

Indicate whether the sentence or statement is true or false. Mark “A” if the statement is True or “B” if it is False.

1. Good network planning can remove all aspects of risk involved in implementing changes to a network.	a. True	b. False		
2. Most network deployments will take place in companies where there is already an existing infrastructure in place.	a. True	b. False		
3. Only one DHCP server will respond to a client request at any given time.	a. True	b. False		
4. A WAN encompasses a limited geographical area.	a. True	b. False		
5. A network can be two computers that share a printer.	a. True	b. False		
6. ArcNet is used quite often in businesses.	a. True	b. False		
7. One of the jobs of a network administrator is to continuously monitor the network for problems in performance.	a. True	b. False		
8. RAM is the most common bottleneck on the network.	a. True	b. False		
9. Windows 2000 Server can support up to five processors on one machine.	a. True	b. False		
10. A router works at the MAC sublayer of the data link layer of the OSI model.	a. True	b. False		

Mark the correct answer on your scantron sheet for each of the following questions.

11. Which of the following is not one of the components of the network deployment cycle?	a. Design	b. Planning	c. Implementation	d. Management
12. The IP address 193.204.42.3 is a	a. class A address.	b. class B address.	c. class C address.	d. class D address.
13. A small network is showing an increase in network traffic. Due to budget limitations, the administrator seeks an inexpensive way to reduce traffic and increase network performance. Which of the following would be an inexpensive way to reduce network traffic for the short term?	a. Increase the length of DHCP leases.	b. Install a router to subnet the network, isolating heavy users from the rest of the network.	c. Decrease the length of DHCP leases.	d. Increase the number of IP addresses available in the scope.
14. Which is the protocol that allows dynamic link-state route discovery?	a. RIP	b. SAP	c. OSPF	d. IGMP
15. When some form of firewall protection is required, use a router	a. between two network segments.	b. between the network and Internet with packet filtering disabled.	c. between networks of dissimilar protocol stacks.	d. between the network and Internet with packet filtering enabled.
16. Which of the following is not a protocol supported by PPP?	a. IPX/SPX	b. TCP/IP	c. NETBEUI	d. ATM
17. As part of the design process you spend a great deal of time documenting information flow for the company you are working for. This time is justified because	a. documenting information flow allows you to design a network that ensures that data and information will be delivered to the proper places in a timely manner.	b. documenting information allows you to design a network that ensures that the TCO remains low throughout the life cycle of the network.	c. documenting information flow is a required part of network analysis that enables you to create charts to better explain the needs to the client.	d. documenting information flow is an expendable step in the needs analysis of the client and should only be done at the client's request.

18. Which of the following does an Active Directory domain server require?	a. Dynamic IP address	b. DNS	c. WINS	d. DHCP
19. Which of the following services allow a network client to connect to the Internet anonymously?	a. NAT	b. Proxy server	c. DHCP	d. Both A and B
20. Which service can update DNS on a Microsoft network under Windows 2000?	a. DHCP	b. NAT	c. RRAS	d. L2TP
21. _____ network administration is best described as a situation where network resources are widely distributed among a wide area network, and the responsibility for management of those resources falls upon the individual offices and campuses of the company.	a. Decentralized	b. Centralized	c. Hybrid	d. Deregulated
22. Which open Internet standard provides security over a VPN?	a. L2TP	b. OSPF	c. IPSec	d. RIP
23. This layer of the OSI model provides addressing, routing, and traffic management among nodes.	a. Application	b. Session	c. Data Link	d. Network
24. Which of the following is not included in analyzing the networking needs of a customer?	a. Review of the company business model	b. Review of communication and information flow	c. Review of the geographical layout of the company	d. Full understanding of all legal aspects related to the company's venture
25. When considering the purchase of a piece of network equipment, it is important to take into consideration the average amount of time the equipment will run before there is a malfunction. This is known as	a. mean time between repair.	b. mean time between failure.	c. mean time before resolution.	d. mean time between response.
26. _____ can best be defined as the ability to maintain performance levels of a network as the workload on the network increases by systematically adding more capacity.	a. Extensibility	b. Scalability	c. Maintainability	d. Legacy
27. A network plan that is highly _____ allows for a solution that can be modified to accommodate scenarios that occur in the foreseeable future.	a. Extensible	b. scalable	c. malleable	d. transitive
28. Which of the following is not an important aspect to take into consideration when planning a network?	a. Verifying the impact of expanding or upgrading an existing network	b. What is available in the existing network infrastructure	c. Current organizational structure of the company	d. Resource management
29. Assessing _____ includes measuring the amount of data any given link can carry or transport at any given time.	a. fault tolerance	b. bandwidth	c. topologies	d. link state
30. C. Slaus has analyzed the current network bandwidth and found the expected bandwidth is not being met. What is the best explanation for this?	a. Throughput of a network is the difference between potential bandwidth and actual bandwidth based on topology, attenuation, and network traffic.	b. There is a problem with one of the major pieces of networking hardware on the network.	c. The company they are leasing the line through may be having technical difficulties.	d. The testing instrument may need to be recalibrated.
31. Which of the following quantifiable measurements will	a. Capacity	b. Throughput	c. Accuracy	d. Efficiency

