

Roll No.

Total Pages : 2

BCA/M-23

20586

COMPUTER NETWORKS

Paper-BCA-303

Time : Three Hours]

[Maximum Marks : 80

Note : A candidate will be required to answer *five* questions in all, selecting *one* question from each Unit in addition to Compulsory Question No. 1. All questions carry equal marks.

Compulsory Question

1. (a) Write short note on switches and routers. (4)
(b) Discuss analog and digital transmission of data. (4)
(c) Write short note on wireless LAN, Bluetooth and VLANs. (4)
(d) Describe congestion control and load shedding. (4)

UNIT-I

2. Explain Computer Networks and its Types. Discuss different types of Network Topologies. Which network topologies are most suitable for wireless transmission? (16)
3. Explain OSI reference model and networking models in detail. (16)

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UNIT-II

4. What is switching and multiplexing? Explain different kinds of switching and multiplexing techniques. (16)
5. Elaborate on the following :
 - (a) Bandwidth, data rate and baud rate.
 - (b) Guided transmission media.
 - (c) Wireless transmission.
 - (d) Modems. (16)

UNIT-III

6. How do sliding window protocols work? Explain different types of sliding window protocols with diagrams and suitable examples. (16)
7. Elaborate on data link layer design issues and various kinds of LAN technologies. (16)

UNIT-IV

8. What is the significance of routing? Explain routing algorithms in detail. Give suitable examples. (16)
 9. Define network security and its objectives. Explain the concept of security attacks, encryption methods and digital signature. (16)
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