

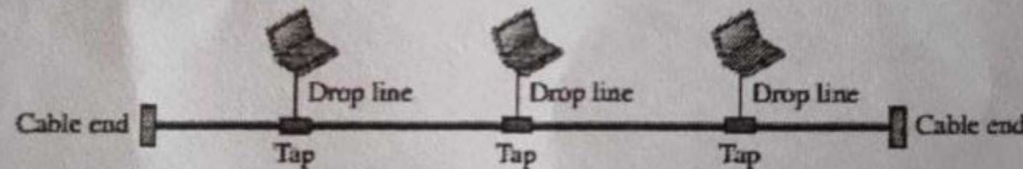
Data Communication
CSE-225; Marks: 15
Class Test # 01; Time: 40 Mins

Answer ALL Questions:

1. Performance is inversely related to delay. When we use the Internet, which of the following applications are more sensitive to delay? Justify your answer. 5

- a. Sending an e-mail
- b. Copying a file
- c. Surfing the Internet

2. What happens if one of the stations is unplugged in the bus topology in the following figure? What are the possible solutions to overcome this situation? 3



3. Suppose a computer sends a packet at the network layer to another computer somewhere in the Internet. The logical destination addresses the packet is corrupted. What happens to the packet? How can the source computer be informed of the situation? 3
4. What is a peer-to-peer process? If a peer-to-peer network is deployed, explain some of its advantages and disadvantages. 4

1. You have been given the responsibility of creating a network topology for DNS servers where these servers are connected with each other. What type of topology will you choose in this case and what could be the possible advantages and disadvantages? Draw figure if appropriate (4)

2. Suppose you are appointed as a network engineer in Daffodil University. Daffodil wants to make a communication system from AB4 to AB1 with appropriate communication characteristics. Now as a network engineer which characteristics you have to keep in this system. (4)

3. Shakib and Tamim are two friends. They arrived on a street which has two pavements (left and right) in a street. On the left side pavement, people can move both ways but not at the same time. But on the right pavements people can move only one way. From this analogy, choose the right types of data flow technique and apply logic in favor of it. (2)

4. Relate the following scenario to one or more layers of the OSI model and explain the layer.

- i. Compression and Encryption
- ii. Web Browsing and File transfer
- iii. Generating Logical address

(5)