you need to measure to assess the rate of error free transmissions related to total transmissions on a network?				
32. Analyzing a company's enterprise includes	a. LANs and WANs	b. LANs and VPNs	c. LANs, WANs, and VPNs	d. LANs, WANs, VPNs, and Remote Users
33. In order to gain a true understanding of real demands that are placed on a network, a person needs to exam	a. network throughput.	b. how end users use the network to access network resources and systems.	c. total available bandwidth.	d. hardware currently in place.
34. When evaluating current network usage, legacy software may require	a. use of older protocols that are not as efficient as newer protocols.	b. troubleshooting policies that only include support of newer technologies.	c. prioritizing the software in use to determine which are critical to the mission of the company.	d. Both A and B
35. Upon doing an availability analysis of a current network, it was discovered that a company's network was down approximately 30 minutes over the course of a week. This represents an uptime of	a. 70%	b. 99.9%	c. 99.7%	d. 89.7%
36. Your client requires a 99.9% uptime among five sites in her WAN. Taking this into consideration, what topology would you suggest?	a. Mesh	b. Bus	c. Star	d. Ring
37. Which of the following is not a component of an effective IP addressing scheme?	a. It is hierarchical in nature.	b. It allows you to focus on specific areas of security.	c. It is meaningful with some basis in the company architecture.	d. It is easy to implement and understand should another network administrator take over.
38. Mr. Smith is setting up a network design for XYZ Corporation and has requested a meeting with the company management to review the company's business plan and operating trends. Management does not see a need for this meeting. What is Mr. Smith's justification for calling a meeting of this sort?	a. Meeting with management to discuss their business practices allows you to determine and establish priorities for planning.	b. Meeting with the management to discuss their business practices will allow you to create your network faster.	c. Meeting with the management to discuss their business practices will allow you to ensure that your priorities are met.	d. Meeting with the management to discuss their business practices will result in a lower total cost of ownership and allow you to design a network specifically to meet their needs.
39. You are creating a network design for Ample Flowers. Currently they are outsourcing much of the IT technical support and management responsibilities for the company.	a. This should not impact your network design and can be disregarded.	b. This may impact your network design so you should include the outsourcing company in your report.	c. This will impact your network design so you should meet with the outsourcing company to determine the impact on the network and ensure that their company can support your design.	d. This will impact your network design so you should try to convince Ample Flowers to discontinue outsourcing and take care of there IT issues themselves.
40. Setting up a data line and cable failure recovery system includes all of the following except	a. building multiple links to servers.	b. allowing for multiple redundant links to network resource.	c. investing in backup WAN links to remote locations.	d. providing a RAID array fault tolerance system.
41. A small company wants to protect its computers from access via the Internet. Which network service can protect	a. Proxy server	b. DHCP	c. WINS	d. SMB

