

TEST BANK



Networking
BASICS

Second Edition
Clamp



🕒 For 32+ hours of instruction

ch02

True/False

Indicate whether the statement is true or false.

- ___ 1. A directed transmission requires that the emitter and detector be aimed directly at one another.
- ___ 2. Spread spectrum is a technique that takes a narrow signal and spreads it over a broader portion of the radio frequency band.
- ___ 3. A network interface card (NIC) serves as the connection between the personal computer and the network media.
- ___ 4. A network interface card (NIC) is always found outside the computer as a separate device.
- ___ 5. The standard bus for personal computers is the Universal Supply Bus (USB).
- ___ 6. One of the functions of a network interface card (NIC) is to create packets.
- ___ 7. With a circuit switched network, a dedicated and direct physical connection is made between the sender and the receiver.
- ___ 8. Circuit switching is used for data communications, while voice conversations are always sent through packet switched networks.
- ___ 9. Baseband signaling sends one data signal across the network media.
- ___ 10. Broadband signaling uses analog transmission.
- ___ 11. The source of near end crosstalk (NEXT) interference is from another data signal being transmitted.
- ___ 12. Category 5 cables are the most common type of unshielded twisted pair (UTP) used for networks.

Modified True/False

Indicate whether the statement is true or false. If false, change the identified word or phrase to make the statement true.

- ___ 13. Baseband signaling requires that a modem be used. _____
- ___ 14. Coaxial cable has a single copper wire at its center and is surrounded by insulation and shielding. _____
- ___ 15. Unshielded twisted pair (UTP) cables have a foil shielding on the inside of the jacket that reduces interference. _____

Multiple Choice

Identify the choice that best completes the statement or answers the question.

- ___ 16. Switching involves moving a _____ from one wire or frequency to another.
 - a. signal
 - b. token
 - c. NIC
 - d. bus
- ___ 17. In a _____ switched network, dedicated and direct physical connection is made between the sender and the receiver.
 - a. wired
 - b. bus
 - c. packet
 - d. circuit

- b. token
 - d. circuit
- ___ 18. A circuit switched network is ideal for ___ communications because there are no interruptions from other devices or delays.
- a. data
 - c. LAN
 - b. voice
 - d. WAN
- ___ 19. Packet switching requires that the data transmission be broken into smaller units called ___.
- a. circuits
 - c. PCR's
 - b. NICs
 - d. packets
- ___ 20. Packet switching allows ___ device(s) to share one line or frequency.
- a. no
 - c. one
 - b. multiple
 - d. none of the above
- ___ 21. ___ signaling sends one data signal across the network media.
- a. Broadband
 - c. Analog
 - b. Circuit
 - d. Baseband
- ___ 22. ___ format is made up of short impulses of off and on.
- a. Digital
 - c. Voice
 - b. Analog
 - d. Broadband
- ___ 23. A device known as a ___ converts data from a digital signal to an analog signal and back again.
- a. NIC
 - c. modem
 - b. switch
 - d. baseband configurator
- ___ 24. A loss of signal power is known as ___.
- a. attenuation
 - c. NEXT
 - b. RFI
 - d. EMI
- ___ 25. Cellular phones, citizens band and police radios, small office or household appliances, fluorescent lights, and loose electrical connections can all cause ___.
- a. NEXT
 - c. EMI
 - b. FEXT
 - d. RFI
- ___ 26. Because a data transmission signal is an electrical impulse, ___ is excellent for transmitting computer network data.
- a. wood
 - c. steel
 - b. copper
 - d. brass
- ___ 27. ___ cable has a single copper wire at its center and is surrounded by insulation and shielding.
- a. Fiber optic
 - c. Category 9
 - b. Telephone
 - d. Coaxial
- ___ 28. ___ cable, which looks similar to the cable that carries a cable TV signal, is approximately one-quarter of an inch in diameter.
- a. Telephone
 - c. Thin coaxial
 - b. Fiber optic
 - d. Twisted pair
- ___ 29. Most computer networks using twisted pair cable have only ___ pairs of wires.
- a. two
 - c. six
 - b. four
 - d. eight
- ___ 30. Each is a standard for unshielded twisted pair *except* ___.
- a. Category 4
 - c. Category 5
 - b. Category 4e
 - d. Category 5e
- ___ 31. The connector found on the end of a twisted pair data cable is called ___.
- a. RJ-11
 - c. RJ-8983
 - b. RJ-45
 - d. NICR
- ___ 32. The type of cable that uses a very thin cylinder of glass at its center and sends light impulses is ___.

