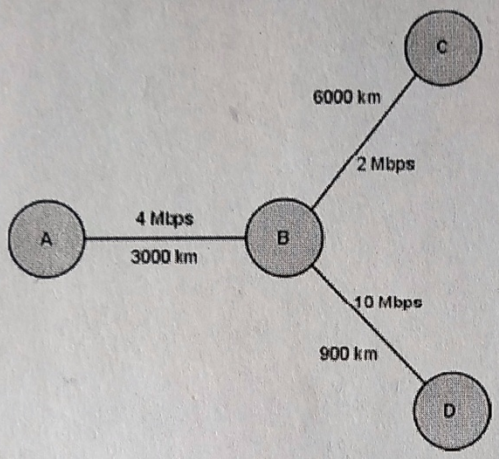
COMPUTER NETWORKS

ASSIGNMENT #2

Q1 For a 10Mbps Ethernet link, if the length of the packet is 32bits, the transmission delay is(in milliseconds)

Q2.



(a) What is the transmission delay if
- A sends a 500 byte packet to B
- B sends a 125 byte packet to D

(b) What is the propagation delay between
- A to B
- B to D

(c) A wants to send a 500 byte packet to D through B. B is supposed to follow the store-and forward model, that is, B will receive the whole packet from A and then start transmitting the packet to D. What is the end-to-end delay seen by the packet?

Q3 Suppose the round trip propagation delay for a 10 Mbps Ethernet having 48-bit jamming signal is 46.4 ms. The minimum frame size is.

Q4 A 2 km long broadcast LAN has 10^7 bps bandwidth. The signal travels along the wire at a speed of 2×10^8 m/s. Calculate propagation delay and transmission delay when length of message is 20 bytes,12 bytes ,28 bytes.

Q5 Determine the maximum length of the cable (in km) for transmitting data at a rate of 500 Mbps in an Ethernet LAN with frames of size 10,000 bits and signal speed in the cable is 2,00,000 km/s. Assume propagation delay is equal to transmission delay.

Q6. Compare OSI reference model with TCP/IP reference model.

Q7. Explain the working of X.25, Frame Relay and ATM.