



# ISRA UNIVERSITY

Islamabad Campus

Department of Electrical Engineering  
Program: B.E. (Electrical)  
Semester - Fall 2018

EL 313- Signal & Systems

**Assignment – 4**

**Marks: 10**

**Due Date: 21/12/2018**

**Handout Date: 14/12/2018**

Question # 1:

Compute the discrete-time Fourier transform of the following signals:

1.  $x[n] = \left(\frac{1}{4}\right)^n u[n]$
2.  $x[n] = \left(\frac{1}{3}\right)^n u[-n]$

Question # 2:

Find the Fourier series coefficients for each of the following signals:

1.  $x(t) = \sin\left(10\pi t + \frac{\pi}{6}\right)$
2.  $x(t) = 1 + \cos(2\pi t)$

**Good Luck**