

# Networking Concepts Practice Test

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Results: \_\_\_\_\_

## Instructions

Choose the correct answer.

- 1) \_\_\_\_\_ **Which of the following Ethernet fiber-optic modes support distances of greater than 550 meters?**
  - a. 1000BASE-CX
  - b. 100BASE-FX
  - c. 1000BASE-LX
  - d. 1000BASE-SX
  
- 2) \_\_\_\_\_ **CSMA/CD stands for which of the following?**
  - a. Collision Sense, Multiple Access with Carrier Detect
  - b. Collision Sense, Multiple Access with Collision Detect
  - c. Carrier Sense, Multiple Access with Collision Detect
  - d. Carrier Sense, Mac Address with Collision Detect
  
- 3) \_\_\_\_\_ **What is a Network Interface Card (NIC)?**
  - a. A WAN adapter
  - b. A card used to make modem connections
  - c. A card used only for Ethernet networks
  - d. A printed circuit board that provides network communications

- 4) \_\_\_\_\_ **In the TCP/IP model, which layer would deal with reliability, flow control and error correction?**
- a. Transport
  - b. Physical
  - c. Network
  - d. Application
- 5) \_\_\_\_\_ **What is the speed of a T1 leased line?**
- a. 100 Mbps
  - b. 10 Mbps
  - c. 44.73 MBps
  - d. 1.544 Mbps
- 6) \_\_\_\_\_ **Which type of routing allows routers to adjust to changing network conditions?**
- a. Automatic
  - b. Dynamic
  - c. Static
  - d. Stub
- 7) \_\_\_\_\_ **What physical interface does a transceiver use to connect to a LAN?**
- a. AUI
  - b. BNC
  - c. MSAU
  - d. RJ-11
- 8) \_\_\_\_\_ **What language is used to create web pages?**
- a. HTTP
  - b. HTML
  - c. GIF
  - d. Spanish

- 9) \_\_\_\_\_ **How often are RIP updates broadcast?**
- a. Every 15 seconds
  - b. Every 30 seconds
  - c. Every 60 seconds
  - d. Every 90 seconds
- 10) \_\_\_\_\_ **What metric is used in RIP?**
- a. Delay
  - b. Bandwidth
  - c. Hop Count
  - d. Traffic Load
- 11) \_\_\_\_\_ **The port number assigned for the POP3 protocol is**
- a. 110
  - b. 43
  - c. 80
  - d. 25
- 12) \_\_\_\_\_ **A peer-to-peer network is also known as what type of network?**
- a. Thin client
  - b. Client-Server
  - c. Workgroup
  - d. Home Office
- 13) \_\_\_\_\_ **Frame Relay cannot be used over what technology?**
- a. ATM
  - b. T3
  - c. T1
  - d. ISDN

- 14) \_\_\_\_\_ **What is the maximum length of a Thinnet segment?**
- a. 100 meters
  - b. 185 meters
  - c. 200 meters
  - d. 500 meters
- 15) \_\_\_\_\_ **How many layers are in the OSI Model?**
- a. Seven
  - b. Six
  - c. Nine
  - d. Eight
- 16) \_\_\_\_\_ **What topology has all network devices connected to a single main cable?**
- a. Bus
  - b. Star
  - c. Mesh
  - d. Ring
- 17) \_\_\_\_\_ **At which layer of the OSI Model does a NIC operate?**
- a. Network
  - b. Data-link
  - c. Transport
  - d. Physical
- 18) \_\_\_\_\_ **What is used to alleviate congestion?**
- a. Bus Topology
  - b. Extended Star
  - c. Install more hubs
  - d. Add more bandwidth

- 19) \_\_\_\_\_ **What is the function of ARP?**
- a. It resolves NetBIOS names to IP Addresses
  - b. It resolves IP Addresses to MAC addresses
  - c. It resolves hostnames to IP addresses
  - d. It resolves WINS addresses to DNS addresses
- 20) \_\_\_\_\_ **Which of the following services provides name resolution services for FQDNs?**
- a. ARP
  - b. DNS
  - c. WINS
  - d. DHCP
- 21) \_\_\_\_\_ **NTFS is an example of what?**
- a. File Storage Method
  - b. Sorting Sequence
  - c. Routing Protocol
  - d. Memory Location
- 22) \_\_\_\_\_ **Which type of routing protocol is RIP?**
- a. Distance vector
  - b. Spanning tree
  - c. Hybrid
  - d. Link State
- 23) \_\_\_\_\_ **E-mail and FTP work at which layer of the OSI Model?**
- a. Application
  - b. Presentation
  - c. Session
  - d. User

