

[LF 806]

OCTOBER 2014

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. Find the Inverse of a Matrix  $\begin{bmatrix} 1 & -2 & 3 \\ 0 & -1 & 4 \\ -2 & 2 & 1 \end{bmatrix}$

2. a) Evaluate  $\int \frac{dx}{(x-1)(x-2)}$  by partial fractions

b) Evaluate  $\int x^2 e^x dx$

3. If  $\sin A = \frac{3}{5}$   $\cos B = \frac{12}{13}$ . Find i.  $\sin(A+B)$ , ii.  $\cos(A-B)$

4. Find the equation of the circle passing through the points (1, 1), (2, -1) and (3, 2)

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

1.  $\int_1^3 (x^2 + 3x - 18) dx$

2. Differentiate  $x^2 e^x$

3. Find the angle between the lines  $2x + y - 7 = 0$  and  $x - 2y + 4 = 0$

4. Find the area of the triangle whose vertices are (4, 7), (2, -3) and (-1, 3)

5. If  $A = \begin{bmatrix} 2 & 3 \\ 4 & 5 \end{bmatrix}$  Find  $A^2 - 6A - 2I$

6.  $(D^2 + 5D + 6)y = e^{2x}$

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