



# ISRA UNIVERSITY

Islamabad Campus

Department of Electrical Engineering

Program: B.E. (Electrical)

Semester - Fall 2016

EL313- Signal & Systems

**Assignment – 1**

**Marks: 15**

**Due Date: 26/10/2016**

**Handout Date: 18/10/2016**

Question # 1:

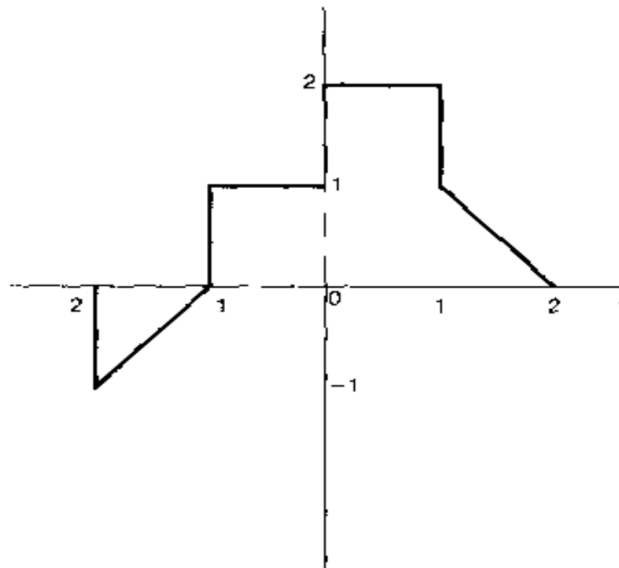
Determine whether or not each of the following signals is periodic. If a signal is periodic, specify its fundamental period:

1.  $x(t) = je^{j10t}$
2.  $x[n] = 1 + e^{\frac{j4\pi n}{7}} - e^{\frac{j2\pi n}{5}}$

Question # 2:

A continuous-time signal  $x(t)$  is shown in figure below. Sketch and label each of the following signals:

1.  $x(t - 1)$
2.  $x(2t + 1)$
3.  $x(2 - t)$



Question # 3:

Determine whether the following signals are energy signal or power signal:

1.  $x(t) = e^{-t}u(t)$

2.  $x[n] = 3e^{j2n}$

**Good Luck**