

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
