

Roll No. ....

Total Pages : 03

BCA/D-17

1254

COMPUTER NETWORKS

BCA-354

Time : Three Hours]

[Maximum Marks : 80

**Note :** Attempt *Five* questions in all. Q. No. 1 is compulsory. In addition to compulsory question, student will have to attempt *four* more questions selecting *one* question from each Unit. All questions carry equal marks.

**Compulsory Question**

1. (a) Write a short note on Frame Relay. 2
- (b) Explain different types of Computer Network. 4
- (c) What do you mean by Wireless LAN ? 2
- (d) Write a short note on Cable Modem. 2
- (e) What is Load Shedding ? Explain. 2
- (f) Write a short note on Digital Certificate. 2
- (g) Write a short note on Gigabit Ethernet. 2

**Unit I**

2. Discuss OSI reference model in detail. Also discuss advantages and disadvantages of OSI model. 16

3. (a) Discuss Connection-oriented and Connectionless Services with examples. 8
- (b) Discuss any *four* network hardware components. 8

## Unit II

4. (a) What do you mean by Multiplexing ? Explain different types of Multiplexing techniques. 8
- (b) What do you mean by transmission media ? Explain unguided media in detail. 8
5. Discuss modulation in detail. Also discuss different types of modulation techniques with advantages and disadvantages of each technique. 8,8

## Unit III

6. (a) What do you mean by framing in networking ? Discuss different framing methods. 8
- (b) Discuss Carrier Sense Multiple Access (CSMA) in detail. 8
7. (a) Explain Hamming code for error detection and correction. 8
- (b) Discuss sliding window protocol in detail. 8

## Unit IV

8. What do you mean by Routing ? Discuss different types of routing algorithm with its advantages. 16
9. Explain congestion and causes of congestion. Also discuss different congestion control algorithms in detail. 16

