

Member ID: _____

Time: _____

Rank: _____



NETWORK ADMINISTRATION USING CISCO® (315) REGIONAL 2023

Multiple Choice:

50 @ 2 points each

_____ (100 points)

Test Time: 60 minutes

GENERAL GUIDELINES:

Failure to adhere to any of the following rules will result in disqualification:

1. Member must hand in this test booklet and all printouts if any. Failure to do so will result in disqualification.
2. No equipment, supplies, or materials other than those specified for this event are allowed in the testing area. No previous BPA tests and/or sample tests (handwritten, photocopied, or keyed) are allowed in the testing area.
3. Electronic devices will be monitored according to ACT standards.

Directions: Identify the letter of the choice that *best* completes the statement or answers the question.

1. If a customer needs to deploy copper cabling to support 10Gbps speeds, which one should he use:
 - A. Cat8
 - B. Cat6a
 - C. Cat6
 - D. Cat7
2. Which layer from the OSI model correspond to the TCP/IP model Internet Layer:
 - A. Application Layer
 - B. Session Layer
 - C. Network Layer
 - D. Physical Layer
3. Which IP address is a private address
 - A. 192.168.253.141
 - B. 192.167.95.3
 - C. 11.253.14.83
 - D. 172.32.1.24
4. How many copper wires pairs does a UTP cable have:
 - A. 10
 - B. 6
 - C. 8
 - D. 4
5. What contents are erased when a Cisco switch is powered down/reloaded?
 - A. ROM
 - B. RAM
 - C. USB
 - D. NVRAM
6. Which protocol is used for transport when utilizing FTP
 - A. UDP
 - B. HTTP
 - C. IP
 - D. TCP
7. Which OSI layer performs the routing over an IP network:
 - A. Transport
 - B. Session
 - C. Network
 - D. Physical

8. What type of connection is commonly used on a Fiber port:
 - A. SFP
 - B. SFP-45
 - C. RJ-45
 - D. Fiber RJ
9. Which module is used for 40Gb Fiber connections
 - A. SFP+
 - B. GBIC
 - C. QSFP+
 - D. SFA
10. Which 2 are Network layer protocols
 - A. IPv4 and HTTP
 - B. IPv4 and IPv6
 - C. TCP and UDP
 - D. UDP and HTTP
11. What is DNS used for:
 - A. IP to hostname resolution
 - B. MAC to IP resolution
 - C. IP to MAC resolution
 - D. Hostname to IP resolution
12. Which of the following is an IP routing protocol
 - A. EIGRP
 - B. IPV4
 - C. ARP
 - D. ICMP
13. Which OSI layer works with bits
 - A. Session
 - B. Physical
 - C. Application
 - D. Cable
14. What metric is used to know how long it takes packets to get from A to B:
 - A. Loss
 - B. Jitter
 - C. Delay
 - D. Bandwidth

15. Which plane is used for Spanning-Tree Protocol?
 - A. Control plane
 - B. Switch plane
 - C. Management plane
 - D. Data plane
16. What feature of a devices IP settings defines what host should be used as a forwarding host in the network?
 - A. Subnet Mask
 - B. IP Address
 - C. Default Gateway
 - D. TCP Sliding Windows Size
17. What cable is usually flat and has the pinout of 1-2-3-4-5-6-7-8 to 8-7-6-5-4-3-2-1?
 - A. Straight-Through cable
 - B. Cross-Over cable
 - C. Serial cable
 - D. Console cable
18. How many bytes are in IP address?
 - A. 4
 - B. 6
 - C. 8
 - D. 16
19. How many bits are in a Subnet Mask?
 - A. 16
 - B. 24
 - C. 32
 - D. 40
20. How many bytes are in a MAC address?
 - A. 4
 - B. 6
 - C. 8
 - D. 16
21. IPv6 is not a valid protocol for use on internal LANs.
 - A. True
 - B. False
22. What is the simplest way to verify that a direct connection between two PCs on the network is working at layer 1 of the OSI model?
 - A. Check the ARP table on both PCs to verify they see the others MAC address
 - B. Copy a file from a share on one PC to the other
 - C. Verify link lights on the network cards
 - D. Ping one PC from the other

