

CSE320: Data Communications

Quiz-1 (Set - B)

Total Marks: 15

Name:

ID:

Sec:

1. “XYZ Corporation”, a medium-sized company with offices distributed across multiple floors, is planning to upgrade its network infrastructure. Given the company's anticipation of yearly revenue loss, ABC Corporation is looking for a cost-effective network infrastructure. How can a hybrid topology address the specific need of building a cost-effective network infrastructure within ABC Corporation? [2.5]

2. Six devices are connected using mesh topology. If each physical link allows communication only in one direction (simplex mode), how many physical links are needed in total? [2.5]

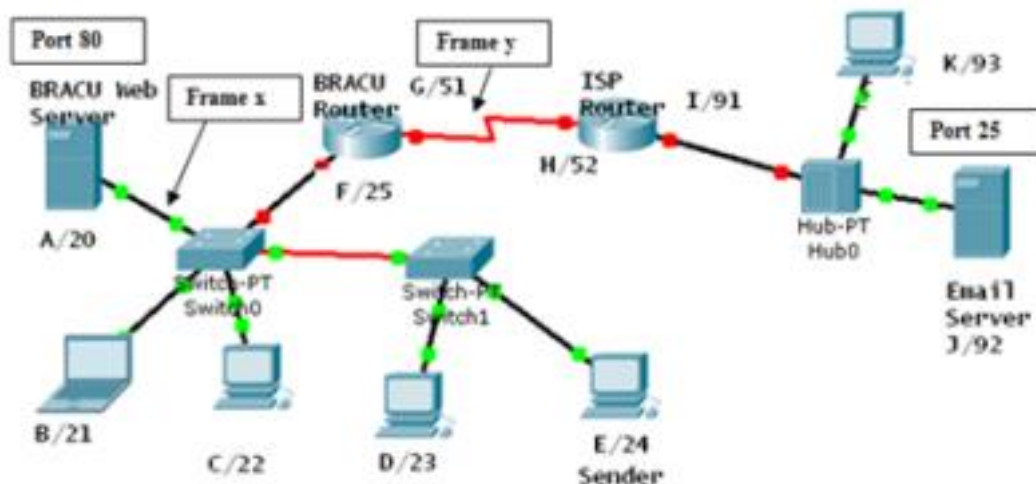
3. Match the following to one or more layers of the OSI protocol suite and mention two protocols associated with that layer. [2.5]

- Adding sequence number
- Connection control using either connection-oriented or connectionless mechanism
- Accomplishing source-to-destination delivery

4. Identify each of the below scenarios to an appropriate network type (PAN, LAN, WAN, MAN) [2.5]

- You and your friend are communicating via email using BRACU PCs and both of you are in different floors of BRACU campus
- You are sending your class schedule using your mobile to your friend who is sitting beside you in a restaurant
- PCs in Ayesha Abed Library can communicate with PCs at BRAC Center (Both are in different networks)
- You are sending an image via Messenger using your mobile to your friend who lives in Dhaka and your home is in Chittagong
- A multinational company has a number of offices located in a different countries and all offices are connected, so office staff can easily communicate with one another

5. Complete the frames (x & y) given below with appropriate port, IP and MAC addresses. The sender Host E has two applications running- one for email with port number 51420 and the other for accessing the web server with port number 62617. Frame x is intended for the sender E and frame y is intended for the Email Server. (MAC addresses are denoted using alphabets and IP addresses are denoted using numbers) [5]



Frame x

D. MAC	S. MAC	D. IP	S. IP	D. Port	S. Port	Data	Trailer

Frame y

D. MAC	S. MAC	D. IP	S. IP	D. Port	S. Port	Data	Trailer