Code No: PHR16112 **R16** SET - 1

I B. Pharmacy I Semester Supplementary Examinations, February - 2019
REMEDIAL MATHEMATICS-I

Time: 3 hours Max. Marks: 70

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B**)
2. Answering the questions in **Part-A** is Compulsory
3. Answer any **FOUR** Questions from **Part-B**

~~~~~~

PART –A

1. a) Find the 5 digit numbers that can be formed using the digits 1, 1, 2, 2, 3. (2M)
   b) Write the values of $(\cos\theta+\sin\theta)^2+(\cos\theta-\sin\theta)^2$ (2M)
   c) Find the distance between the points (7,9) ,(3,-7) (2M)
   d) Write the expansion of r^{th} term in $(x+2)^n$ (2M)
   e) Evaluate $\int(4x^{-2}+\cos x)dx$ (2M)
   f) Find the order and degree of the D.E $\frac{dy}{dx}=\sin x$ (2M)
   g) Find the derivate of cos2x (2M)

PART -B

2. a) Resolve $\frac{3x-18}{x^3(x+3)}$ into partial fractions. (7M)
   b) Show that $\begin{vmatrix} a & a+b & a+b+c \\ 2a & 2b+3a & 4a+3b+2c \\ 3a & 6a+3b & 10a+6b+3c \end{vmatrix}=a^3$ (7M)
3. a) If $A+B+C=\frac{\pi}{2}$, then prove that $\tan A.\tan B+\tan B.\tan C+\tan A.\tan C=1$. (7M)
   b) Find the value of $\cos 18^0$. (7M)
4. a) Find the locus of point P such that PA-PB=4 where A (4,0) and B(-4,0) (7M)
   b) Reduce the equation 5x-4y+10 =0 into (i) slope –intercept form (ii) perpendicular form. (7M)
5. a) Evaluate $\int\frac{dx}{(x^2+5x+6)}$ (7M)
   b) Evaluate $\int\frac{dx}{1+\tan x}$ (7M)
6. a) Solve the D.E $\frac{dy}{dx}=-4xy^2$ (7M)
   b) Find the $L(e^t\sin t+t^3)$ (7M)
7. a) Find the $Lt_{x\to3}\frac{x^3-27}{x-3}$ (7M)
   b) Find the derivate of $\log\left[x-\sqrt{x^2-1}\right]$ (7M)
~~~~~~