

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[PHARMD 0321]

MARCH 2021

Sub. Code: 3806

(OCTOBER 2020 EXAM SESSION)

PHARM. 'D' DEGREE EXAMINATION

FIRST YEAR (2009-2010 Regulation)

PAPER VI – REMEDIAL MATHEMATICS

Q.P. Code : 383806

Time : Three hours

Maximum : 70 Marks

I. Elaborate on:

(4 x 10 = 40)

1. Find the rank of the matrix $A = \begin{bmatrix} 1 & 3 & -4 \\ -1 & -3 & 4 \\ 2 & 6 & -8 \end{bmatrix}$.
2. If $\sec A = 3/2$, find $\tan A$ and $\operatorname{cosec} A$.
3. Evaluate $\int x e^x dx$.
4. Differentiate $\frac{x+1}{x+2}$.

II. Write notes on:

(6 x 5 = 30)

1. If $A = \begin{bmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \\ 0 & 1 & 0 \end{bmatrix}$, $B = \begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 1 & 1 \end{bmatrix}$ then find $2A-3B$.
2. If $b=1$, $C=\sqrt{3}-1$ and $A=60^\circ$, find the length of the side a .
3. Find the equation of the parabola whose focus is $(3,0)$ and the directrix is $3x+4y = 1$.
4. Differentiate $y = \frac{1}{x+3}$.
5. Evaluate $\int_0^1 \log x dx$.
6. Solve $(D^2 + 5D + 6)y = 0$.
