Roll No. ..... Total Pages : 2

BT-5/D-20 **45247**

COMPUTER NETWORKS

Paper–ECO-1A

Time : Three Hours] [Maximum Marks : 75

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

UNIT–I

1. (a) What is a computer network? What are the objective of computer networking? Discuss.

(b) What is the difference between TCP/IP and OSI reference model? Discuss the functionalities of network and transport layer in OSI reference model.

2. (a) What is the difference between circuit switching and packet switching? Explain.

(b) What is a Transmission medium? Discuss the characteristic features of fibre optic.

UNIT–II

3. (a) What are the services provided by the Data Link Layer? Discuss.

(b) Write a note on CRC code for error detection and correction.

4. (a) What is the Random Access Protocol? Discuss ALOHA Protocol in detail.

(b) Discuss the one-bit sliding window protocol.

UNIT–III

5. (a) What is IPv4? Discuss its header format used in Network Layer.

(b) Explain the need of IPv6 in Network Layer.

6. (a) What are the factors causing congestion? Discuss the congestion control in TCP.

(b) What is cryptography? What is the difference between transposition and substitution ciphers? Discuss.

UNIT–IV

7. (a) Discuss the protocols used in electronic mail.

(b) What is the difference between FTP and HTTP? Explain.

8. (a) What is World Wide Web (WWW)? Describe its architecture.

(b) What are the design issues in Application layer? Discuss.