PHARM. D DEGREE EXAMS
FIRST YEAR
PAPER VI – REMEDIAL MATHEMATICS
Q.P. Code : 383806

Time : 3 hours　　　　　　　　　　　　　　　　　**Maximum : 100 marks**
　　(180 Min)

Answer ALL questions in the same order.

I. Elaborate on :

	Pages (Max.)	Time (Max.)	Marks (Max.)
1. If the matrix A is given by A = $\begin{matrix} 1 & 1 & 1 \\ 2 & -1 & 3 \\ 3 & 2 & -1 \end{matrix}$ Obtain a matrix B such that AB = BA = I. [Hint: B=A^{-1}].	17	40	20
2. Solve $\dfrac{dy}{dx}$ + y cot x = Cosec x.	17	40	20

II. Write short notes on

	Pages (Max.)	Time (Max.)	Marks (Max.)
1. Find the value of $\begin{vmatrix} l & 0 & 0 \\ 0 & l & 0 \\ 0 & 0 & l \end{vmatrix}^{2}$	4	10	6
2. Find the inverse of $\begin{pmatrix} a & b \\ c & d \end{pmatrix}$	4	10	6
3. Find the equation of a straight line passing through the Points (3,6) and (-2,5).	4	10	6
4. Prove that $\cos^2\theta + \dfrac{1}{1+\cot^2\theta} = 1$.	4	10	6
5. Differentiate with respect to x $(x^3 + x^2 +3)/ x^2$.	4	10	6
6. Evaluate $\int (x + 1/x)^2$ dx.	4	10	6
7. $\int_0^5 (50q - 4q^2)dq$.	4	10	6
8. L [$4t^2$ - e^{-2t} - cos 2t].	4	10	6
9. Evaluate $\dfrac{dy}{dx} = \dfrac{1+y^2}{1+x^2}$.	4	10	6
10. Solve d^2y/dx^2 - 9y = e^{3x}.	4	10	6

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