

Roll No. ....

**97679**

**BCA 5th Semester (Re-Appeal)**  
**Examination – October, 2020**  
**DATA COMMUNICATION AND NETWORKING**

Paper : BCA-303

Time : 1.45 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 any **three** questions. All questions carry equal marks.

1. Explain the following :
  - (a) X.25
  - (b) DSL Service
  - (c) Gateways
  - (d) Virtual Circuits and Datagrams
  
2. Define Computer Network. Explain types of Computer Networks and their topologies.
  
3. Describe ISO-OSI reference model in detail with proper diagram.
  
4. Explain the following :
  - (a) Asynchronous and Synchronous Transmission
  - (b) Maximum Data Rate of Channel

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- 5. Explain the following :**
- (a) Dialup Networking
  - (b) Digital Carrier Systems
- 6. Define Data Link layer and explain the following :**
- (a) Error Detection and Correction
  - (b) Flow control
- 7. Explain in detail about Network Hardware components.**
- 8. Describe congestion and congestion control algorithms in detail.**
- 9. Describe the following :**
- (a) Authentication
  - (b) Security Threats
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