

**Bachelor of Science (B.Sc.I.T.) Semester—III (C.B.S.) Examination****DATA COMMUNICATION AND NETWORK—I****Paper—III**

Time : Three Hours]

[Maximum Marks : 50

**N.B. :—** (1) **All** questions are compulsory and carry equal marks.

(2) Draw neat and labelled diagrams wherever necessary.

**EITHER**

1. (a) Explain data communication protocol. 5
- (b) Differentiate between serial and parallel communication. 5

**OR**

- (c) Explain data modulation techniques. 5
- (d) Explain process of digital communication. 5

**EITHER**

2. (a) Explain various transmission medias. 5
- (b) Explain Delta Modulation PCM. 5

**OR**

- (c) Explain working of applied data transmission. 5
- (d) Explain signal voltage-to-quantization noise voltage ratio. 5

**EITHER**

3. (a) Explain the terms electromagnetic polarization and radiations. 5
- (b) Explain satellite communication system. 5

**OR**

- (c) Explain microwave communication system. 5
- (d) What are the data communication codes ? 5

**EITHER**

4. (a) Explain services provided by LAN data link layer. 5
- (b) Explain the term broadcast domain. 5

**OR**

- (c) Explain working of ethernet. 5
- (d) What are the transmission formats ? 5

5. Attempt **all** :

- (a) What are the possibilities of error in data communication ? 2½
- (b) Explain light detector principle and working for optical fiber. 2½
- (c) Write a short note on bar-code. 2½
- (d) Explain medium access control. 2½