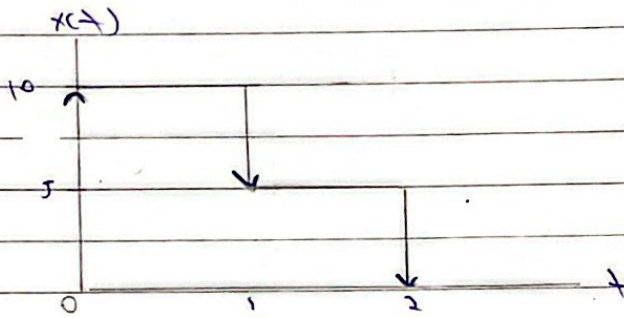


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211022084

NMT20703 : SIGNAL AND SYSTEMS

ASSIGNMENT 3 : LAPLACE TRANSFORM



- 1) Compute Laplace transform for the above signal.

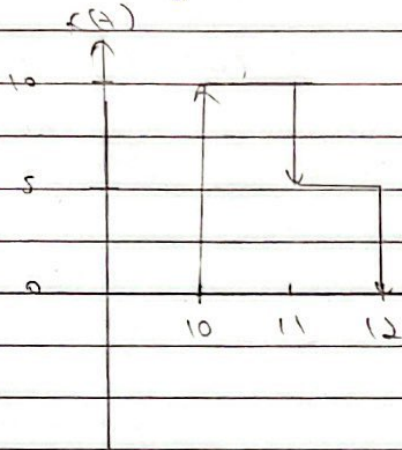
$$x(t) = 10 u(t) - 5u(t-1) - 5u(t-2)$$

$$X(s) = \frac{10}{s} - \frac{5e^{-s}}{s} - \frac{5e^{-2s}}{s}$$

$$X(s) = \frac{10 - 5e^{-s} - 5e^{-2s}}{s}$$

$$X(s) = \frac{5[2 - e^{-s} - e^{-2s}]}{s} \neq$$

- 2) By using a suitable Laplace transform properties, evaluate the Laplace transform if the signal is shifted to the right by 10 sec.



$$x(t) = (t-10)u(t-10) - [5u(t-11)] - [5u(t-12)]$$

$$X(s) = \frac{10e^{-10s}}{s} - \frac{5e^{-11s}}{s} - \frac{5e^{-12s}}{s}$$

$$X(s) = \frac{5}{s} [2e^{-10s} - e^{-11s} - e^{-12s}]$$