

Subject Code: B13102/R13

I B. Pharmacy I Semester Supplementary Examinations August - 2015

REMEDIAL MATHEMATICS-I

Time: 3 hours

Max. Marks: 70

Question Paper Consists of **Part-A** and **Part-B**
 Answering the question in **Part-A** is Compulsory,
 Three Questions should be answered from **Part-B**

PART-A

- 1.(a) Define matrix?
- (b) Define continuity?
- (c) Write the formula for area of triangle?
- (d) Find the derivative of y^2 w.r.to x ?
- (e) Define the order and degree of the differential equation?
- (f) Define permutation and combination?

[4+4+3+3+4+4]

PART – B

- 2.(a) Find how many elements of the G.P 1, 3, 9, will be 9841?
 (b) Solve the differential equation $(1+x) y dx + (1+y) x dy = 0$?
 [8+8]
- 3.(a) If $\tan A = \frac{3}{5}$ find the values of $\sin 2A$, $\cos 2A$, $\tan 2A$.
 (b) Derive the derivative of $\cos hx$
 [8+8]
- 4.(a) Evaluate $\int x e^{2x} dx$
 (b) Solve the system of equations $x - 10y = 4$; $2x + y = 8$ by using Crammer's rule?
 [8+8]
- 5.(a) Find the derivative of $\log x$
 (b) A flagstaff stands upon the top of a building. At a distance of 40m, the angles of elevation of the tops of the flagstaff and building are 60° and 30° . Find the length of the flagstaff.
 [8+8]
- 6.(a) Reslove $\frac{2x+3}{(x+3)(x+1)}$ into partial fractions.
 (b) Evaluate $\int \sin ax dx$
 [8+8]
- 7.(a) Form the differential equation to represent the family of curves
 $y = A \cos x + B \sin x$?
 (b) Find the value of k for which the equation $12x^2 - 10xy + 2y^2 + 14x - 5y + k = 0$ represents two straight lines. Find the point of intersection and an angle between them.
 [8+8]
