

(3 Hours)

[Total Marks : 80

Instructions to candidates

- 1) Q.No. 1 is compulsory.
- 2) Solve any 3 questions from the remaining 5 questions.
- 3) Figures on right side indicate full marks.

Marks

~~Duration~~ Time - 3 hours

Max. Marks - 80

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| Q.No 1 | a) Explain the various Connecting devices used in computer networks. | 05 |
| | b) Explain bit stuffing and unstuffing with respect to HDLC. | 05 |
| | c) Explain CSMA/CA method of random access. | 05 |
| | d) Compare TCP and UDP. | 05 |
| Q.No 2 | a) Explain the ISO-OSI model of networks with the help of neat diagrams. | 10 |
| | b) Explain the sliding window ARQ used for error control. | 10 |
| Q.No 3 | a) Explain the various station types, Configurations, response modes and Frame formats in HDLC. | 10 |
| | b) Draw the TCP header format with the help of a neat diagram. | 10 |
| Q.No.4 | a) Explain circuit switching, packet switching and message switching. | 10 |
| | b) Explain how routers use link state routing algorithm to create the routing table. | 10 |
| Q.No.5 | a) List the various options used in the IP datagram and explain each in brief. | 10 |
| | b) Draw and discuss the Ethernet frame format. | 10 |
| Q.No.6 | Write short notes on | |
| | a) Guided and unguided media. | 05 |
| | b) Open loop congestion control. | 05 |
| | c) PPP Header format | 05 |
| | d) Network topologies. | 05 |

MD-Con. 10763-15.