September 2010

[KX 806]   **Sub. Code: 3806**

DOCTOR OF PHARMACY (PHARM. D) DEGREE EXAMINATION
(Regulations 2008 - 2009)

(Candidates admitted from 2008-2009 onwards)
FIRST YEAR

Paper VI – REMEDICAL MATHEMATICS

Q.P. Code : 383806

Time : Three hours   **Maximum : 70 marks**
Answer All questions
I. Essay Questions :   **(2X 20 = 40)**

1. (a) For the Square Matrix A = $\begin{pmatrix} 1 & 1 & 1 \\ 1 & 2 & -3 \\ 2 & -1 & 3 \end{pmatrix}$

   Prove that A (adj A) = $|A|$ I.

   (b) If A = $\begin{pmatrix} 2 & 3 \\ 4 & 5 \end{pmatrix}$.   Show that $A^2 - FA - 2I = 0$

2. (a) Find the equation of the circle passing through the points (1, 1), (2, -1) & (3, 2).
   (b) If $x = a\cos\theta + b\sin\theta$ and $y = a\sin\theta - b\cos\theta$. Prove that $x^2 + y^2 = a^2 + b^2$.

II. Write Short Notes :   **(6 X 5 = 30)**

1. Find the ad joint of $\begin{pmatrix} 3 & 1 & 2 \\ 2 & 2 & 5 \\ 4 & 1 & 0 \end{pmatrix}$

2. Find the equation of the parabola whole focus if (1, 2) and directive is x+y-2=0.
3. Integrate $x^2 e^2 x \, dx$.
4. Verify the Euler's theorem.
   if $u = x^3 + y^3 + 3x^2y + 3xy^2$.
5. Solve $(D^2 - 6D + a)y = e^{3x}$.
6. Find the area of the triangle whole vertices are (4, 7), (2, -3) and (-1, 3).

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