

[LH 806]

OCTOBER 2015

Sub. Code: 3806

PHARM. D DEGREE EXAMINATION
(2009-2010 Regulation)
FIRST YEAR
PAPER VI – REMEDIAL MATHEMATICS
Q.P. Code: 383806

Time : Three hours**Maximum : 70 marks****I. Elaborate on :****(4 x 10 = 40)**

1. If $A = \begin{vmatrix} 1 & -2 \\ 3 & -4 \end{vmatrix}$ then compute $A^2 - 5A + 3I$.

2. If $\sin A = 1/3$, $\cos B = -3/4$ and A and B are second quadrant. Find (i) $\sin (A-B)$ and (ii) $\cos (A-B)$.

3. Evaluate:

$$\int \frac{dx}{x^2 + 3x + 2}$$

4. Find the equation of the line which passes through the point of intersection of the two lines $2x+y=8$ and $3x-2y+7=0$ and is parallel to the line $4x+y-11=0$.

II. Write notes on :**(6 x 5 = 30)**

1. Find the determinant, $A = \begin{vmatrix} 3 & 1 & 2 \\ 4 & 8 & 5 \\ -1 & 0 & -3 \end{vmatrix}$

2. Integrate: $x \sin (x^2) dx$.

3. If $y = -6x^2 + 7x + 6$. Find $\frac{d^2y}{dx^2}$.

4. Show that $\tan x + \cot x = \sec x \cdot \operatorname{cosec} x$

5. Solve: $(16D^2 - 24D + 9)y = 0$

6. Prove: $\cos^4 A - \sin^4 A = 2\cos^2 A - 1$.
