

Roll No.....

**EC-802**

**B.E. VIII Semester**

Examination, June 2014

**Advanced Communication System**

*Time : Three Hours*

**RGPVONLINE.COM** *Maximum Marks : 70*

*Note :* Attempt one question from each unit. All questions carry equal marks.

**Unit-I**

- 1. a) With the help of block diagram explain the working of frequency hopped spread spectrum technique.
- b) Discuss about the multiuser detection technique.

OR

- 2. a) With the help of block diagram explain the working of Direct sequence spread spectrum technique. Also explain processing gain.
- b) Discuss about the multiuser detection technique.

**Unit-II**

- 3. a) Discuss the working principle of OFDM.
- b) How is channel estimation done in OFDM? Determine the peak to average power ratio.

OR

- 4. a) Discuss the principle of multicarrier code division multiple access.
- b) What is inter carrier interference? How can it be reduced?

**Unit-III**

- 5. Explain in detail the principle working of smart antenna.
- OR

- 6. Explain in detail the principle of multi input multi output system also explain multi user MIMO.

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**Unit-IV**

- 7. a) Discuss the principle of inter weaving in cognitive radio.

- b) How is spectrum sharing done in cognitive radio.

OR

- 8. a) Explain about the cognitive transceiver architecture.
- b) What do you understand by overlay and underlay.

**Unit-V**

- 9. Write short notes of the following:

- a) Routing and resource allocation in multi hop networks.

- b) Network Coding.

OR

- 10. Write short notes of the following:

- a) Relaying with multiple parallel relays.

- b) Routing and resource allocation in collaborative networks.

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