BT6/M11　　　　　8618

Data Communication Networks

Paper—ECE-310E

Time : Three Hours]　　　　　　　　[Maximum Marks : 100

Note :—Attempt **FIVE** questions in all, selecting at least **ONE** question from each unit. All questions carry equal marks.

UNIT—I

1. What are the distinguishing features of a Local Area Network ? How is it different from a Wide Area Network with respect to the transmission technology used and the relevant software design issues ?

2. Distinguish between the following :—

   (a) Connection oriented and connectionless services

   (b) Wired and wireless media

   (c) Telephone system and cellular radio.

UNIT—II

3. (a) How are errors detected and corrected in data communication ? What is the role of sequence numbers and acknowledgements in error control ?

   (b) Name some important IEEE LAN standards and bring out a brief comparison between them.

4. (a) Compare CSMA media access control mechanism with Aloha and slotted Aloha.

   (b) How does packet switching support data communication ?

UNIT—III

5. Discuss the important issues related to internetworking. Also mention the devices commonly used for internetworking along with a distinction between each.

6. (a) Compare distance vector and link state routing.

    (b) How congestion is controlled using Traffic Shaping ?

UNIT—IV

7. What do you mean by cryptography ? What is the role of keys in cryptography ? Illustrate with the help of suitable examples.

8. What is the importance of DNS and World Wide Web applications of a network ? Define web pages, web browser, web server, and search engine.