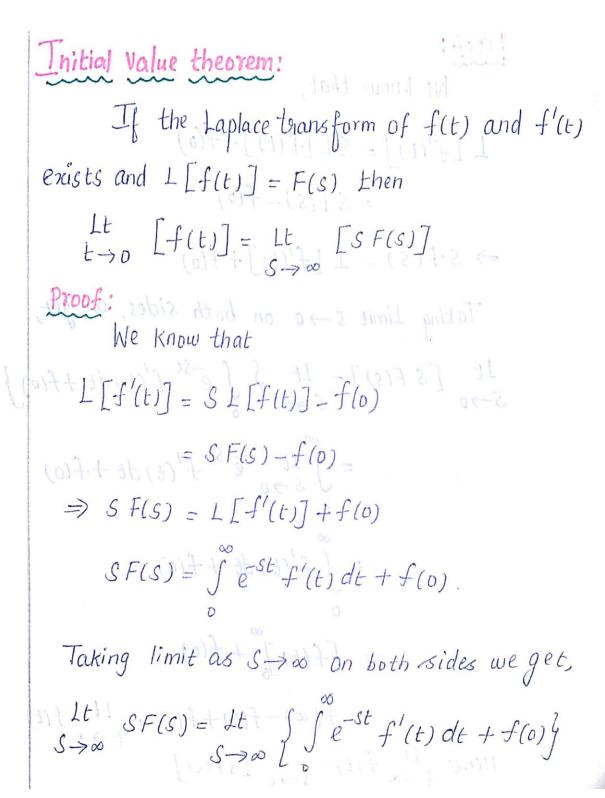




(An Autonomous Institution)
Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai
Accredited by NAAC-UGC with 'A++' Grade (Cycle III) & Company (B.E - CSE, EEE, ECE, Mech & Company);
Accredited by NBA (B.E - CSE, EEE, ECE, Mech & Company); B.Tech.IT)

COIMBATORE-641 035, TAMIL NADU

DEPARTMENT OF MATHEMATICS

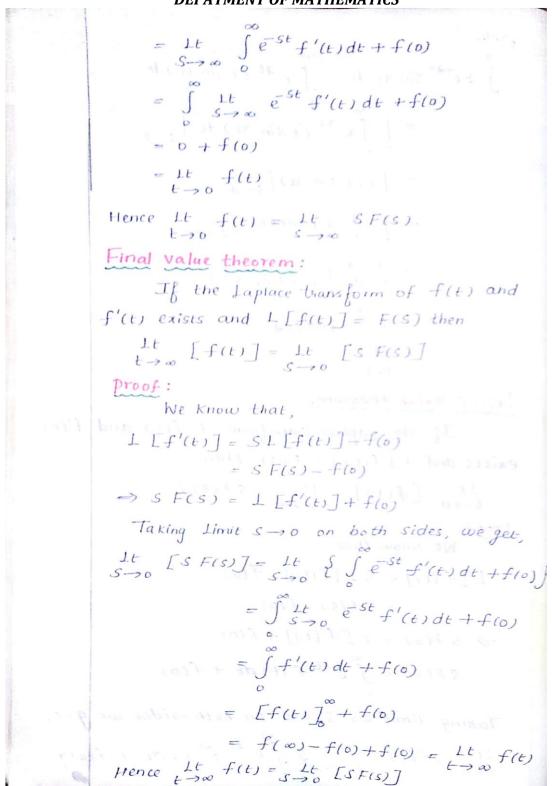






(An Autonomous Institution)

DEPATMENT OF MATHEMATICS







(An Autonomous Institution)

DEPARTMENT OF MATHEMATICS

Vesify the initial and final value theorem for
$$f(t) = 1 + e^{t}$$
 (Sint + cost)

Soln:

$$f(s) = L \left[1 + e^{t} Sint + e^{t} cost \right]$$

$$= L(1) + L(sint)_{S \to S+1} + L(cost)_{S \to S+1}$$

$$= \frac{1}{s} + \left(\frac{1}{s^{2}+1} \right)_{S \to S+1} + \left(\frac{s}{s^{2}+1} \right)_{S \to S+1}$$

$$= \frac{1}{s} + \left(\frac{1}{s^{2}+1} \right)_{S \to S+1} + \left(\frac{s}{s^{2}+1} \right)_{S \to S+1}$$

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

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

$$= \frac{1}{s} + \frac{1}$$





(An Autonomous Institution)

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

DEPARTMENT OF MATHEMATICS

