

**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**

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**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  $60^\circ$  and  $30^\circ$ . 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]

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