



ANJUMAN-I-ISLAM'S
KALSEKAR TECHNICAL CAMPUS, NEW PANVEL
School of Engineering & Technology

Sub :AM(III)

Date: /10 /2016

Class:M.E

Q : Attempt any **four** .

(20 marks)

1) Find Laplace transform of $te^{3t}\sin 4t$. (CO1)

2) Find the Laplace transform of $\frac{1-\cos t}{t}$ (CO1)

3) Find Inverse Laplace transform by Convolution thm $\frac{s^2}{(s^2+a^2)^2}$. (CO1)

4) Solve Using Laplace transform $\frac{dy}{dt} + 3y = 2 + e^{-t}$, $y(0) = 1$. (CO1)

5) Solve by Bender Schmidt method

$$\frac{d^2u}{dx^2} - 32\frac{du}{dt} = 0, \quad \text{Given } u(0, t) = 0, u(1, t) = t, u(x, 0) = 0$$

taking $h=0.25$ (CO5)

6) Find the Fourier Series expansion of $f(x) = e^{-x}$ in $(0, 2\pi)$. (CO3)