
NETWORKING CONCEPTS

Overview

Acquiring a high level of familiarization and proficiency in working with networks is essential in today's connected workplace. This event provides recognition for FBLA members who have an understanding of network technologies.

This is an individual objective test.

Competencies and Task Lists

<http://www.fbla-pbl.org/docs/ct/FBLA/NETWORKINGCONCEPTS.pdf>

Web Site Resources

- Networking
<http://www.pctechguide.com/29network.htm>
- Network Topologies
http://www.webopedia.com/Networks/Network_Topologies/

NETWORKING CONCEPTS SAMPLE QUESTIONS

1. The connection-oriented, reliable transport of data takes place at what layer of the OSI model?
 - a. transport
 - b. network
 - c. data-link
 - d. session
2. You are the administrator of a network with 250 nodes. You want to implement video conferencing, but your network is performing poorly. Through network analysis software, you determine that the hub is the bottleneck. Which device should you install in place of the hub to alleviate the bottleneck?
 - a. a transceiver
 - b. a repeater
 - c. a switch
 - d. a MAU
3. Which connector should you use with fiber optic cabling?
 - a. RJ-45
 - b. ST
 - c. BNC
 - d. AUI
4. Which benefit does starting Samba on a UNIX/LINUX server provide?
 - a. Web access
 - b. Telnet access
 - c. Print server access
 - d. Secured server access
5. Which fiber connector uses a twist-type attachment mechanism?
 - a. SC
 - b. ST
 - c. MT-RJ
 - d. FC

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6. Your company is planning to rebuild its network infrastructure. You are asked to provide a topology that will be scalable and easy to troubleshoot. Which topology should you recommend?
 - a. ring
 - b. mesh
 - c. bus
 - d. star

 7. You are assisting your senior technician in extending the Denmark for a new DSL circuit. Which tool should you use?
 - a. punch down tool
 - b. bit error rate tester
 - c. multimeter
 - d. optical tester

 8. What is the process of changing the configuration of an A, B, or C network so that it treats the network and node number differently?
 - a. proxying
 - b. reverse lookup
 - c. routing
 - d. subnetting

 9. Which network transmission medium is limited to 10 megabits per second and can support cable segments up to a maximum of 100 meters?
 - a. 10Base-F
 - b. 10Base-2
 - c. 10Base-T
 - d. 10Base-5

 10. Which one of the following applications, if running on a server, would most likely require more RAM than the minimum specified by the NOS vendor?
 - a. MS SQL Server
 - b. Netscape Navigator
 - c. Telnet
 - d. MS-DOS

 11. You must propose a cabling scheme for your company's new location. Several departments are located on the same floor with a maximum distance of 61 meters (200 feet) between departments. You want a relatively easy, low-cost installation with simple connections. Which type of cabling would you propose?
 - a. unshielded twisted-pair
 - b. fiber-optic
 - c. yhicknet
 - d. yhinnet

 12. You are experiencing connection problems with the fiber-optic cables in the 100BaseFX LAN that you administer. What could be the cause of this problem?
 - a. The cable length between workstations and hubs is less than 1,000 meters.
 - b. The cable is experiencing problems with ESD.
 - c. The cable is not properly terminated.
 - d. The cable in the plenum is too close to an energy source.

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13. Twisted pair cabling is commonly terminated with what type of connector:
- a. RJ-45
 - b. BNC
 - c. RJ-11
 - d. RJ-12
14. To use file level security you should have what file system installed?
- a. FAT
 - b. FAT32
 - c. CDFS
 - d. NTFS
15. Twisted pair cable installations are covered by what wiring standard?
- a. TIA/EIA 568
 - b. IEEE 802.3
 - c. TAI/EAI 568
 - d. IEEE 802.1
16. What is 10Base5 considered?
- a. category 5 UTP
 - b. thinnet
 - c. thicknet
 - d. category 6 UTP
17. ____ is **not** a fiber-optic connector.
- a. MT-RJ
 - b. RJ-45
 - c. SMA
 - d. MIC
18. With respect to structured cabling, a(n) ____ is the location of the cabling and equipment that connects a corporate network to a third-party telecommunications provider.
- a. work area
 - b. equipment room
 - c. cable plant
 - d. entrance facility
19. The job of the ____ to convert bits into signals for outgoing messages and signals into bits for incoming messages.
- a. MAC sublayer
 - b. data link layer
 - c. LLC sublayer
 - d. physical layer
20. ____ frames are created for any computers on a network that "listen" to a shared network address.
- a. Group
 - b. Multicast
 - c. Broadcast
 - d. Unicast
21. ____ is a name-to-address resolution protocol that functionally operates at the Session layer of the OSI model.
- a. ICMP
 - b. ARP
 - c. DHCP
 - d. DNS

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22. Class ____ addresses are reserved for experimental use and cannot be used for address assignment.
- D
 - A
 - C
 - E
23. A form of ____ is used in wireless LANs with an access point.
- polling
 - CSMA/CA
 - demand priority
 - switching
24. ____ defines Gigabit Ethernet over fiber-optic cable.
- 1000BaseO
 - 1000BaseC
 - 1000BaseX
 - 1000BaseF
25. ____ uses specially shielded, balanced, copper jumper cables.
- 1000BaseTX
 - 1000BaseSX
 - 1000BaseCX
 - 1000BaseT
26. A V.90 modem uses a technique called ____ that digitizes analog signals.
- MP3
 - PCM
 - WAV
 - CODEC
27. One of the most widely used high-speed digital lines is the ____, a DDS technology that uses two two-wire pairs to transmit full-duplex data signals at a maximum rate of 1.544 Mbps.
- ADSL
 - T1
 - T3
 - ISDN
28. Most NICs in computer workstations today are connected to what type of bus architecture?
- AGP
 - firewire
 - PCI
 - USB-x
29. When a computer boots up and tries to obtain an IP address automatically, but does **not** find a DHCP server, what addressing is used?
- APIPA
 - ICANN
 - IP
 - DNS
30. The main active directory unit that is the building block of the structure allowing for distribution of resources and administration is:
- domain
 - forest
 - tree
 - organizational unit (OU)