

GOVT.POLYTECHNIC - PLPT
UNIT TEST - I

Scheme and Subject code: C-20(2020-21)ENGG.MATHEMATICS-401

Subject Name: ENGINEERING MATHEMATICS - II

PIN:

Total Marks: 40 MARKS

DATE:

TIME:

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) If roots are complex conjugate $a+ib$ $y_c =$ _____ b) $\frac{1}{D^2 - a^2} \sin ax =$ _____ c) $L[\sin x] =$ _____ d) $D[D^2 - 1] y = 0$ $D =$ _____	1 1 1 1			CO1 CO1 CO1 CO1
2	Solve $[D^2 - 7D + 12] y = 0$	3			CO1
3	Solve $[D^2 + D + 1] y = 0$	3			CO1
4	Find $y_p(PI)$ of $(D^2 + 25)y = \cos 5x$	3			CO1
5	Find $L[e^{2t} + 4 + 3\sin 2t + 2\cos 2t]$	3			CO2

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) Solve $(D^2 + 2D + 1)y = 4e^{3x}$ (or) b) Solve $(D^2 - 3D + 2)y = \cos 3x$	8			CO1 CO1
7	a) Solve $(D^2 + D - 6)y = x$ (or) b) Solve $(D^2 + 5D + 4)y = x + \sin 2x$	8			CO1 CO1
8	a) Find $L[e^{2t}(\cos 4t + 3\sin 4t)]$ (or) b) Find $L[e^{-3t}(\sin 4t + \cos 2t)]$	8		1	CO2 CO2