Department of Computer Systems Engineering
University of Engineering & Technology
Peshawar, PAKISTAN

Subject: Signal and Systems (4th Semester)

Exam: Mid Term (Spring 2020)

Max Marks: 20

Attempt All Questions. **Time allowed : 2 hours**

Question 3:

1) Use the convolution sum method to find the response y[n], when the input signal x[n] is passed through the LTI system with impulse response h[n], given in Figure-3. Also sketch your results. (CLO2) **(3+1 Marks)**

   2) S = Smaller among the digits at units and tens places of your registration number

   3) B = Bigger among the digits at units and tens places of your registration number

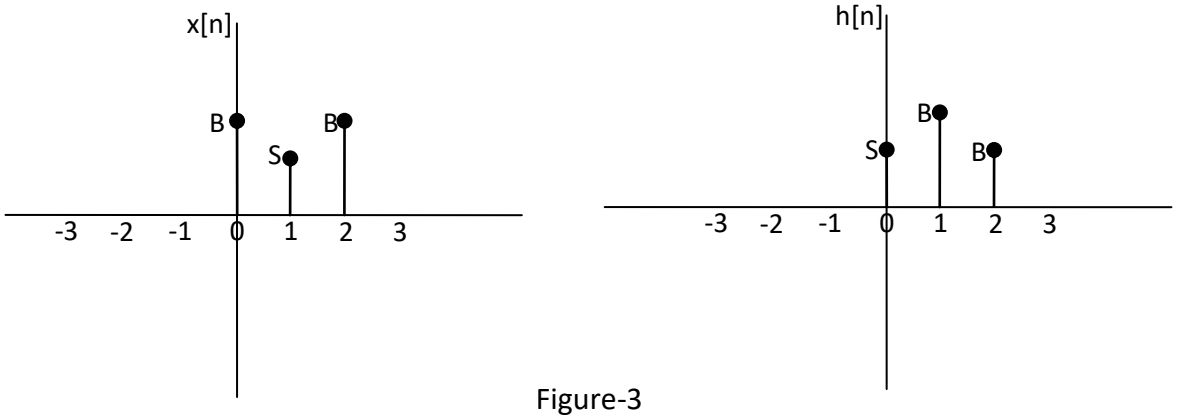

Figure-3

4) How the **L**inearity and **T**ime **I**nvariance properties of Linear Time-Invariant (LTI) systems help to analyze (find output) of the LTI systems using impulse response h[n]. Why the same method of analysis can't be applied to systems which are **N**on-**L**inear and/or **T**ime-**V**ariant.

   (CLO2) **(3 Marks)**