

SYSTEMS ADMINISTRATION USING CISCO® (315)

REGIONAL – 2018

TOTAL POINTS _____ (500 points)

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

- 1. Contestant must hand in this test booklet and all printouts. 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 or facsimile (handwritten, photocopied, or keyed) are allowed in the testing area.**
- 3. Electronic devices will be monitored according to ACT standards.**

No more than sixty (60) minutes testing time

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Workplace Skills Assessment Program competition.

MULTIPLE CHOICE

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

1. The network infrastructure contains three categories of network components; which of the following is *not* one of them?
 - A. Hardware
 - B. Medium
 - C. Services
 - D. Software

2. The network devices that people are most familiar with are called _____.
 - A. media
 - B. end devices
 - C. endpoint
 - D. intermediary devices

3. _____ connect the individual devices to the network and can connect multiple individual networks to form an internetwork.
 - A. PC's
 - B. End devices
 - C. Endpoint
 - D. Intermediary devices

4. Which method allows you to configure a device if no networking services have been configured?
 - A. Console
 - B. Telnet
 - C. SSH
 - D. HTTP

5. _____ is a method for remotely establishing a secure CLI connection through a virtual interface, over a network.
 - A. Console
 - B. Telnet
 - C. SSH
 - D. HTTP

6. Privileged EXEC mode is sometimes called _____.
 - A. Line mode
 - B. enable mode
 - C. SSH mode
 - D. Telnet mode

7. What form of Help verifies that a valid command was entered by the user?
 - A. Context-Sensitive Help
 - B. Command Syntax Check
 - C. CLI help
 - D. Command Line Check

8. What shortcut erases the character at the cursor?
 - A. Backspace
 - B. Ctrl-D
 - C. Ctrl-K
 - D. Esc-D

9. Which of the following is *not* a guideline for hostnames?
 - A. Start with a letter
 - B. End with a letter or digit
 - C. Contain spaces
 - D. Be less than 64 characters

10. What is the command to encrypt passwords?
 - A. Password encryption
 - B. Password global-encryption
 - C. Encrypt all passwords
 - D. Service password-encryption

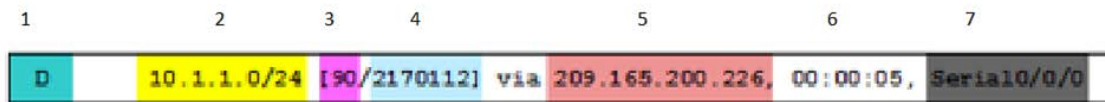
11. Startup-config is stored in what kind of memory?
 - A. RAM
 - B. Compact Flash
 - C. NVRAM
 - D. CMOS

12. Cisco IOS Layer 2 switches have physical ports for devices to connect. These ports do *not* support Layer 3 IP addresses. Therefore, switches have one or more _____.
 - A. SVI
 - B. FA0
 - C. FG0
 - D. SV0

13. What command is used to verify the interfaces, status and address settings of intermediary devices like switches and routers?
 - A. show ip interface brief
 - B. ping interface
 - C. show running-config
 - D. show vlan

14. The portion of operating system that interacts with applications and the user is called _____.
- A. kernel
 - B. GUI
 - C. shell
 - D. putty
15. Windows command that shows the IP configuration settings on a PC.
- A. TRACEROUTE
 - B. TRACERT
 - C. PING
 - D. IPCONFIG
16. HTTP is found at what layer of the TCP/IP model?
- A. Application
 - B. Internet
 - C. Transport
 - D. Network access
17. _____ is the measure of the transfer of bits across the media over a given period of time.
- A. Bandwidth
 - B. Goodput
 - C. Throughput
 - D. Latency
18. The IEEE assigns the vendor a 3-byte (24-bit) code, called
- A. ISO
 - B. OSI
 - C. MAC
 - D. OUI
19. Which of the following is *not* a characteristic of the IP protocol?
- A. Medium independent
 - B. Best effort
 - C. End-to-end connection
 - D. Connectionless
20. What would the prefix length be for an IP address with a subnet mask of 255.255.255.248?
- A. 24
 - B. 27
 - C. 29
 - D. 30

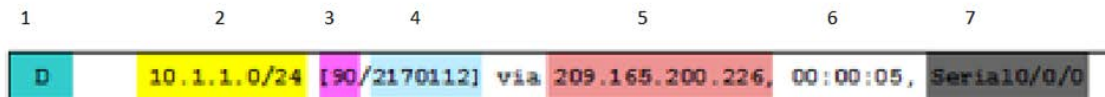
21. Which organization is based in the United States, coordinates IP address allocation, the management of domain names, and assignment of other information used TCP/IP protocols?
- A. Internet Society (ISOC)
 - B. Internet Engineering Task Force (IETF)
 - C. Internet Corporation for Assigned Names and Numbers (ICANN)
 - D. Internet Architecture Board (IAB)
22. _____ is the measure of usable data transferred over a given period of time.
- A. Bandwidth
 - B. Goodput
 - C. Throughput
 - D. Latency
23. What Ethernet field notifies the destination to get ready for a new frame?
- A. Preamble
 - B. Start of frame delimiter
 - C. 802.2 header and data
 - D. Destination address



