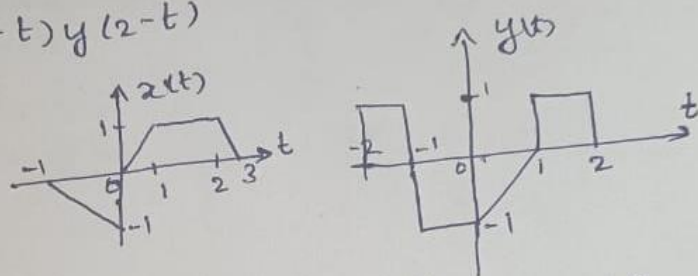


BECM301L - Signal Processing

Assignment - I

1. For the given signals plot (i) $x(2t)y(0.5t+1)$
(ii) $x(4-t)y(2-t)$



2. Check periodic or not. Find fundamental period if signal is periodic.

(i) $x(n) = e^{j(2\pi/3)n} + e^{j(3\pi/4)n}$

(ii) $x(n) = 2 \cos 3\pi n + 7 \cos 9n$

3. Check whether the following systems are static/dynamic, linear/NL, TV/TI, causal/NC

(1) $y(n) = x(n)x(n-1)$

(2) $z(n) = 2x(n) + \frac{1}{x(n-1)}$

(3) $y(n) = n x(n)$

(4) $y(n) = x^2(n)$

4. Determine z-transform:

(1) $x(n) = n^2 u(n)$

(2) $x(n) = n a^n u(n)$

(3) $x(n) = n u(n)$