

[LB 806]

OCTOBER 2012

Sub. Code: 3806

PHARM. D DEGREE EXAMS

FIRST YEAR

PAPER VI – REMEDIAL MATHEMATICS

Q.P. Code : 383806

 Time : 3 hours
 (180 Min)

Maximum : 100 marks

Answer ALL questions in the same order.

I. Elaborate on :

Pages (Max.)	Time (Max.)	Marks (Max.)
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1. If the matrix A is given by $A = \begin{bmatrix} 1 & 1 & 1 \\ 2 & -1 & 3 \\ 3 & 2 & -1 \end{bmatrix}$

 Obtain a matrix B such that $AB = BA = I$. [Hint: $B=A^{-1}$].

17	40	20
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2. Solve $\frac{dy}{dx} + y \cot x = \operatorname{Cosec} x$.

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II. Write short notes on

1. Find the value of $\begin{vmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{vmatrix}^2$

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2. Find the inverse of $\begin{bmatrix} a & b \\ c & d \end{bmatrix}$

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3. Find the equation of a straight line passing through the Points (3,6) and (-2,5).

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4. Prove that $\cos^2 \theta + \frac{1}{1+\cot^2 \theta} = 1$.

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5. Differentiate with respect to x $(x^3 + x^2 + 3)/x^2$.

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6. Evaluate $\int (x + 1/x)^2 dx$.

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7. $\int_0^5 (50q - 4q^2) dq$.

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8. L [$4t^2 - e^{-2t} - \cos 2t$].

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9. Evaluate $\frac{dy}{dx} = \frac{1+y^2}{1+x^2}$.

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10. Solve $d^2y/dx^2 - 9y = e^{3x}$.

4	10	6
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