- 24) \_\_\_\_\_ **Routers make forwarding decisions based on which kind of address?**
- a. Logical
  - b. Layer
  - c. 2 physical
  - d. hardware
- 25) \_\_\_\_\_ **Which of the following is a benefit of VLAN?**
- a. Elimination of broadcast domains
  - b. Increased administration
  - c. Multiple cable runs
  - d. Tighter network security
- 26) \_\_\_\_\_ **Which of the following is true about a CSMA/CD network?**
- a. Signals are always sent in multi-frame broadcast mode
  - b. One node's transmission goes directly to the destination
  - c. Signals are sent directly to the destination if both the MAC and IP are known
  - d. One nodes transmission traverses the entire network and is seen by every node
- 27) \_\_\_\_\_ **What term defines two-way simultaneous communications?**
- a. Simplex
  - b. Half-duplex
  - c. Total-duplex
  - d. Full-duplex
- 28) \_\_\_\_\_ **What percentage of bandwidth is offered in each direction when using Full Duplex?**
- a. 50 percent
  - b. 75 percent
  - c. 100 percent
  - d. The same as half duplex

- 29) \_\_\_\_\_ **Which best describes the structure of a MAC address?**
- a. 16 bit network code plus 16 bit serial code
  - b. 16 bit vendor code plus 16 bit serial number
  - c. 24 bit vendor code plus 24 bit serial number
  - d. 24 bit network identity plus 24 bit network identity
- 30) \_\_\_\_\_ **VLANs make filtering and forwarding decisions based on**
- a. Packets
  - b. Frames
  - c. Presentation header
  - d. Network design
- 31) \_\_\_\_\_ **Which command is used to establish a remote login to a router?**
- a. Rsession
  - b. Rlogin
  - c. Telnet
  - d. Rconsole
- 32) \_\_\_\_\_ **What command is used to display the hardware addresses in the ARP cache?**
- a. Tracert
  - b. Arp - a
  - c. Rarp -a
  - d. Arp -s
- 33) \_\_\_\_\_ **What ISDN channels are for voice video and data?**
- a. D channels
  - b. B channels
  - c. Data Channels
  - d. History Channel

- 34) \_\_\_\_\_ **What is the advantage of a coaxial cable?**
- a. It can run unrepeated farther than twisted-pair cabling
  - b. It is less expensive than any other type of cabling
  - c. It is easier to install than UTP
  - d. It is more susceptible to noise than UTP
- 35) \_\_\_\_\_ **When running cable from the wiring closet to wall jacks, where is the cable itself labeled?**
- a. At the panel end
  - b. At each end
  - c. At the jack end
  - d. At each tie
- 36) \_\_\_\_\_ **Which of the following best defines an object on a web page that, when clicked, transfers you to a new web page?**
- a. Web browser
  - b. Hyperlink
  - c. Network redirector
  - d. ASCII
- 37) \_\_\_\_\_ **In a network, each point that can send or receive data or both is known as a**
- a. Star
  - b. Link
  - c. Node
  - d. client
- 38) \_\_\_\_\_ **What utility do you use to check the IP configuration on a windows 95 or 98 workstation?**
- a. Ping
  - b. Ipconfig
  - c. Winipcfg
  - d. netstat



- 39) \_\_\_\_\_ **Broadband transmissions refer to what kind of signal?**
- a. Synchronous
  - b. Digital
  - c. Analog
  - d. Asynchronous
- 40) \_\_\_\_\_ **What is an advantage of a coaxial cable?**
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- 41) \_\_\_\_\_ **A Token Ring network uses what devices to connect to workstations?**
- a. MSAU
  - b. Repeater
  - c. Switch
  - d. Hub
- 42) \_\_\_\_\_ **What is an example of an application that requires both a client and server component in order to function?**
- a. Web browser
  - b. ASCII
  - c. Microsoft Word
  - d. PICT
- 43) \_\_\_\_\_ **A CSU/DSU does what function?**
- a. Acts as translator between a LAN and a WAN
  - b. Acts as a switching device on a LAN
  - c. Terminates a data signal
  - d. Routes data