24. Using the diagram above, which number identifies the IP address of the next router to forward the packet?
- A. 2
 - B. 4
 - C. 5
 - D. 7
25. What is the binary number conversion for 249?
- A. 11111101
 - B. 11101001
 - C. 11111001
 - D. 11111011
26. Which layer is found in *both* the OSI model and the TCP/IP Model?
- A. Session
 - B. Internet
 - C. Network Access
 - D. Transport

27. Which cable is used to connect a workstation to a router or switch console port?
- A. Crossover
 - B. Straight-through
 - C. Rollover
 - D. Patch
28. Which of the following is *not* a function of the Mac sublayer?
- A. Works with hardware to support bandwidth requirements.
 - B. Controls access to the media through signaling and physical media standards requirements.
 - C. Controls the network interface card through software drivers.
 - D. Supports Ethernet technology by using CSMA/CD.
29. What Cisco memory type is used to store crucial operational instructions?
- A. RAM
 - B. ROM
 - C. NVRAM
 - D. Flash
30. Use the ANDing process to determine the network address 192.128.22.179
255.255.255.192.
- A. 192.128.22.179
 - B. 192128.22.64
 - C. 192.128.22.128
 - D. 192.128.22.0
31. The form that a piece of data takes at any layer is called a _____.
- A. frame
 - B. packet
 - C. protocol data unit
 - D. segment
32. Which cable is used to interconnect similar devices?
- A. Crossover
 - B. Straight-through
 - C. Rollover
 - D. Patch
33. Which of the following switching is the predominant switching method used on Cisco switches?
- A. Fast-forward switching
 - B. Fragment-free switching
 - C. Cut-through
 - D. Store-and-forward

34. What Cisco memory type is used to store the IOS?
A. RAM
B. ROM
C. NVRAM
D. Flash
35. Use the ANDing process to determine the network address 12.18.22.222
255.255.255.248.
A. 12.18.22.216
B. 12.18.22.220
C. 12.18.22.224
D. 12.18.22.0
36. What is the *correct* order for the OSI model, layer 7 through 1?
A. Application, Physical, Session, Transport, Data Link, Network, Internet
B. Application, Session, Network, Transport, Data Link, Physical, Internet
C. Application, Presentation, Session, Transport, Network, Data Link, Physical
D. Application, Session, Network, Transport, Data Link, Physical, Presentation
37. The data link layer is divided into how many sublayers?
A. 1
B. 2
C. 3
D. 4
38. The process used to find a layer 2 address when just the layer 3 address is known as _____.
A. TCP
B. UDP
C. ARP
D. MAC



39. Using the diagram above, which number identifies the administrative distance?
A. 3
B. 4
C. 5
D. 6

40. What is the decimal number for 11100011?
- A. 220
 - B. 224
 - C. 227
 - D. 231
41. Which organization is best known for its 802 standards?
- A. Institute of Electrical and Electronics Engineers (IEEE)
 - B. Telecommunications Industry Association (TIA)
 - C. Electronic Industries Alliance (EIA)
 - D. International Telecommunications Union-Telecommunication Standardization Sector (ITU-T)
42. What is it called when both devices can transmit and receive on the media but cannot do so simultaneously?
- A. star
 - B. half-duplex
 - C. bus
 - D. full-duplex
43. What kind of traffic does port 53 allow?
- A. DNS traffic
 - B. FTP traffic
 - C. TFTP traffic
 - D. Telnet traffic
44. Which address type does a switch use to make forwarding decisions?
- A. source IP address
 - B. destination IP address
 - C. source MAC address
 - D. destination MAC address
45. IP is found at what layer of the TCP/IP model?
- A. Application
 - B. Internet
 - C. Transport
 - D. Network access
46. Which cable is used to interconnect a host to a switch and a switch to a router?
- A. Crossover
 - B. Straight-through
 - C. Rollover
 - D. Patch

47. What form of CSMA is used by IEEE 802.11 WLANs?
- A. CSMA/CD
 - B. CSMA/CN
 - C. CSMA/AC
 - D. CSMA/CA
48. What Ethernet frame format is used in TCP/IP networks?
- A. Ethernet I
 - B. Ethernet II
 - C. Ethernet III
 - D. Ethernet IPv4
49. What is the default configuration register setting on most Cisco routers?
- A. 0x2104
 - B. 0x2102
 - C. 0x2012
 - D. 0x2142
50. Where is the start-up configuration file normally stored?
- A. RAM
 - B. ROM
 - C. FLASH
 - D. NVRAM

49. Ethernet frame size less than 64 bytes is called _____.
- A. Baby giant frame
 - B. Runt frame
 - C. Minimum frame
 - D. Maximum frame
50. What is the prefix length for an IP address with a subnet mask of 255.255.254.0?
- A. 22
 - B. 23
 - C. 24
 - D. 25