Total No. of Questions : 8] *[Total No. of Printed Pages : 2*

Roll No .....

EC-4002 (CBGS)

B.E. IV Semester

Examination, May 2018

Choice Based Grading System (CBGS)

Signals and Systems

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions.

ii) All questions carry equal marks.

1. a) Explain the Basic operations of signals with an examples. 7

   b) What is sampling and quantization? Explain in detail. 7

2. Explain the following with an examples: 6+4+4
   a) Static and Dynamic
   b) Stability
   c) Causality

3. a) Define ROC and its properties. 4

   b) Derive the relation between discrete time Fourier Transform and Z Transform. 10

4. Derive the following properties of Z transform 4+5+5
   a) Time shifting
   b) Initial Value theorem
   c) Convolution

5. a) Explain the Impulse response characterization. 7

   b) Explain the properties of convolution summation. 7

6. a) What is Discrete time Fourier series and explain in detail? 7

   b) What are the applications of DTFT? 7

7. Derive the following properties of Z transform 4+5+5
   a) Time Reversal
   b) Differentiation in time domain
   c) Frequency shifting

8. a) What is recursive and non recursive discrete time systems? 7

   b) Compare continuous and discrete time LTI systems. 7

******