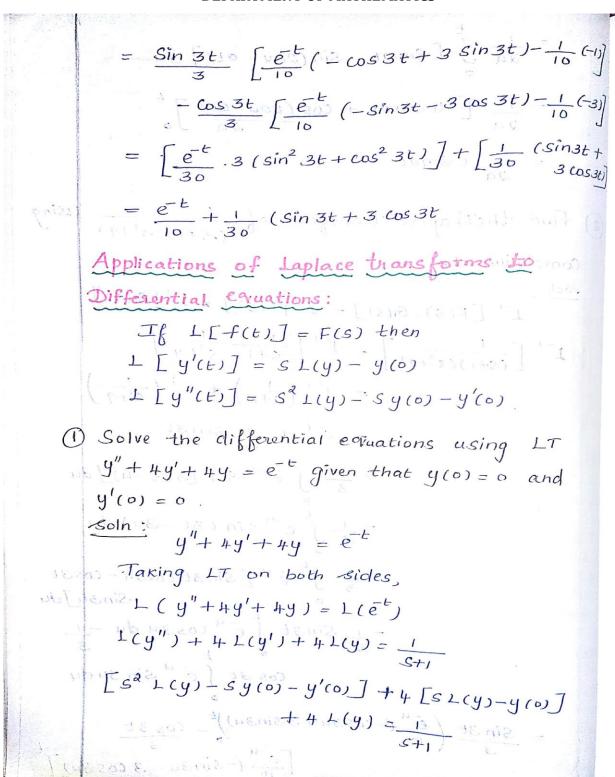


SNS COLLEGE OF TECHNOLOGY



(An Autonomous Institution)

DEPARTMENT OF MATHEMATICS





SNS COLLEGE OF TECHNOLOGY



(An Autonomous Institution)

Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai Accredited by NAAC-UGC with 'A++' Grade (Cycle III) & Colombia Accredited by NBA (B.E - CSE, EEE, ECE, Mech & Colombia Colo

DEPATMENT OF MATHEMATICS

Given:
$$y(0) = 0$$
, $y'(0) = 0$

$$\Rightarrow \begin{bmatrix} s^2 L(y) - sx_0 - 0 \end{bmatrix} + 4 \begin{bmatrix} s L(y) - 0 \end{bmatrix} + 4 L(y) \\ = \frac{1}{s+1} \end{bmatrix}$$

$$\Rightarrow s^3 L(y) + 4 s L(y) + 4 L(y) = \frac{1}{s+1} \end{bmatrix}$$

$$\Rightarrow L(y) (s+3)^3 = \frac{1}{s+1} \end{bmatrix}$$

$$L(y) = \frac{1}{(s+1)(s+2)^2}$$

$$= \frac{A}{s+1} + \frac{B}{s+2} + \frac{C}{(s+2)^2}$$

$$1 = A(s+2)^3 + B(s+2)(s+1) + C(s+1)$$
Put $s = -a \Rightarrow c = -1$
Put $s = 0 \Rightarrow B = -1$

$$\frac{1}{(s+1)(s+2)^2} = \frac{1}{s+1} - \frac{1}{(s+2)^2}$$

$$y = L^{-1} \left(\frac{1}{(s+1)(s+2)^2} \right)$$

$$= L^{-1} \left(\frac{1}{(s+1)(s+2)^2} \right)$$



SNS COLLEGE OF TECHNOLOGY



(An Autonomous Institution)

Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai Accredited by NAAC-UGC with 'A++' Grade (Cycle III) & 2 amp; Accredited by NBA (B.E - CSE, EEE, ECE, Mech & 2 amp; B.Tech.IT) COIMBATORE-641 035, TAMIL NADU

DEPARTMENT OF MATHEMATICS

