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Roll No.....

CS - 501

B.E. V Semester

Examination, December 2014

Data Communication

Time : Three Hours

Maximum Marks : 70

Note: i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.

ii) All parts of each question are to be attempted at one place.

i i i) All questions carry equal marks, out of which part A and B (Max.50 words) carry 2 marks, part C (Max.100 words) carry 3 marks, part D (Max.400 words) carry 7 marks.

iv) Except numericals, Derivation, Design and Drawing etc.

Unit - I

1. a) Define digital signal.
- b) Define the term frequency and period of a signal. 2
- c) Define line coding. What are its characteristics? 3
- d) Draw components of data communication system and state function of each component. 7

Or

What are modes of data transmission? Explain with examples. 7

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Unit - II

2. a) What are the advantages of TDM over FDM?
- b) Define synchronous TDM.
- c) What is direct sequence spread spectrum? 3
- d) What is the difference between message switching and packet switching? 7

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Or

What is ISDN? Explain in details with neat diagram. 7

Unit - III

3. a) Define:
 - i) RJ-45 2
 - ii) RJ-11 2
- b) What is the key advantage of BNC connector? 2
- c) List out the difference between active hubs and passive hubs. 3
- d) What are types of bridge? Explain with example. 7

Or

What is Null Model? Explain in detail with diagram. 7

Unit - IV

4. a) Define:
 - i) Guided media
 - ii) Unguided media 2
- b) Define ADSL. 2
- c) What are the characteristics of Base-band signal? 3
- d) What is electromagnetic signal? Explain its advantages. 7

Or

What are the advantages of fibre optic cable over coaxial cable? 7

Unit - V

5. a)
 - b) How do you identify errors in the signal? 2
 - c) List out the methods available for error detection. 2
 - d) Define flow integrity error. 3
- What is CRC? Explain CRC with example. 7

Or

What is interleaved codes? Explain interleaved codes with example. 7

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