Reg. No. : ☐☐☐☐☐☐☐☐☐☐☐☐

A 1229

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2008.

Sixth Semester

Electronics and Communication Engineering

EC 343 — COMPUTER COMMUNICATION NETWORKS

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Write short notes on multiplexing.

2. What is meant by DC component in digital encoding?

3. Differentiate between flow control and congestion control.

4. What is meant by Automatic Repeat Request in data link protocols?

5. What is the purpose of token passing in Token Ring networks?

6. Whether 1-persistent CSMA is better or non-persistent CSMA is better? Justify your answer.

7. List down four major differences between circuit switched networks and packet switched networks.

8. Two local area networks are to be interconnected. What is your choice of internetworking device? Justify your answer.

9. Mention the functions of session layer.

10. Differentiate between substitution and transposition in encryption.

PART B — (5 × 16 = 80 marks)

11. (a) Explain the ISO/OSI reference model in detail. (16)

Or

(b) Explain the various digital to digital encoding techniques in detail. (16)

12. (a) (i) Discuss about the stop and wait protocol with an example. (6)

(ii) Explain the sliding window flow control mechanism with an example. (10)

Or

(b) Explain the operation of HDLC protocol in detail. (16)

13. (a) Discuss the various types of Carrier Sense Multiple Access protocols in detail. Also brief CSMA/CD. (16)

Or

(b) (i) Explain the token passing mechanism of Token Ring networks. (8)

(ii) Discuss the ring maintenance in Token Ring networks. (8)

14. (a) (i) Discuss the B-ISDN ATM reference model in detail. (8)

(ii) Explain the fundamental design principles of ATM networks. (8)

Or

(b) Discuss the various stages of a link state routing protocol with a sample topology. (16)

15. (a) (i) Explain how data can be transmitted safely across a network using a sample encryption and decryption algorithm. (8)

(ii) Discuss how the data can be transmitted using reduced bandwidth across a network using sample compression and decompression algorithm. (8)

Or

(b) (i) Explain the architecture of a network management system. (8)

(ii) Discuss the CMIP model of network management. (8)

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