Before answering the question paper the candidate should ensure that they have been supplied the correct question paper. Complaints in this regard, if any, shall not be entertained after the examination.

Note: Question No. 1 is Compulsory and attempt any two questions from each section. All questions carry equal marks.

1. (a) What is Digital signal? Discuss Bit rate, Bit length and Transmission Impairment. (4)
   (b) Discuss Transmission modes. Differentiate synchronous and asynchronous Modes. (4)
   (c) Explain history of internet in detail. (4)
   (d) What is Backbone network? Discuss its benefits and applications. (4)
   (e) What is protocol? Explain various protocols of communication. (4)

SECTION – A

2. What is computer network? Explain the history of networks. Discuss need of networking and its application in various fields. (20)

3. Explain term Ethernet. What is the use of Ethernet in networking? Discuss its need and benefits. (20)

4. Discuss LAN interconnecting devices in detail. What are their advantages and disadvantages? Explain NIC, Repeater, Hubs and Switches. (20)

SECTION – B

5. Discuss TCP/IP model with diagram. What are functions of each layer? Explain its services and protocols of each layer. (20)

6. What is IP addressing? Where IP addressing used in networks? Discuss IP address classes with in detail. (20)

7. Explain wireless networks. Provide suitable examples of wireless networks. Discuss various Wireless Topologies in detail. (20)