the company's internal network from forces from the Internet?				
Krispy Little has a small business network consisting of two computers which are able to access the network sporadically. The computers are set up as follows: <div><div>Computer I: Pentium IV 1.4 Ghz 256 MB RAM 20 GB HD 10/100 Ethernet Network Interface Card IP Address 192.168.5.5</div><div>Computer II: Pentium IV 1.2 Ghz 128 MB RAM 20 GB HD 10 Mbps Ethernet Network Interface Card IP Address 192.168.5.5</div></div>				
42. What can be done to resolve this problem?	a. Upgrade the RAM in Computer II to at least 256 MB	b. Update the NIC in computer II to 10/100 as all cards on a network must be compatible	c. Change the IP address in either computer	d. Get a larger hard drive for either computer
43. Squares and Warez is setting up shop with 398 computers. Generally 300-350 computers are on the network at any given time, although sometimes all 398 hosts are on the network. The company has leased a class C address but finds that there are not enough IP addresses to meet their current needs. What is the best and most inexpensive option available to them to deal with this problem?	a. Subnetting	b .Supernetting	c. DHCP with a scope of 230 addresses	d. Lease another set of class C addresses
44. The piece of hardware which takes a high bandwidth broadband segment and splits it into multiple segments with lower bandwidth is called a	a. hub.	b. router.	c. repeater.	d. multiplexor.
45. When cost is a factor, which of the following backbones would be the most reasonable choice?	a. Ethernet	b. ATM	c. FDDI	d. SDDI
46. This protocol is used to resolve IP addresses to MAC addresses.	a. TCP	b. IP	c. PPP	d. ARP
47. A large company maintains many mission-critical database servers in a large server farm. The area is prone to brownouts and blackouts. The company has hired you to investigate ways to keep downtime to a minimum in the case of a blackout. The best solution is	a. put uninterruptible power supplies on all servers in the server farm.	b. place surge protectors on each server.	c. place line conditioners throughout the server farm.	d. set up power generators that kick in automatically to power all servers in the farm for long term outages.
48. This protocol suite is non-routable and may be used in LANs that do not require access to external networks.	a. TCP/IP	b. IPX/SPX	c. NetBEUI	d. NWLink
49. A class C address can support up to _____ hosts with unique IP addresses.	a. 255	b. 254	c. 256	d. 253
50. When a network client wishes to lease an IP address from a DHCP server, it logs on and sends a	a. DHCPDISCOVER	b. HCPACK	c. HCPNAK	d. HCPOFFER
51. DNS servers store DNS data in	a. class records	b.resource records.	c. data elements.	d. domain names.
52. The following are features of the _____ file system. Security at file and folder level File compression	a. NTFS	b. FAT16	c. AT32	d. FAT12

Disk quotas File encryption Active directory				
53. This is the native protocol for IBM mainframes and minicomputers.	a. SNA	b. AppleTalk	c. IPX/SPX	d. TCP/IP
54. When only a few computers on a Windows 2000 network must connect to a NetWare network, the best solution is	a. gateway services for NetWare.	b. set up a hardware gateway.	c. install NWLink on the server.	d. client services for NetWare on the clients.
55. This is the part of a network that provides services and access to resources.	a. Transmission media	b. Server	c. Protocols	d. Client
56. This piece of software can serve as a POP3 or MAPI client.	a. Microsoft Outlook	b. Microsoft Excel	c. Microsoft Access	d. Microsoft PowerPoint
57. Once a network is set up, much of a network administrator's time may be spent	a. designing new network interfaces to fulfill future needs.	b. troubleshooting and maintaining the current network.	c. setting up clients and providing technical support.	d. integrating new protocols into the network.
58. This part of the network defines the "Rules" for communication.	a. Transmission media	b. Connectivity devices	c. Protocols	d. Client
59. The logical topology of a token ring network is a	a. Star	b. Bus	c. Ring	d. Mesh
60. This can best be defined as software that allows a server to manage resources.	a. Protocols	b. Network operating system	c. Connectivity devices	d. Management software
61. If a computer has data to send, it captures the special frame and sends the data. This access method sends around a special frame to each computer. What is it called?	a. Polling	b. Token passing	c. Contention	d. CSMA/CD
62. What type of cabling is used in FDDI?	a. Cat 5	b. Cat 4	c. Coaxial	d. Fiber Optic
63. The OSI model can be used to	a. explain network communications on a conceptual level.	b. monitor network performance by categorizing what should be happening in network communications.	c. show interrelationships among hardware, protocols, and actions that occur/are used in network communications.	d. All of the above
64. Ms. Soda has the following protocols installed on her server: NetBEUI TCP/IP NWLink IPX/SPX AppleTalk Of these protocols, NetBEUI is never used, AppleTalk is used only to print to an Apple color printer every once in awhile, NWLink is used to connect to a Novell LAN two or three times a week, and TCP/IP is used consistently to access the Internet for intranetwork communications on the LAN. Ms. Soda should	a. reorder all of the protocol bindings so that NetBEUI is at the top and TCP/IP is at the bottom.	b. remove AppleTalk.	c. place NWLink IPX/SPX at the top of the binding order.	d. place TCP/IP at the top of the binding order.

