



Dr. Babasaheb Ambedkar Technological University

Vidyavihar, Lonere, Dist. Raigad

WINTER END SEMESTER THEORY EXAMINATION DECEMBER-2019

Center Code: 5448

Course: F.Y.B.Pharm

Semester: I

Date: 28/12/2019

Time: 10:30 am to 12:30 pm

Marks: 35

Subject: Remedial Mathematics

Subject Code: BP106RMT

Q.1 Attempt any one of the following.

[10 Marks]

(a) Differentiate following function with respect to x.

(i) $e^{\sin x} \cdot \sqrt{\sin x}$. (ii) $\sin^3(3x) \cdot \cot \sqrt{x}$

(b) If $A = \begin{bmatrix} 2 & 3 & 4 \\ -1 & 5 & -3 \\ -6 & 3 & 8 \end{bmatrix}$ find A^{-1} by adjoint method

Q.2 Attempt any FIVE of the following.

[5X5=25 Marks]

(a) If the line passes through the point (2, 1) and having slope $\frac{3}{2}$ find equation of line.

(b) If $y(x) = \frac{e^{3x} \log(\cot x)}{\sin(4x)}$ find $\frac{dy}{dx}$.

(c) find x if $\begin{vmatrix} 1 & 2 & 3 \\ 1 & x & 4 \\ 2 & -3 & -1 \end{vmatrix} = 0$

(d) Define (i) singular matrix (ii) non singular matrix (iii) logarithm

(iv) equation of line in slop intercept form and two point form.

(e) Find Partial fraction of $\frac{x-2}{(x-3)(x-4)(x-5)}$.

(f) Verify that $A(B+C) = AB+AC$. Where $A = \begin{bmatrix} 1 & 2 \\ 3 & -1 \end{bmatrix}$, $B = \begin{bmatrix} -1 & 2 \\ 1 & 0 \end{bmatrix}$, $C = \begin{bmatrix} 2 & -3 \\ 4 & -8 \end{bmatrix}$

(g) Prove that $\text{Log}(1+2+3) = \text{Log}1 + \text{log}2 + \text{log}3$.