- | | | |
|--|-----------------|----------------------------|
| | a. fiber optic | c. unshielded twisted pair |
| | b. twisted pair | d. coaxial |
- ___ 33. A standard size of a fiber optic cable is ____.
- | | |
|------------------------|---------------------|
| a. 27.5 centimeters | c. 16 inches |
| b. 500x250 millimeters | d. 62.5/125 microns |
- ___ 34. Fiber optic cables are available in ____ modes.
- | | |
|----------|---------|
| a. two | c. four |
| b. three | d. five |
- ___ 35. ____ light, often used for wireless transmissions, shares the same properties as visible light.
- | | |
|------------------|-------------|
| a. Infrared (IR) | c. Laser |
| b. Blue | d. Spectrum |

Completion

Complete each statement.

36. A loss of signal power over distance is known as _____.
37. Interference is also called _____.
38. _____ refers to interference caused by broadcast signals from a radio or television transmitter.
39. There are two basic types of copper cables used for networks, _____ and twisted pair.
40. The connectors used on the ends of a thin coaxial cable are known as _____ connectors.
41. _____ cable has become today's standard for copper cabling used in computer networks, replacing thin coaxial cable.
42. There are two types of twisted pair cables, shielded twisted pair (STP) and _____.
43. The newest category of unshielded twisted pair cable is Category _____.
44. _____ cables have connectors on the end that closely resemble those found on a modular telephone cable.
45. A fiber optic cable consists of a very thin strand of glass called the _____.

Essay

46. Explain how fiber optic cables transmit data.
47. Give some examples of how wireless technology can be used in a school.
48. List the four basic functions that a network interface card (NIC) performs when transmitting data.
49. Tell how error correction in a packet switching network is efficient.
50. Explain how broadband signaling functions.

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Answer Section

TRUE/FALSE

1.	ANS: T	PTS: 1	DIF: Moderate	REF: 50
2.	ANS: T	PTS: 1	DIF: Moderate	REF: 52
3.	ANS: T	PTS: 1	DIF: Easy	REF: 52
4.	ANS: F	PTS: 1	DIF: Easy	REF: 52
5.	ANS: F	PTS: 1	DIF: Moderate	REF: 53
6.	ANS: T	PTS: 1	DIF: Easy	REF: 54
7.	ANS: T	PTS: 1	DIF: Moderate	REF: 35
8.	ANS: F	PTS: 1	DIF: Moderate	REF: 35
9.	ANS: T	PTS: 1	DIF: Moderate	REF: 38
10.	ANS: F	PTS: 1	DIF: Hard	REF: 39
11.	ANS: T	PTS: 1	DIF: Moderate	REF: 41
12.	ANS: T	PTS: 1	DIF: Moderate	REF: 46

MODIFIED TRUE/FALSE

13.	ANS: F, broadband			
	PTS: 1	DIF: Hard	REF: 39	
14.	ANS: T		PTS: 1	DIF: Moderate
	REF: 43			
15.	ANS: F, shielded twisted pair, STP			
	PTS: 1	DIF: Easy	REF: 45	

MULTIPLE CHOICE

16.	ANS: A	PTS: 1	DIF: Easy	REF: 34
17.	ANS: D	PTS: 1	DIF: Moderate	REF: 35
18.	ANS: B	PTS: 1	DIF: Moderate	REF: 35
19.	ANS: D	PTS: 1	DIF: Easy	REF: 35
20.	ANS: B	PTS: 1	DIF: Moderate	REF: 36
21.	ANS: D	PTS: 1	DIF: Moderate	REF: 38
22.	ANS: A	PTS: 1	DIF: Easy	REF: 38
23.	ANS: C	PTS: 1	DIF: Easy	REF: 39
24.	ANS: A	PTS: 1	DIF: Hard	REF: 41
25.	ANS: C	PTS: 1	DIF: Hard	REF: 41
26.	ANS: B	PTS: 1	DIF: Easy	REF: 43
27.	ANS: D	PTS: 1	DIF: Moderate	REF: 43
28.	ANS: C	PTS: 1	DIF: Moderate	REF: 43
29.	ANS: B	PTS: 1	DIF: Hard	REF: 45

