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ASSIGNMENT NO 2

QUESTION NO 1:

What is the difference between a host and an end system? List several different types of end systems. Is a Web server an end system?

ANSWER:

There is no significant difference between host and end system, both can be interchangeable each other. In the field of Internet system all devices are called hosts and end systems.

TYPES OF END SYSTEM:

- ✓ email servers
- ✓ Workstations
- ✓ Web servers
- ✓ TVs
- ✓ Cell Phones
- ✓ Tablets

Yes, the web server is an end system.

QUESTION NO 2:

List six access technologies. Classify each one as home access, enterprise access, or wide-area wireless access

ANSWER:

The following are the six access technologies:

- i. Digital Subscriber Line over telephone line
- ii. Cable internet access
- iii. Fiber to the home (FTTH)
- iv. Dial-up modem over telephone line
- v. Ethernet
- vi. Wi-Fi

CLASSIFICATIONS:

- ✓ Digital Subscriber Line over telephone line can be classified as the one that is used for home access.

- ✓ Cable internet access can be classified as the one that is used for home access.
- ✓ Fiber to the home (FTTH) can be classified as the one that is used for home access.
- ✓ Dial-up modem over telephone line can be classified as the one that is used for home access.
- ✓ Ethernet can be classified as the one that is used for home access as well as enterprise access.
- ✓ Wi-Fi can be classified as the one that is used for home access, enterprise access as well as wide-area wireless access.
- ✓ Third-generation (3G) wireless and Long-Term Evolution (LTE) are used for wide-area wireless access. They are the access technologies used in mobiles.

QUESTION NO 3:

Why are standards important for protocols?

ANSWER:

Standards are important for protocols so that people can create networking systems and products that inter operate. It is more necessary because without some proper rules, no system can be developed. By applying standard rules, all of the people of the world can work in same manner and can communicate with each other.

QUESTION NO 4:

List five nonproprietary Internet applications and the application-layer protocols that they use

ANSWER:

The Web:

Hyper Text Transfer Protocol (**HTTP**) is used in the Web application as application layer.

File transfer:

File Transfer Protocol (**FTP**) is used in the File Transfer Web application as application layer.

Remote login:

Telecommunications Network (**TelNet**) is used in Remote login related applications as application layer.

E-mail:

Simple Mail Transfer Protocol (**SMTP**) is used in E-mail related applications;

BitTorrent file sharing:

BitTorrent file sharing used their own **BitTorrent protocol** as application layer protocol.

QUESTION NO 5:

Suppose you wanted to do a transaction from a remote client to a server as fast as possible.

- a. Would you use UDP or TCP?
- b. Why?

ANSWER:

We will use UDP. With UDP, the transaction can be completed in one roundtrip time (RTT) - the client sends the transaction request into a UDP socket, and the server sends the reply back to the client's UDP socket. With TCP, a minimum of two RTTs are needed - one to set-up the TCP connection, and another for the client to send the request, and for the server to send back the reply.