Department of Electronics & Communication Engineering

Faculty of Engineering, Integral University, Lucknow

Quiz 02

Signals & Systems (IEC-402)

Candidate Name & Roll Number :

Date :

Maximum Marks : 10

Group: Second Year EC-2

Attempt all questions.

1. Find out the nyquist rate

(a) y(t)=sin (500*3.14t)+cos(750*3.14t)

(b)y(t)=sin(60*3.14t) X cos(75*3.14)t

ii) Find the even and odd components of the following signals

(a) x(t)=u(t) (b) $x(t)=e^{-a|t|}$

2. (I). Determine the complex exponential Fourier series representation for each of the following signals.

(a). $x(t) = \cos 6t + \sin 8t$ (b). $x(n) = cos^2(0.125\pi n)$

(II). Find the Fourier transform of the following signals.

(a) X(t) = 1 (b) $x(n) = \begin{cases} 1 & |n| \leq 1 \\ 0 & Otherwise \end{cases}$