30.	ANS: B	PTS: 1	DIF: Hard	REF: 46
31.	ANS: B	PTS: 1	DIF: Hard	REF: 47
32.	ANS: A	PTS: 1	DIF: Easy	REF: 47
33.	ANS: D	PTS: 1	DIF: Hard	REF: 48
34.	ANS: A	PTS: 1	DIF: Hard	REF: 48
35.	ANS: A	PTS: 1	DIF: Moderate	REF: 50

COMPLETION

36.	ANS: attenuation			
	PTS: 1	DIF: Easy	REF: 41	
37.	ANS: noise			
	PTS: 1	DIF: Hard	REF: 41	
38.	ANS: Radio frequency interference RFI			
	PTS: 1	DIF: Moderate	REF: 41	
39.	ANS: thin coaxial cable			
	PTS: 1	DIF: Hard	REF: 44	
40.	ANS: BNC			
	PTS: 1	DIF: Moderate	REF: 44	
41.	ANS: Twisted pair			
	PTS: 1	DIF: Moderate	REF: 44	
42.	ANS: Unshielded twisted pair UTP			
	PTS: 1	DIF: Moderate	REF: 45	
43.	ANS: 6			
	PTS: 1	DIF: Easy	REF: 46	
44.	ANS: Twisted pair Shielded twisted pair Unshielded twisted pair STP UTP			
	PTS: 1	DIF: Moderate	REF: 47	
45.	ANS: core			
	PTS: 1	DIF: Hard	REF: 47	

ESSAY

46. ANS:

Fiber optic cables transmit signals by “flashes” or impulses of light. For example, the American Standard Code for Information Interchange, the standard used by computers today to represent letters and numbers, defines an uppercase letter A as 01000001. To transmit this over a fiber optic cable, a 1 is transmitted by an impulse of light flashing on, while a zero is transmitted by the light being off. The uppercase letter A would be sent over the fiber optic cable as “off-on-off-off-off-off-off-on”.

PTS: 1 DIF: Moderate REF: 48

47. ANS:

Wireless technology is an ideal application for colleges and schools. Instructors can create classroom presentations on the notebook computer in their office and then carry that computer with them into the classroom. Once there, they do not have to plug and unplug cables to attach to the campus network. Instead, their notebooks automatically make the wireless connection as soon as they walk into the room. Instructors can also send handouts directly to learners sitting in the classroom who have brought their own wireless devices with them. The wireless connection also offers learners a degree of freedom that they have not experienced before. Learners no longer must go to a specific computer lab or to the library to access the computer network; instead, they can access the school network wirelessly from almost any location on campus.

PTS: 1 DIF: Hard REF: 49

48. ANS:

1. Changes a parallel transmission to a serial transmission
2. Creates packets
3. Determines when to send the packet
4. Transmits the packet

PTS: 1 DIF: Hard REF: 54

49. ANS:

If a transmission error occurs, it will affect only the packet that was corrupted. Suppose that a transmission error occurs while a 300-page document is being sent to the printer. If the document was not divided into packets, the entire document would have to be resent, which would result in the network being tied up even longer. However, with a packet switched network, only the packet that was corrupted would need to be retransmitted, not the entire document.

PTS: 1 DIF: Easy REF: 37

50. ANS:

Broadband transmission divides the cable into several different channels. It does this because the signals are transmitted at different frequencies in an analog, or continuous, mode. Broadband transmission allows many different signals to be sent simultaneously on a single cable. Unlike baseband signaling, broadband can send a signal in only one direction; it cannot receive back a signal. Cable TV is an example of broadband transmission, which allows several hundred different channels to come into a television set from just one cable.

PTS: 1 DIF: Hard REF: 39