Chapter 6 Review Questions

**1. What are the two ways to view telecommunications?**

One way is to view it as a linking mechanism that we use to send data from one place to another, the other way is to view it as providing a cyberspace where people can “exist” in a virtual world.

**2. What is the Internet? What three attributes make it important to business?**

The internet is a global packet switching network, actually a worldwide system of computers network, a network of networks

The three attributes are:

1. Ubiquity: Because it is global, anybody can reach it with just a browser
2. Reliability: it was designed to survive crashes by allowing alternate routing.
3. Scalability: It is able to sustain incredible growth, i.e. a website could handle tremendous amount of traffic.

**3. Describe the functions of hubs, switches, and routers**

* Hubs are repeater; they forward packets of data from one machine to all the other machines connected to the hub
* Switches are smarter; they only forward packets to the port of the intended computer using the addressing info in each packet’s header
* Routers are smarter still; they use a routing table to pass along a packet to the next appropriate router on a network, they can direct packets via the most efficient route, they also link network segments that use different protocols.

**4. What is digital convergence and why is it important?**

It is the intertwining of various forms of media (voice, data, and video) and converting them in digital form and it is important because by doing that they can be managed and manipulated digitally and integrated in highly imaginative ways, i.e. IP telephony and video telephony

**5. Briefly describe each layer of the OSI reference model**

7. Application Layer: it’s the Interface to application; this layer contains the protocol in the applications we use, like HTTP or FTP

6. Presentation layer: Translates data to and from language in application layer

5. Session layer: Control dialog, acts as moderator for a session; one important protocol used in this layers is the SSL

4. Transport layer: Control flow, ensures reliable packet delivery; the main protocol used here is TCP

3. Network layer: Addresses and routes packets; here resides the IP

2. Logical Link layer: Makes sure no data are lost or garbled; LAN protocols such as Ethernet and Token Ring work here

1. Physical layer: Defines physical connection to network, like Ethernet or fiber optics or wireless

**6. Why are unlicensed frequencies important?**

Because allows anyone to create a wireless device to operate in this unlicensed frequencies without first getting a license from the government

**7. What are four types of wireless area networks?**

* Wireless Personal Area Networks (WPANs): Networks that provide high-speed connections between devices that are up 30 ft apart
* Wireless Local Area Networks (WLANs): Networks that provide access to corporate computers in office building, retail stores, and hospital, or access to Internet “hot spots” where people congregate
* Wireless Metropolitan Area Network (WMANs): Networks that provide connections in cities and campuses at distances up to 30 miles
* Wireless Wide Area Networks (WWANs): Networks that provide broadband wireless connections over thousands of miles

**8. How is American Greeting moving wireless?**

They teamed up with Nokia in 2002 to create a wireless web presence, using the WAP browser built into a Nokia phone, they allow members to access American Greetings’ WAP based Web site to send electronic greeting, either to another phone or to a computer.

**9. Why might wireless devices not be safe for humans?**

Because they use almost the same frequency as microwave ovens but with less power (3 watt in Wireless versus 500 watts in microwaves) and this waves are known to caused DNA damage that could caused cancer, it is thought that even with less power they could still damage humans

**10. What is presence and why is it important?**

Presence means that a person on your buddy list can see when you are using a computer device, and it is important because if he knows that you are present and available he can contact you for whatever he needs immediately

**11. Why is always on important?**

Always on is important because it allows instant notifications, for example a sales team may asked to received news releases about their specific clients.

**12. What is RecipeBuddie and what does she do?**

RecipeBuddie is an instant messenger bot that converses with people who IM her, she only talks about recopies, using her database of 700 recipes, to help people figure out what to cook for dinner.

**13. What is ZigBee?**

ZigBee is a radio-based communication standard used by tiny sensors, sensors might monitor the main systems in a vehicle for example. The sensors are designed to send specific bits of information, be long lasting, require little energy, and communicate efficiently.

**14. What are the three roles of the IS department with respect to telecommunications?**

1. Planning and creating the telecommunications architecture: set the policies and rules that lead to the desired network environment, one key challenge in the network design is connectivity to improve productivity and business opportunities. The second key concept in architecture design is interoperability which means the capability for different computers.
2. Managing Telecommunications: managing expenses, manage voice and data security, putting a disaster recovery plan to minimize possible disruption of business activities should the systems stop working
3. Keeping Abreast of telecommunications Technology policy: Stay current with the technology, explore new business models to use new technologies, for example experimenting with handheld devices to interact with websites