

2019

COMPUTER SCIENCE

( Major )

Paper : 5.3

( Computer Network )

Full Marks : 60

Time : 3 hours

*The figures in the margin indicate full marks  
for the questions*

1. Answer the following questions: 1×7=7
- (a) Give two examples of guided media.
  - (b) For what purpose is 127.0.0.1 used for?
  - (c) What type of communication exists between a computer and a keyboard?
  - (d) Give an example of a data link layer protocol.
  - (e) DHCP stands for what?
  - (f) Which class of IP-address is used for multicasting?
  - (g) How many classes of IP address is there?



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2. Answer the following questions very briefly :

2×4=8

- (a) What is the difference between simplex and half-duplex communication?
- (b) Define character/byte stuffing.
- (c) Why is piggybacking important?
- (d) Define CSMA-CD and CSMA-CA.

3. Answer any *three* from the following questions :

5×3=15

- (a) Differentiate between star topology and mesh topology.
- (b) Explain the insights of sliding window protocol.
- (c) Explain data link layer protocol with reference to ISO-OSI protocol suite.
- (d) Explain the purpose of congestion control protocols.
- (e) What is FTP? How does it differ from Telnet?

Answer any *three* questions from Question Nos. 4 to 9 :

10×3=30

4. Explain physical layer, data link layer, network layer and transport layer with reference to ISO-OSI model.

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5. Explain the link state routing protocol for packet transmission in network.

6. Explain the functions of repeater, bridge, switch, router and gateway.

7. Explain connection-oriented and connection-less services.

8. Explain various techniques available for a good QoS.

9. Differentiate between stop-and-wait protocol and sliding window protocol.

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