- 44) \_\_\_\_\_ **What kind of jack must be used for making a connection to a Category 5 unshielded twisted pair cable in a horizontal cabling scheme?**
- a. RJ-45
  - b. EIA 45
  - c. UTP 45
  - d. BNC 45
- 45) \_\_\_\_\_ **A connection-oriented protocol guarantees what?**
- a. Fast bandwidth
  - b. Error free transmissions
  - c. Delivery of data
  - d. High Security
- 46) \_\_\_\_\_ **What are most applications that work in a networked environment classified as?**
- a. Network redirector applications
  - b. File storage applications
  - c. Client-server applications
  - d. Dialogue control applications
- 47) \_\_\_\_\_ **Packets are encapsulated into frames at which layer of the OSI model?**
- a. Data link
  - b. Network
  - c. Transport
  - d. Session
- 48) \_\_\_\_\_ **Logical network maps describe**
- a. Topology changes
  - b. Switch locations
  - c. Wiring runs
  - d. IP addressing
- \_\_\_\_\_

- 49) \_\_\_\_\_ **Which of the following network types is easiest to add nodes to?**
- a. Ring
  - b. Star
  - c. Bus
  - d. Mesh
- 50) \_\_\_\_\_ **What is the basic reason for implementing a firewall?**
- a. It provides NAT functionality
  - b. It reduces the cost associated with Internet access
  - c. It provides a mechanism to protect one network from another
  - d. It allows Internet access to be centralized
- 52) \_\_\_\_\_ **A peer-to-peer network by definition is a network that consists of \_\_\_\_\_ workstations or less**
- a. 10
  - b. 100
  - c. 15
  - d. 20
- 53) \_\_\_\_\_ **What private company created Ethernet?**
- a. IBM
  - b. Apple
  - c. Xerox
  - d. Cisco
- 54) \_\_\_\_\_ **What protocol is designed to download or upload files on the Internet?**
- a. Telnet
  - b. SNMP
  - c. FTP
  - d. HTTP

- 55) \_\_\_\_\_ **What is a WAN?**
- a. A network that connects users across a large geographic area
  - b. A network that connects devices in a workgroup setting
  - c. A network that connects physically adjacent devices
  - d. A network that connects business departments in a building
- 56) \_\_\_\_\_ **Which of the following security protocols is protocol-independent**
- a. IPSec
  - b. SSL
  - c. SLIP
  - d. L2TP
- 57) \_\_\_\_\_ **What is true about RJ-45 connectors?**
- a. Have eight conductors
  - b. Have four conductors
  - c. Have one center conductor
  - d. There are a layer 2 component
- 58) \_\_\_\_\_ **The protocol OSPF is most closely associated with what device?**
- a. Bridges
  - b. Routers
  - c. Hubs
  - d. Switches
- 59) \_\_\_\_\_ **The best description of a default Route would be**
- a. A route defined by LSA
  - b. A route defined by an administrator
  - c. The last router in an autonomous system
  - d. A route defined by RIP

- 60) \_\_\_\_\_ **What is the function of a MAC address?**
- a. Provides a unique identity
  - b. Provides a collision free domain
  - c. Provides a hierarchical addressing scheme
  - d. Provides increased network stability
- 61) \_\_\_\_\_ **What fiber mode characteristic is recommended for inter-building connectivity?**
- a. Single-mode
  - b. Inter-mode
  - c. Intra-mode
  - d. Multi-mode
- 62) \_\_\_\_\_ **Which of the following best describes networking protocols?**
- a. A formal description of a set of rules that say how nodes exchange information
  - b. A set of guidelines that can be customized to meet individual needs
  - c. The use of the same network topology for all networks
  - d. All of the above
- 63) \_\_\_\_\_ **Which of the following services provides name resolution services for FQDNs?**
- a. ARP
  - b. DNS
  - c. WINS
  - d. DHCP
- 64) \_\_\_\_\_ **What type of server is used to translate a domain name into the associated IP address?**
- a. TFTP
  - b. DNS
  - c. FTP
  - d. DHCP
- \_\_\_\_\_

