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Roll No. ....

**97679**

**BCA 5th Semester (New)  
Examination – November, 2019**

**DATA COMMUNICATION AND NETWORKING**

**Paper : BCA-303**

Time : Three Hours ]

[ Maximum Marks : 80

*Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.*

**Note :** Attempt *five* questions in all, selecting *one* question from each Unit. Question No. 1 is *compulsory*. All questions carry equal marks.

1. Explain the following :

16

- (a) Frame Relay
- (b) Digital carrier system
- (c) Network interpole cards
- (d) Internetworking

### UNIT – I

2. Explain TCP/IP reference model in detail with proper diagram. 16
3. Explain the following : 16
- (i) Connection oriented and connectionless services
  - (ii) Peer to Peer model

### UNIT – II

4. Explain the following : 16
- (i) Representing Data as Analog Signals
  - (ii) Representing Data as Digital Signals
5. Describe the following : 16
- (i) Data Encoding Techniques
  - (ii) Communication Satellites

### UNIT – III

6. Explain in detail about sliding window protocols. 16

7. Explain the following : 16
- (i) FDDI
  - (ii) Gateways
  - (iii) Switches

### UNIT – IV

8. Define Routing and explain the following : 16
- (i) Shortest Path Routing
  - (ii) Flooding
9. Explain the following : 16
- (i) Symmetric Key Algorithms
  - (ii) Public Key Algorithms