23. What allows a PC to communicate locally to other PCs?
- A. MAC Address
 - B. IP Address
 - C. Directory Address
 - D. Mailing Address
24. When creating a common cable for use in an Ethernet network, the 568B standard begins with what two colors?
- A. White/Green
 - B. White/Blue and Blue
 - C. White/Brown and Brown
 - D. White/Orange
25. When creating a common cable for use in a Fiber network, what connector is used on the ends?
- A. RS-232
 - B. SFP
 - C. RJ-45
 - D. RG-59
26. What cable allows two different types of devices to be communicate by being directly connected to one another?
- A. Straight-Through cable
 - B. Console cable
 - C. Serial cable
 - D. Cross-Over cable
27. What is multicast traffic?
- A. One-to-One traffic
 - B. One-to-Many traffic
 - C. One-to-All traffic
 - D. One-to-None traffic
28. What is the purpose of Spanning-Tree Protocol?
- A. Allows multiple links between switches to work and act as a single connection
 - B. It allows switches to communicate and distribute routes with one another
 - C. Allows a host's connection to span multiple ports a switch
 - D. Prevent traffic storms in the network caused by layer-2 loops
29. How many objects can exist in a network with a subnet mask of 255.255.255.128?
- A. 126
 - B. 255
 - C. 254
 - D. 127

30. What is a reason a network administrator would use a subnet mask of 255.255.0.0 rather than 255.255.255.0?
- A. Can charge more to configure the network
 - B. It is more efficient
 - C. The network segment needs more than 254 hosts
 - D. It allows for multiple private IP networks to be used
31. What command gets a user into Privilege EXEC mode on a Cisco router?
- A. enter
 - B. allow
 - C. configure terminal
 - D. enable
32. What command gets a user into Global Configuration mode on a Cisco router?
- A. enter
 - B. allow
 - C. configure terminal
 - D. enable
33. What command is used to save the configuration on a Cisco switch?
- A. save config
 - B. copy running-config startup-config
 - C. checkpoint config
 - D. save
34. What command is used to see the current configuration of a Cisco router?
- A. show running-config
 - B. display startup-config
 - C. show config
 - D. display config
35. What command is used to display the status of the interfaces on a Cisco switch?
- A. show port
 - B. show interface
 - C. show connections
 - D. show links
36. What TCP port does HTTPS web traffic use?
- A. 81
 - B. 442
 - C. 80
 - D. 443

37. What UDP port is used by DNS traffic?
- A. 80
 - B. 22
 - C. 21
 - D. 53
38. HTTP and HTTPS traffic can use the same TCP Port for communication
- A. True
 - B. False
39. An ethernet switch allows devices to communicate in a local network
- A. True
 - B. False
40. A router allows layer-2 broadcasts to other networks
- A. True
 - B. False
41. Configuration changes are not saved automatically on Cisco devices
- A. True
 - B. False
42. To connect an end device such as a PC to the network, you use a cross-over cable
- A. True
 - B. False
43. TCP/IP version 5 is the most widely adopted networking protocol
- A. True
 - B. False
44. How many bytes are in an IPv6 address?
- A. 8
 - B. 10
 - C. 12
 - D. 16
45. How many possible IPv6 addresses are there?
- A. 4,294,967,296
 - B. 18,446,744,073,709,551,616
 - C. 340,282,366,920,938,463,463,374,607,431,768,211,456
 - D. 65,536
46. IPv6 exclusively uses Broadcast type traffic
- A. True
 - B. False

47. Which of the following is a valid IPv6 Address?
- A. 2101:FD006:1C20:ABCD::1
 - B. 1536:AB01:5A::20:ABCD::1
 - C. 1762:FD:1C::20:ABCQ:1
 - D. 2101:FD00:1C::20:ABCD:1
48. IPv6 is not directly compatible with IPv4
- A. True
 - B. False
49. What subnet mask matches the CIDR notation /32?
- A. 255.255.255.128
 - B. 255.255.255.255
 - C. 255.255.255.252
 - D. 255.255.255.248
50. What CIDR notation matches the Subnet Mask 255.255.255.128?
- A. /27
 - B. /24
 - C. /25
 - D. /26