

B 318

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2005.

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. What are the transmission impairments in data transmission?
2. What are the responsibilities of the session layer?
3. Why do we need flow control?
4. In HDLC, what is bit stuffing and why is it needed?
5. What are the advantages of FDDI over a basic Token Ring?
6. What is CSMA/CD and mention its uses?
7. What are the two popular approaches to packet switching?
8. What is the advantage of B-ISDN over N-ISDN?
9. What are the two categories of encryption/decryption methods?
10. What is the need for virtual terminal?

PART B — (5 × 16 = 80 marks)

11. Explain the principles of RSA algorithm and how are public and secret keys derived. (16)
12. (a) (i) Explain in detail about various transmission media. (8)
(ii) Compare OSI and TCP reference model. (8)

Or

- (b) (i) Explain in detail about various transmission impairments. (8)
(ii) Compare different multiplexing schemes. (8)
13. (a) Explain the various flow control methods in data transmission. (16)

Or

- (b) (i) Why are asynchronous protocols losing popularity? (3)
(ii) Describe the line configuration, transmission mode and flow and error control methods used by Binary Synchronous communication. (13)
14. (a) (i) Elaborate on the Media Access Control layer of a Token Ring Network. (6)
(ii) Explain with a suitable diagram how switched Multimegabit Data Service can be used for internetworking of LANS. (10)

Or

- (b) Explain the principles of FDDI and write MAC frame format of FDDI and how FDDI is different from IEEE 8025. (16)
15. (a) Discuss the main features of ATM Networks. (16)

Or

- (b) Explain the architecture and functions of ISDN with necessary diagrams and what are the limitations. (16)
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