GOVT.POLYTECHNIC - PLPT

UNIT TEST - II

Scheme and Subject code: C-20(2020-21)ENGG.MATHEMATICS-301

Subject Name: ENGINEERING MATHEMATICS - II DATE:

PIN: TIME:

Total Marks: 40 MARKS

PART - A

I. Answer **ALL** questions.

First question carries **4** marks and remaining questions carry **3** marks each.

S.no	Questions	Marks	Marks obtained	Blooms Taxonomy Level	Course Out comes
1	a) $\int \frac{1}{1+x^2}$ dx =_____ b) Mean value of y= f(x) on [a,b]=_____ c) Trapezoidal rule formula =_____ d) Order of the Differentiation equation =_____	1 1 1 1			CO1 CO2 CO1 CO3
2	Evaluate $\int_0^1 \frac{1}{\sqrt{1-x^2}}$ dx	3			CO2
3	The area enclosed by y = x, x axis x = 0,x = 1	3			CO2
4	Solve $\frac{dy}{dx} = \frac{\sqrt{1-y^2}}{\sqrt{1-x^2}}$	3			CO3
5	Solve $\frac{dy}{dx} = \frac{1+y^2}{1+x^2}$	3			CO3

Part-B

II Answer **ALL** questions.Each question carries **EIGHT** marks

S.no	Questions	Marks	Marks obtained	Blooms Taxonomy Level	Course Out comes
6	a)Evaluate $\int_0^{\frac{\pi}{2}} \frac{\sqrt{sinx}}{\sqrt{sinx}+\sqrt{cosx}}$ dx (or) b) Find the area of circle of the radius 'r'	8			CO2 CO2
7	a)Find $\int_0^6 \frac{1}{1+x^2} dx$,n=6 by using simpson's $\frac{1}{3}$rd rule (or) b)Find the RMS value of y = $\sqrt{27-4x^2}$ from x=0 to x=3	8			CO1 CO2
8	a) Solve $(x^{10}+y)$dx+$(x^{12}+x)$dy =0 (or) b)Eliminatry orbitals constants y=A$e^{5x}+Be^{-5x}$	8		1	CO3 CO3