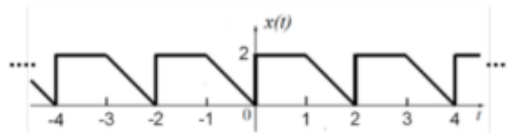


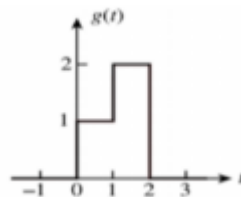
Tutorial Questions 1:

Signals and System

- 1- What is a system?
- 2- What is a signal?
- 3- List the Classifications of Signals
- 4- What the difference between
 - Continuous Time and Discrete Time Signals.
 - Even and Odd Signals.
 - Periodic and Aperiodic Signals
 - Deterministic and non-Deterministic Signals
 - Unit Step Function, Signum Function and Unit Ramp Function
- 5- Determine the signal from following functions, Even, odd and neither
 - a. $x(t) = t^2 + t^4$
 - b. $x(t) = t^3 + t^5$
 - c. $x(t) = 2 + t + 7t^2 + 4t^3 + 12t^4 + 4t^5$
- 6- Determine the fundamental period, frequency and angular frequency for following signals:
 - a. $x(t)$



- b. $g(t)$



- c. $x[n] = (3 - 2)^n$
 - d. $x[n] = 2(-1)^{n^2}$
- 7- Determine the case of following signals then draw it
 - a. $x(t) = 6e^{3t}$
 - b. $x[n] = 3(0.5)^n$

Tutorial Questions 1:

Signals and System

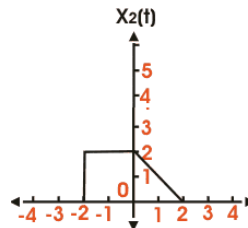
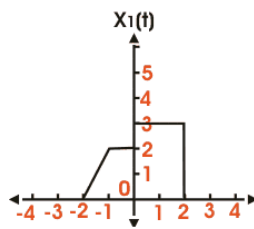
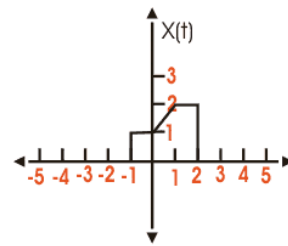
8- Sketch each of following signals from $x(t)$

a. $y_1(t) = 0.5x(t)$ and $y_2(t) = 3x(t)$

b. Add: $x_1(t)$ and $x_2(t)$

c. Subtract: $x_1(t)$ and $x_2(t)$

d. Multiple: $x_1(t)$ and $x_2(t)$



9- Sketch each of following signals from $x(t)$

a. $y(t) = x(0.5t)$

b. $y(t) = x(3t) + x(3t + 4)$

c. $y(t) = x(3(t + 2))$

d. $y(t) = x(-2t - 3)$

