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Introduction to Broadband Technologies

1. In a broadband context, what is the difference between synchronous and asynchronous communications?

- Asynchronous communications is transmission of data, generally without the use of an external clock signal, where data can be transmitted intermittently rather than in a steady stream.
- Synchronous communications enable real-time communication and collaboration in a "same time-different place" mode. These tools allow people to connect at a single point in time, at the same time. Synchronous tools possess the advantage of being able to engage people instantly and at the same point in time. The primary drawback of synchronous tools is that, by definition, they require same-time participation -different time zones and conflicting schedules can create communication challenges. In addition, they tend to be costly and may require significant bandwidth to be efficient

2. What is latency?

- A measure of time delay experienced in a system, the precise definition of which depends on the system and the time being measured.

3. From Eli's point of view, what is the difference between business and residential service?

- The differences between the two are becoming very slim. You can now do most of what businesses were only capable of like video chat, video streaming, etc. Also the price of broadband internet is lowering dramatically.

4. Explain the difference between a static and a dynamic IP address.

- When you are assigned a static IP address, it stays the same the entire time you connect to the network. When you have a dynamic IP address, it will change randomly depending on the network.

5. Why might an organization want a static rather than an IP address?

- Since static stays the same, it is easier to troubleshoot

6. Why would an ISP block a particular port?

- Many ISPs are blocking what is called "Port 25" which is the port used to send e-mail. They are doing this to cut down on the amount of spam that is sent from their networks.

7. What is an SLA?

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- A service-level agreement is part of a service contract where a particular service is defined formally.

8. When would you use a T1 line?

- If a constant fast internet speed is needed

9. What are two advantages of a T1 line?

- Faster internet
- More open ports

10. What is the primary disadvantage of a T1 line?

- A T1 line can become expensive

11. What is the primary advantage of carrier class Ethernet?

- One of the advantages is it reduces cost

12. In wireless networking, what does 'unlimited Internet' mean?

- There is no cap in the amount of bandwidth that is used.

13. In an old building, what could be a problem source concerning DSL service?

- Existing telephone wires

14. With a cable connection, what type of problem could be associated with a trunk line?

- The potential of traffic problems

15. From a business perspective, what is a potential weakness of Cable?

- The speed can be very limited.

16. What is FIOS?

- Fiber optic communication network

17. What is the reason that you probably don't want a satellite connection?

- A satellite connection can become expensive