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

Roll No .....

EC-8002 (CBGS)

B.E. VIII Semester

Examination, May 2019

Choice Based Grading System (CBGS)

Advanced Communication System

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions.

ii) All questions carry equal marks.

1. a) Explain the principle working of frequency hopping spread spectrum technique.

   b) What is CDMA? Explain how does it employ spread spectrum techniques during the multiple access of the signals.

2. a) Explain the generation and characteristics of PN sequence.

   b) With the help of block diagram explain OFDM and state the working of each stage.

3. a) What is inter carrier interference and how it can be overcomed?

   b) Explain the principle of single carrier modulation with frequency domain equalization.

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4. a) What is spatial division multiple access? Explain.

   b) Discuss the working of multi user MIMO.

5. a) Describe smart antenna system with the help of transmitter and receiver.

   b) Describe the architecture of cognitive transceiver.

6. a) List out design consideration in cognitive radio.

   b) Discuss about spectrum sensing, spectrum management and spectrum sharing. http://www.rgpvonline.com

7. a) What are fundamentals of relaying? Discuss relaying with multiple parallel relays.

   b) Discuss about routing and resource allocation in collaborative networks.

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

   a) Time hopping impulse radio.

   b) Frequency selective channel estimation in OFDM.

   c) Advantages and disadvantages of smart antenna with justification.

   d) Network coding

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