65. Schneider needs to install a hub on his system. He has cable lengths of approximately 20 meters each. It is 300 meters from one end of the network to the other. His main issue is attenuation. Other than that, he just wants to combine signals. He wants to buy the cheapest hub he can that will work best with his network. What type of hub should Schneider choose?	a. Active hub	b. Passive hub	c. Intelligent hub	d. Switching hub
66. Routers use _____ protocols.	a. transport	b. routable	c. modulated	d. application layer
67. This piece of hardware can be managed remotely and works at the data link layer of the OSI model.	a. Switch	b. Active hub	c. Passive hub	d. Router
68. Flower is running a small network and using TCP/IP as the protocol stack. He needs to deal with a high number of collisions as indicated below. What is the result of this solution? <i>Required result:</i> reduce collisions on the network. <i>Optional desired results:</i> route data from one computer directly to another; subnet the network into smaller networks. <i>Proposed solution:</i> Install a brouter	a. Fulfills the required result and both desired results.	b. Fulfills the required result and one desired result.	c. Fulfills the required result only.	d. Does not fulfill the required result.
69. The purpose of the secondary DNS server is to	a. provide a master copy of the lookup database to other DNS servers on the network.	b. maintain a secondary copy of the lookup database for fault tolerance.	c. help even the load of DNS requests on a large network so the primary DNS server is not overwhelmed.	d. Both B and C.
70. Which protocol would be used by a router?	a. FTP	b. DN	c. TCP	d. IP
71. A bridge uses this address to deliver its packets.	a. Hardware or MAC address	b. IP address	c. Network address	d. Port address
72. Configuring your hard drive to break a large hard drive into smaller logical drives is referred to as	a. formatting.	b. partitioning.	c. managing.	d. portioning.
73. To resolve an IP address to a domain name, use	a. forward lookup zones.	b. WINS resolution.	c. reverse lookup zones.	d. DNS caching.
74. This is the area in RAM set aside for a device and its drivers to use.	a. DMA channel	b. IRQ	c. Memory address	d. IRC
75. This is the protocol stack used by Novell Netware.	a. IPX/SPX	b. TCP/IP	c. NETBEUI	d. DLC
76. This is a direct line to the CPU. When a device needs some processing power, it interrupts the CPU using the	a. IRC.	b. IRQ.	c. DMA channel.	d. I/O address.
77. New to Windows 2000 is a dynamic DNS server, which	a. automatically registers computers with the DNS server as they log into the network. It works with the DHCP server to keep the DNS	b. automatically assigns DNS addresses to the clients as they log onto the network. It works with DHCP.	c. automatically registers computers NetBIOS names with the WINS server when the computer logs onto the network. It works with the DHCP	d. automatically updates the caching servers with new requests as the clients log onto the network.

	server lookup database up to date.		server.	
78. What is the purpose of plug and play?	a. Allows the user to manually configure hardware devices.	b. Allows the computer to discover hardware devices and installs drivers.	c. Discovers all hardware devices installed in a system.	d. Ensures that all hardware devices are compatible with Windows 2000.
79. If DNS is configured statically on a client that uses a DHCP server for IP addresses assignment,	a. the DHCP server will override the static DNS addresses when it assigns the IP address and subnet mask.	b. the DHCP server addresses will be added to the statically assigned addresses providing more fault tolerance in case of a DNS server failure.	c. the static IP addresses will be erased from the TCP/IP properties box.	d. the static IP addresses of the DNS.
80. S. Endz needs to install Windows 2000 Server on a number of computers on a network. What is the result of this solution? <i>Required objective:</i> Install Windows 2000 Server <i>Optional desired results</i> Prepare different installations for different computers. Deploy the setups using the fastest and easiest way possible <i>Proposed solution:</i> SysPrep to prepare an image. Deploy that image using a third party project.	a. Fulfills the required result and both desired results.	b. Fulfills the required result and one desired result.	c. Fulfills the required result only.	d. Does not fulfill the required result.
81. This information is included in a packet and is the main "stuff" being transmitted.	a. Header	b. Data	c. Start bits	d. Stop bits
82. This RAID level provides more speed, but no real fault tolerance.	a. RAID 0	b. RAID 1	c. RAID 2	d. RAID 5
83. This device allows you to continue working for a few minutes in the event of a power outage.	a. UPS	b. APS	c. RAID	d. Backup
84. When Windows 2000 Server is installed on the computer without checking the HCL, you find that the serial ports do not work correctly. What is most likely the problem?	a. The ports are bad	b. Need to install an update to Windows 2000	c. Need to update the BIOS because Windows has updated the serial port configuration.	d. Need to update the serial port because Windows has updated the serial port configuration
85. Which of the following is not an ongoing responsibility of a network administrator?	a. Monitoring the network	b. Optimizing network communications	c. Troubleshooting problems	d. Maintaining hardware
86. This RAID level can be either duplexing or mirroring.	a. RAID 0	b. RAID 1	c. RAID 2	d. RAID 5
87. When starting in this mode, the screen is 640 x 480 and the colors are 16 colors.	a. VGA	b. Safe mode	c. Debugging mode	d. Last known good
88. This is a kind of "shortcut" from a device to RAM that allows the device to use memory without bugging the CPU.	a. DMA channel	b. IRC	c. IRQ	d. I/O Address

