

Computer Networks and Networking Media

Computer Science · Answer Key · 20 Questions

1. Which type of wired connection involves pairs of wires twisted together and is used for telephone and network connections?

- A) Coaxial cable
- B) Twisted-pair cable**
- C) Fiber-optic cable
- D) Ethernet cable

2. What is the primary characteristic of coaxial cable?

- A) It uses glass or fiber strands.
- B) It has a thick center wire.**
- C) It transmits data as light pulses.
- D) It uses radio signals.

3. Which networking medium uses glass or fiber strands through which light can pass for high-speed communications?

- A) Twisted-pair cable
- B) Coaxial cable
- C) Fiber-optic cable**
- D) Wireless connection

4. Wireless connections utilize what type of signals to transmit data?

- A) Light pulses
- B) Sound waves
- C) Radio signals**
- D) Electrical signals

5. Which wireless technology is used for short-range connections, such as connecting a wireless keyboard or mouse to a computer?

- A) Wi-Fi
- B) WiMAX
- C) Bluetooth**
- D) Infrared

6. What does Wi-Fi typically enable?

- A) Long-range internet access
- B) Short-range device connections
- C) Wireless LANs and public hotspot access**
- D) Satellite communication

7. Which wireless technology can be used to provide internet access to wide geographic areas?

A) Bluetooth

B) WiMAX

C) Wi-Fi

D) Infrared

8. Radio frequencies are assigned by which commission and measured in hertz (Hz)?

A) IEEE

B) FCC

C) ITU

D) W3C

9. Microwaves are high-frequency radio signals that are sent and received using:

A) Fiber-optic cables

B) Twisted-pair cables

C) Microwave stations or satellites

D) Infrared transmitters

10. Why are microwave stations often built on tall structures?

A) To reduce interference

B) To accommodate satellite dishes

C) Because signals are line of sight

D) To increase data transfer speed

11. What type of orbit do traditional communication satellites typically use?

A) Low Earth Orbit (LEO)

B) Medium Earth Orbit (MEO)

C) Geosynchronous orbit

D) Polar orbit

12. Low Earth Orbit (LEO) satellites were developed to combat what issue with traditional satellites?

A) Signal strength

B) Delay

C) Cost

D) Bandwidth limitations

13. Infrared (IR) transmissions send data as:

- A) Radio waves
- B) Microwaves
- C) Infrared light**
- D) Sound waves

14. A limitation of Infrared (IR) transmissions is that they require:

- A) A strong signal booster
- B) Line of sight**
- C) A wide open area
- D) High-frequency waves

15. What is a protocol in the context of computer networks?

- A) A physical connection medium
- B) A set of rules for communication**
- C) A type of network hardware
- D) A wireless transmission standard

16. What is the primary function of a communications protocol?

- A) To provide physical connectivity
- B) To determine how devices on a network communicate**
- C) To assign IP addresses
- D) To create wireless signals

17. TCP/IP is the most widely used communications protocol, especially with:

- A) Bluetooth networks
- B) Local Area Networks (LANs)
- C) The Internet**
- D) Satellite communications

18. Within TCP/IP, what is the role of IP?

- A) Ensuring reliable data delivery
- B) Providing addresses and routing information**
- C) Translating data formats
- D) Managing wireless connections

19. A hub connects all devices on a network but sends data to:

- A) Only the intended recipient
- B) All connected devices**
- C) The nearest connected device
- D) The network administrator

20. What is the main difference between a hub and a switch?

A) A hub uses wireless signals, a switch uses wired.

B) A switch only sends data to the intended device, a hub sends to all.

C) A switch connects more devices than a hub.

D) A hub is faster than a switch.