

N 1160

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2004.

Sixth Semester

Electronics and Communication Engineering

EC 343 — COMPUTER COMMUNICATION NETWORKS

Time : Three hours

Maximum : 100 marks

Answer ALL the questions.

PART A — (10 × 2 = 20 marks)

1. What are the functions of physical layer?
2. Define what is meant by a protocol.
3. What are the most common error control techniques?
4. What are the different network topologies to organize Computer Networks?
5. What are the disadvantages of Token ring protocol?
6. Compare persistent and non persistent CSMA.
7. What are datagrams?
8. List the strategies of controlling congestion.
9. List the security services provided by the Network.
10. What is known as authentication?

PART B — (5 × 16 = 80 marks)

11. (i) Give the advantages of encoding and decoding techniques. (8)
- (ii) Explain the architecture of a OSI reference model with a neat sketch. (8)

12. (a) What is the draw back of stop and wait flow control and explain in detail an efficient flow control scheme with necessary diagrams.

Or

- (b) Explain briefly the error detection schemes and compare the different error control techniques.

13. (a) Explain the principles of Token ring network. Describe its basic operation, token passing, initialization and priority operation.

Or

- (b) Explain the principles of FDDI and write MAC frame format of FDDI and how FDDI is different from IEEE 802.5.

14. (a) (i) Distinguish between packet switching and circuit switching. (6)

- (ii) Explain the basic principles, packet format and services provided by X.25 standard. (10)

Or

- (b) (i) Explain the network congestion and the various methods of dealing congestion. (8)

- (ii) Discuss the details of ATM scheme. (8)

15. (a) Explain in detail DES encryption scheme with an example and what are the draw backs of DES algorithms.

Or

- (b) Write short notes on :

- (i) Message Authentication (8)

- (ii) Virtual terminals. (8)