallel to each other then $\overline{a} \times \overline{b} = $ _____

52. A. 0   B. Unit vector

     C. 1   D. Null vector

જો $\overline{a}$ અને $\overline{b}$ એક બીજાને સમાંતર હોય તો $\overline{a} \times \overline{b} = $ _____

૫૨. A. 0   B. એકમ સદિશ

     C. 1   D. શૂન્ય સદિશ

$(\overline{x} \times \overline{y}) \square \overline{y} = $ _____

53. A. 0   B. $(\overline{x} \square \overline{y} \times \overline{y} \square \overline{y})$

     C. 1   D. $(\overline{x} \times \overline{y} \square \overline{y})$

$(\overline{x} \times \overline{y}) \square \overline{y} = $ _____

૫૩. A. 0   B. $(\overline{x} \square \overline{y} \times \overline{y} \square \overline{y})$

     C. 1   D. $(\overline{x} \times \overline{y} \square \overline{y})$

If $\overline{a} = (2,3,1)$ and $\overline{b} = (4,-1,2)$ then $\overline{a} \square \overline{b} = $ ____

54. A. 13   B. 6

     C. 7   D. 9

જો $\overline{a} = (2,3,1)$ અને $\overline{b} = (4,-1,2)$ તો $\overline{a} \square \overline{b} = $ ____

૫૪. A. 13   B. 6

     C. 7   D. 9

_____ is perpendicular to $\overline{a}$ and $\overline{b}$ both

55. A. $\overline{a} + \overline{b}$ B. $\overline{a} - \overline{b}$

     C. $\overline{a} \times \overline{b}$ D. $\overline{a} \square \overline{b}$

_____ એ $\bar{a}$ અને $\bar{b}$ બન્નેને લંબ છે.

૫૫.
A. $\bar{a}+\bar{b}$ B. $\bar{a}-\bar{b}$

C. $\bar{a}\times\bar{b}$ D. $\overline{a\square b}$

$\overline{x}\square\overline{x} = $ _____

56.
A. $|\bar{x}|^2$ B. $\bar{x}^2$

C. $|\bar{x}|$ D. O

$\overline{x}\square\overline{x} = $ _____

૫૬.
A. $|\bar{x}|^2$ B. $\bar{x}^2$

C. $|\bar{x}|$ D. O

If angle between $\bar{a}=(1,1,2)$ and $\bar{b}=(2,1,1)$ is θ then $\cos\theta = $ _____

57.
A. $1/6$ B. $5/\sqrt{6}$

C. $5/6$ D. 1

જો $\bar{a}=(1,1,2)$ અને $\bar{b}=(2,1,1)$ વચ્ચે નો ખૂણો θ હોય તો $\cos\theta = $ _____.

૫૭.
A. $1/6$ B. $5/\sqrt{6}$

C. $5/6$ D. 1

If $(2,3,1)=(a,b+1,c-1)$ then $(a,b,c)=$ _____

58.
A. $(2,4,0)$ B. $(2,2,2)$

C. $(2,1,-1)$ D. $(2,4,-2)$

જો $(2,3,1)=(a,b+1,c-1)$ તો $(a,b,c)=$ _____

૫૮.
A. $(2,4,0)$ B. $(2,2,2)$

C. $(2,1,-1)$ D. $(2,4,-2)$

If $\bar{a}=(1,2,3)$ and $\bar{b}=(3,4,6)$ then $|2\bar{a}-\bar{b}|=$ _____

59.
A. -1 B. 2

C. O D. 1

જો $\bar{a}=(1,2,3)$ અને $\bar{b}=(3,4,6)$ તો $|2\bar{a}-\bar{b}|=$ _____

૫૯.
A. -1 B. 2

C. O D. 1

Due to the effect of force $(2,3,-1)$ a particle moves from $(1,1,1)$ to $(2,2,2)$. Find work done.

60.
A. 3 B. 2

C. 4 D. 5

બળ $(2,3,-1)$ ની અસરથી કણ $(1,1,1)$ થી $(2,2,2)$ સુધી સ્થાનાંતરીત થાય તો થયેલ કાર્ય શોધો.