89. When a client boots with a RIS boot disk and connects to a RIS server, which of the following is not an option presented by the client wizard?	a. Restart a previous setup	b. Custom setup	c. Maintenance and troubleshooting	d. Interactive setup
90. A piece of hardware that deals with attenuation problems is called a	a. repeater	b. passive Hub	c. NIC	d. NAC
91. A simple solution to subnetting a large network would be	a. brouter	b. hub	c. gateway	d. bridge
92. _____ can be set up in a variety of ways and ensures high network availability, fail-over support, and little or no downtime in the event of a catastrophic network event.	a. Backups	b. Deployment	c. Fault tolerance	d. Logical grouping
93. Analyzing a company's enterprise includes	a. LANs and WANs.	b. LANs and VPNs.	c. LANs, WANs, and VPNs.	d. LANs, WANs, VPNs, and Remote Users.
94. You are creating a network design for Ample Flowers. Currently they are outsourcing much of the IT technical support and management responsibilities for the company.	a. This should not impact your network design and can be disregarded.	b. This may impact your network design so you should include the outsourcing company in your report	c. This will impact your network design so you should meet with the outsourcing company to determine the impact on the network and ensure that their company can support your design.	d. This will impact your network design so you should try to convince Ample Flowers to discontinue outsourcing and take care of there IT issues themselves.
95. A _____ is a need assessment to determine what needs to be added to an existing network in order to meet the requirements of the present and future needs of a company.	a. Gap-analysis	b. Needs assessment	c. Fault tolerance scheme	d. Desired infrastructure analysis
96. You are setting up a backbone-based network for a small not for profit company using donated equipment. The backbone consists of thicknet coaxial cable with drop cables connecting the hosts. Which of the following is required on this network?	a. TCP/IP protocol	b. 5-4-2 rule throughout the network	c. Terminate both ends of the backbone to absorb the signal	d. Use a repeater every 100 meters to deal with attenuation
97. This numerical designation is a number between 0 and 65535 that is coded into TCP or UDP to provide communication for specific applications. It allows for differentiation of data streams being sent to a particular host.	a. IP address	b. Host address	c. MAC address	d. Port address
98. This access method "fights" for the transmission media. Its drawback is that collisions happen quite often.	a. Polling	b. Token Passing	c. Contention	d. None of the above
99. In your token-ring network, node D did not return a reply to the beacon just sent out by the active monitor. What happens next?	a. Node D will be sent another beacon.	b. Node D will be removed from the network by the MSAU.	c. The network will cease to function.	d. Nothing

ANSWER KEY
NETWORK DESIGN 2002 STATE TEST

	Answer		Answer		Answer		Answer
1	B	26.	B	51.	B	76.	B
2	A	27.	B	52.	A	77.	A
3	B	28.	C	53.	A	78.	B
4	B	29.	B	54.	D	79.	D
5	A	30.	A	55.	B	80.	B
6	B	31.	C	56.	A	81.	B
7	A	32.	D	57.	B	82.	A
8	A	33.	B	58.	C	83.	A
9	B	34.	D	59.	C	84.	C
10	B	35.	C	60.	B	85.	D
11	B	36.	A	61.	B	86.	B
12	C	37.	B	62.	D	87.	B
13	A	38.	D	63.	D	88.	A
14	C	39.	C	64.	D	89.	D
15	D	40.	D	65.	A	90.	A
16	D	41.	A	66.	A	91.	D
17	A	42.	C	67.	A	92.	C
18	B	43.	B	68.	A	93.	D
19	D	44.	D	69.	D	94.	C
20	A	45.	A	70.	D	95.	A
21	A	46.	D	71.	A	96.	C
22	C	47.	A	72.	B	97.	D
23	D	48.	C	73.	C	98.	A
24	D	49.	B	74.	C	99.	C
25	B	50.	A	75.	A	100.	A