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

Roll No ....

EC-5002 (CBGS)
B.E. V Semester
Examination, November 2018
Choice Based Grading System (CBGS)
Digital Communication
Time : Three Hours

Maximum Marks : 70

Note: i)   Attempt any five questions.

ii)   All questions carry equal marks.

1. a)   Discuss about cumulative distribution function and probability density function.

   b)   Discuss Mean, Variance and Standard Deviation of random variable.

2. a)   State and prove sampling theorem of Band Limited Signal.

   b)   Explain the generation of PWM and PPM signal.

3. a)   What is Quantization? What is the need of Quantization and determine the expression of quantization error?

   b)   Explain the working principle of differential PCM.

4. a)   Explain the principle of companding and what is its need? Also discuss about A-law and μ-law compander.

   b)   Explain the working principle of ADM.

5. a)   Explain the generation and reception of BPSK signal.

   b)   Explain about differential encoded PSK.

6. a)   Explain about matched filter and correlator.

   b)   Discuss Bayes theorem.

7. a)   Determine the channel capacity of Binary symmetric channel and Binary erase channel.

   b)   State and discuss Shannon theorem and Shannon limit.

8.   Write short notes on any two of the following:

   a)   QPSK

   b)   Duobinary encoding

   c)   MSK

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