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# EC-501

#### **BE V Semester**

Examination December 2012

## Voice and Data Communication

Time: Three Hours

Maximum Marks: 70/100

Note: 1. Attempt one question from each unit.
2. All questions carry equal marks.

#### Unit - I

- 1. a) Explain the principle working of Electronic Telephones.
  - b) Discuss briefly about voice frequency circuit arrangements.

OR

- 2. a) Explain the procedure of a call execution.
  - b) What are the reasons of cross talk? How it can be reduced?

#### Unit - II

- 3. a) Explain the working of automated central office switches.
  - b) Differentiate between different exchanges.

OR

- 4. a) Explain the common channel signaling system.
  - b) Discuss briefly about telephone switching hierarchy.

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## Unit-III

- 5. a) Explain briefly about digital carrier line encoding.
  - b) Discuss briefly about composite baseband signal.

OR

- 6. a) Explain briefly about FDM hierarchy.
  - b) Differentiate between TDM, FDM and WDM.

## Unit-IV

- 7. Explain the following:
  - a) Digital to Digital encoding.
  - b) Shannon capacity.

OR

- 8. Explain the following:
  - a) DTE DCE interface.
  - b) MODEM.

#### Unit - V

- 9. a) Explain cyclic Redundancy check codes.
  - b) Explain the principle of time division circuit switching technique.

OR

- 10. a) Explain the error correction Hamming code.
  - b) Differentiate between packet and message switching.

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