

Networking 2010

1. State true and false:

- a. The fundamental purpose of a communication system is the exchange of data between two parties.
- b. Circuit-switching network, a dedicated communication path is established between two stations through the nodes of the network.
- c. The TCP/IP model organizes the communication task into six relatively independent layers.
- d. The file transfer protocol (FTP) is used to send files from one system to another under user command.
- e. Full-duplex operation, both stations may transmit, but only one at a time.
- f. One of the most common and one of the most powerful error-detecting codes is the cyclic redundancy check.
- g. Guided media, electromagnetic waves are guided along a soled medium such as copper twisted pair, copper co-axial cable and optical fiber.
- h. Data rate is the rate in bytes per second, at which data can be communicated.
- i. Thermal noise is due to thermal agitation of electrons.
- j. Asynchronous transfer mode sometimes referred to a frame relay.

2.

- a. Differentiate between bridge and gateway?
- b. What is router? Explain how router works.

3. Define OSI layer. Describe in brief all the layers in OSI model with suitable diagram.

4. What is transmission medium? Describe in brief all types of medium.

5. Define the following terms:

- a. SMTP
- b. TCP/IP
- c. CSMA/CD
- d. FDDI

6. What is multiplexing? What are the different types of multiplexing?
Describe with example.
7. Differentiate between:
 - a. Circuit switching and packet switching
 - b. Analog signal and Digital signal
8.
 - a. What are major disadvantages of asynchronous transmission?
 - b. How is synchronization provided for synchronous provided for synchronous transmission?
9.
 - a. What is the difference between passive and active security threats?
 - b. What is distinction among the term public key, private key, and secret key?

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