- 65) \_\_\_\_\_ **If you decided to block access to port 53 on your network, what service would you be blocking?**
- a. SMTP
  - b. WINS
  - c. DNS
  - d. POP3
- 66) \_\_\_\_\_ **While in use, where are software applications stored?**
- a. RAM
  - b. ROM
  - c. NIC
  - d. EPROM
- 67) \_\_\_\_\_ **Which of the following is a characteristic of TCP?**
- a. Connectionless
  - b. Unreliable
  - c. Divides outgoing messages into segments
  - d. Provides no software checking for segments
- 68) \_\_\_\_\_ **The star/extended star topology uses what type of standard?**
- a. ARCNET
  - b. Ethernet 802.3
  - c. Ethernet 802.5
  - d. Token Ring
- 69) \_\_\_\_\_ **Which of the following protocols is commonly used to send e-mails from one server to another?**
- a. ICMP
  - b. SMTP
  - c. POP3
  - d. RIP
- \_\_\_\_\_

- 70) \_\_\_\_\_ **What protocol can find the MAC address of a computer given its IP address**
- a. DHCP
  - b. RARP
  - c. ARP
  - d. Proxy RARP
- 71) \_\_\_\_\_ **Which of the following access methods is associated with Ethernet Networks?**
- a. CSMA/CA
  - b. CSMA/CD
  - c. Token Passing
  - d. Demand Polling
- 72) \_\_\_\_\_ **What can be done if the area of the LAN is more than 200 meters in diameter?**
- a. A repeater could be installed to extend the network
  - b. Special NICs can be purchased to extend the network
  - c. Another server could be used to extend the network
  - d. All of the above
- 73) \_\_\_\_\_ **Which component of a PC is a collection of wires through which data is transferred from one part of the computer to another?**
- a. Expansion slot
  - b. Bus
  - c. Microprocessor
  - d. System unit
- 74) \_\_\_\_\_ **Native Disk Quota support for Microsoft Network Operating Systems began with the**
- a. Windows 2003 Server
  - b. Windows NT Server
  - c. Windows NT 3.51
  - d. Windows 2000 Server
- \_\_\_\_\_

- 75) \_\_\_\_\_ **What Protocol supports Network Management?**
- a. SMTP
  - b. NFS
  - c. SNMP
  - d. FTP
- 76) \_\_\_\_\_ **A “clear text” password is transmitted through**
- a. No encryption
  - b. Well-known encoding encryption algorithms
  - c. Public Key encryption
  - d. Kerberos encryption
- 77) \_\_\_\_\_ **What is the first step in LAN design?**
- a. Establish the design goals
  - b. Determine the physical size
  - c. Determine the network users
  - d. Estimate the design cost
- 78) \_\_\_\_\_ **What command is used to display the hardware addresses in the ARP cache?**
- a. Tracert
  - b. ARP – a
  - c. RARP – a
  - d. ARP – s
- 79) \_\_\_\_\_ **Which is a network layer protocol that can be routed?**
- a. IP
  - b. NetBEUI
  - c. ISP
  - d. ARP



## Instructions

Choose the correct layer of the OSI Model next to its description

- A. Application                  B. Presentation                  C. Data Link                  D. Transport  
E. Session                  F. Network                  G. Physical

80) Provides a reliable link between two directly connected nodes \_\_\_\_\_

81) Provides the reliable sending of data packets between nodes (with addresses) located on a network, providing reliable data transfer services to the upper layers \_\_\_\_\_

82) Defines the electrical and physical specifications of the data connection \_\_\_\_\_

83) Establishes context between application-layer entities \_\_\_\_\_

84) Controls dialogues (connections) between computers. Establishes, manages and terminates the connection between the local and remote application \_\_\_\_\_

85) Layer closest to the end user. Interacts with software applications that implement a communicating component  
\_\_\_\_\_

86) Provides the functional and procedural means of transferring variable length data sequences (datagrams) from one node to another node \_\_\_\_\_

87) Encryption occurs in this layer  
\_\_\_\_\_

## Instructions

Choose the TCP/IP or UDP port number next to the protocol

- A. 443      B. 22      C. 143      D. 201      E. 118      F. 23  
G. 109      H. 115      I. 161      J. 110      K. 80      L. 194  
M. 20 or 21

88) HTTPS \_\_\_\_\_

89) FTP (Data or Control) \_\_\_\_\_

90) POP3 \_\_\_\_\_

91) POP2 \_\_\_\_\_

92) SSH \_\_\_\_\_

93) IRC \_\_\_\_\_

94) SNMP \_\_\_\_\_

95) Telnet \_\_\_\_\_

96) IMAP \_\_\_\_\_

97) HTTP \_\_\_\_\_

98) SFTP \_\_\_\_\_

99) SQL Services \_\_\_\_\_

100) AppleTalk \_\_\_\_\_