૬૦.
A. 3 B. 2

C. 4 D. 5

Area of rectangle is 48m². If the length is 12m then width is _____m.

61.
A. 3   B. 4
C. 6   D. 8

લંબચોરસ નું ક્ષેત્રફળ 48m² છે. જો લંબાઈ 12m હોય તો પહોળાઈ ____m. થાય

૬૧.
A. 3   B. 4
C. 6   D. 8

Area of circle with diameter d is _____

62.
A. $\dfrac{\pi d^2}{4}$ B. $\dfrac{\pi d^2}{2}$
C. πd^2 D. $2\pi d$

'd' વ્યાસ વાળા વર્તુળનું ક્ષેત્રફળ _____ છે.

૬૨.
A. $\dfrac{\pi d^2}{4}$ B. $\dfrac{\pi d^2}{2}$
C. πd^2 D. $2\pi d$

Area of circle made from 22m long rope is _____

63.
A. 38.5   B. 77
C. 36   D. 35.5

22m લાંબા દોરડાથી બનેલા વર્તુળનું ક્ષેત્રફળ _____ છે.

૬૩.
A. 38.5   B. 77
C. 36   D. 35.5

_____ square tiles of length 10cm is required to cover floor of 300cmX200cm.

64.
A. 200   B. 300
C. 60   D. 600

300cmX200cm. માપના ભોંયતળિયા ને ઢાંકવા 10 લંબાઈની _____ ચોરસ ટાઈલ્સ જોઈએ.

૬૪.
A. 200   B. 300
C. 60   D. 600

What is the cost of fencing the circular garden of radius 35m if cost of fencing is Rs. 10 per meter?

65.
A. 2200   B. 220
C. 350   D. 2000

જો વાડ કરવાનો ખર્ચ રૂ.10 પ્રતિ મીટર હોય તો 35m ત્રિજ્યા વાળા વર્તુળાકાર બગિયા ને વાડ કરવાનો ખર્ચ કેટલો થાય?

૬૫.
A. 2200   B. 220

C.	350	D.	2000

Surface area of sphere of radius 'r' is _____

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

'r' ત્રિજ્યા વાળા ગોલકની સપાટીનું પૃષ્ઠફળ _____ છે.

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

Curved surface area of cone having radius 5cm and slant height 7cm is ____

67. A. 112 cm^2 B. 142 cm^2
    C. 188.5 cm^2 D. 110 cm^2

5cm ત્રિજ્યા અને 7cm તીર્થંક ઉંચાઇ વાળા શંકુનું વક્રસપાટીનુ ક્ષેત્રફળ ____ છે

૬૭. A. 112 cm^2 B. 142 cm^2
    C. 188.5 cm^2 D. 110 cm^2

Volume of cylinder of radius 'r' and height 'h' is _____

68. A. $\pi r^2 h$ B. $2\pi r^2 h$
    C. $2\pi rh$ D. πrh^2

'r' ત્રિજ્યા અને 'h' ઉંચાઇ વાળા નળાકારનું ધનફળ _____ છે.

૬૮. A. $\pi r^2 h$ B. $2\pi r^2 h$
    C. $2\pi rh$ D. πrh^2

For cuboid l=4cm, b=3cm and h=2cm then its volume is ____

69. A. 12 cm^3 B. 22 cm^3
    C. 28 cm^3 D. 24cm^3

લંબધન માટે l=4cm, b=3cm અને h=2cm તો તેનુ ધનફળ _____ છે.

૬૯. A. 12 cm^3 B. 22 cm^3
    C. 28 cm^3 D. 24cm^3

If the ratio of radius of two cylinder of same height is 2:3 then ratio of their volume is _____

70. A. 4:9   B. 2:3
    C. 8:9   D. 8:27

જો બે સમાન ઉંચાઇ વાળા નળાકારની ત્રિજ્યાઓનો ગુણોતર 2:3 હોય તો તેઓના ધનફળનો ગુણોતર _____ છે.

૭૦. A. 4:9   B. 2:3

C.   8:9   D.   8:27

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