

National Institute of Technology, Delhi

Name of the Examination: B. Tech.

Mid-Semester Examination March, 2019

Branch

:ECE

Semester

:VI

Title of the Course

:Computer Networks

Course Code

:CSB342

Time: 2 Hours

Maximum Marks: 25

Note : Answer all Question

Section A

Attempt All the Question [One Marks]

1. What are the component of data communication?
2. What is the difference between connectionless and connection-oriented network layer?
3. Explain simplex, half duplex and full duplex mode of data transmission.
4. Why the channel through double in slotted ALOHA compared to pure ALOHA.
5. Explain and Compare twisted pair, coaxial cable and optical cables.

Section B

Attempt All the Question [Four Marks]

6. Differentiate digital data and signal. Explain and compare with neat sketch NRZ, NRZ-L, NRZ-I, Polar RZ, Polar Biphas, Manchester line encoding scheme.
7. What are the two reasons for using layered protocols? Explain in detail about ISO-OSI reference Model.
8. (i). Discuss the different phase of the circuit switched networks.
(ii). Why does a virtual circuit network need address during all the three phase? To established connection between the host A and B. Fig. 1 shows the table entry for three switches in virtual circuit networks. Explain how the switches make their table entry.

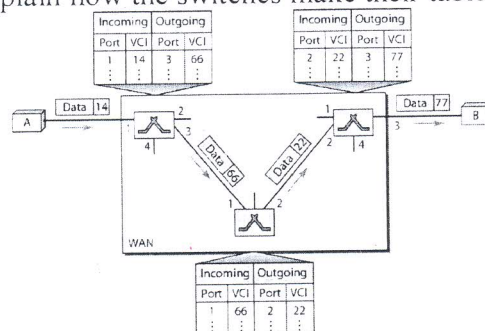


Fig.1

9. (i). How CSMA/CA works, explain in details? Draw and explain the header format of CSMA/CA
(ii). Two channels, one with a bit rate of 100 kbps and another with a bit rate of 200 kbps, are to be multiplexed. How this can be achieved? What is the frame rate? What is the frame duration? What is the bit rate of the link?
10. (i). Explain in details flooding. What do you understand by selective flooding. Also explain flow based routing.
(ii). Explain in brief stop and wait ARQ protocol. Shows the flow diagram of Stop-and-Wait ARQ. When Frame 0 is send and acknowledged. Frame 1 is lost and resent after the time-out. The resent frame 1 is acknowledged and the timer stops. Frame 0 is sent and acknowledged, but the acknowledgment is lost.