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Roll No.....

EC-601

B.E. VI Semester

Examination, December 2012

Data Communication and Networks

Time : Three Hours

Maximum Marks : 100 ***Minimum Pass Marks :35***

Note : 1. Attempt any one question from each unit.

2. All questions carry equal marks.

UNIT-I

1) a) Compute the channel capacity of a noisy channel having bandwidth 4kHz and SNR = O dB. (10)

b) Discuss the types of addresses used in an internet employing TCP/IP protocol. (10)

OR

2) Discuss the functions and features of each layer of OSI Model. How does it differ from TCP/IP model? Enlist some similarities also. (20)

UNIT-II

3) a) Differentiate between synchronous and asynchronous TDM. (10)

b) Compare datagram and virtual circuit packet switching techniques. (10)

OR

4) a) List the advantages and disadvantages of FDM. (10)

b) Give a short account of different Digital subscriber lines (DSL). (10)

UNIT-III

5) a) Explain the main functions of Datalink control layer. (10)

b) What is parity Checking? How is parity generated? (10)

OR

6) a) Distinguish between Go-back-N and selective repeat ARQ protocols. (10)

b) Why framing of the bit stream necessary? Explain different framing techniques? (10)

UNIT - IV

7) a) Explain how the throughout doubles when slotted ALOHA is used instead of pure ALOHA? (10)

b) Enlist the types of CSMA protocols. Name and explain the types of cables used in CSMA/CD. What types of encoding schemes are used in CSMA/CD? (10)

OR

8) a) Compare FDMA, TDMA and CDMA. (10)

b) Draw and explain the frame format used in IEEE 802.4 Token Bus LAN. (10)

UNIT - V

9) a) Differentiate static and dynamic routing. (10)

b) What is the use of bridges in internetworks? Explain the advantages and disadvantage of bridges? (10)

OR

10) a) Explain how routing is done using Dijkstra's algorithm. (10)

b) Compare IP_v4 and IP_v6. (10)

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