

CCNA 1 Final v5.0 Exam Answers 2015 100%

1. Which communication tool allows real-time collaboration?

- wiki
- e-mail
- weblog
- **instant messaging**

2. A host is accessing a Web server on a remote network. Which three functions are performed by intermediary network devices during this conversation? (Choose three.)

- **regenerating data signals**
- acting as a client or a server
- providing a channel over which messages travel
- **applying security settings to control the flow of data**
- **notifying other devices when errors occur**
- serving as the source or destination of the messages

3. A home user is looking for an ISP connection that provides high speed digital transmission over regular phone lines. What ISP connection type should be used?

- **DSL**
- dial-up
- satellite
- cell modem
- cable modem

4. A company is expanding its business to other countries. All branch offices must remain connected to corporate headquarters at all times. Which network technology is required to support this requirement?

- LAN
- MAN
- **WAN**
- WLAN

5. Refer to the exhibit. From which location did this router load the IOS?

```
Router# show version
Cisco IOS Software, 1841 Software (C1841-ADVIPSERVICESK9-M), Version 12.4(15)T1,
RELEASE SOFTWARE (fc2)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2007 by Cisco Systems, Inc.
Compiled Wed 18-Jul-07 04:52 by pt_team

ROM: System Bootstrap, Version 12.3(8r)T8, RELEASE SOFTWARE (fc1)

System returned to ROM by power-on
System image file is "flash:c1841-advipservicesk9-mz.124-15.T1.bin"

<output omitted>

Cisco 1841 (revision 5.0) with 114688K/16384K bytes of memory.
Processor board ID FTX0947Z18E
M860 processor: part number 0, mask 49
2 FastEthernet/IEEE 802.3 interface(s)
191K bytes of NVRAM.
63488K bytes of ATA CompactFlash (Read/Write)

Configuration register is 0x2102

Router#
```

CCNA 1 Final Exam Answer 001 (v5.02, 2015)

- flash memory
- NVRAM?
- RAM
- ROM
- a TFTP server?

6. Which connection provides a secure CLI session with encryption to a Cisco network device?

- a console connection
- an AUX connection
- a Telnet connection
- an SSH connection

7. Refer to the exhibit. An administrator is trying to configure the switch but receives the error message that is displayed in the exhibit. What is the problem?

```
Switch1> config t
      ^
% Invalid input detected at '^' marker.
```

CCNA 1 Final Exam Answer 002 (v5.02, 2015)

- The entire command, configure terminal, must be used.
- The administrator is already in global configuration mode.

- The administrator must first enter privileged EXEC mode before issuing the command.
- The administrator must connect via the console port to access global configuration mode.

8. An administrator uses the Ctrl-Shift-6 key combination on a switch after issuing the ping command. What is the purpose of using these keystrokes?

- to restart the ping process
- to interrupt the ping process
- to exit to a different configuration mode
- to allow the user to complete the command

9. What function does pressing the Tab key have when entering a command in IOS?

- It aborts the current command and returns to configuration mode.
- It exits configuration mode and returns to user EXEC mode.
- It moves the cursor to the beginning of the next line.
- It completes the remainder of a partially typed word in a command.

10. Refer to the exhibit. An administrator wants to change the name of a brand new switch, using the hostname command as shown. What prompt will display after the command is issued?

```
Switch(config)# hostname My Switch
```

CCNA 1 Final Exam Answer 003 (v5.02, 2015)

- My Switch(config)#?
- Switch(config)#?
- MySwitch(config)#?
- My(config)#?
- Switch#

11. Refer to the exhibit. A network administrator is configuring access control to switch SW1. If the administrator uses Telnet to connect to the switch, which password is needed to access user EXEC mode?

```
Enter configuration commands, one per line. End with CNTL/Z.
SW1(config)# enable password letmein
SW1(config)# enable secret secretin
SW1(config)# line console 0
SW1(config-line)# password lineconin
SW1(config-line)# login
SW1(config-line)# exit
SW1(config)# line vty 0 15
SW1(config-line)# password linevtyin
SW1(config-line)# login
SW1(config-line)# end
SW1#
```

CCNA 1 Final Exam Answer 004 (v5.02, 2015)

- letmein
- secretin
- lineconin
- **linevtyin**

12. After making configuration changes, a network administrator issues a copy running-config startup-config command in a Cisco switch. What is the result of issuing this command?

- The new configuration will be stored in flash memory.
- **The new configuration will be loaded if the switch is restarted.**
- The current IOS file will be replaced with the newly configured file.
- The configuration changes will be removed and the original configuration will be restored.

13. Refer to the exhibit. Which action will be successful?

- PC1 can send a ping to 192.168.1.1?.
- PC1 can send a ping to 192.168.1.254?.
- **PC2 can send a ping to 192.168.1.1.**
- PC2 can send a ping to 192.168.1.254?.

14. Which IPv4 address can be pinged to test the internal TCP/IP operation of a host?

- 0.0.0.0
- 0.0.0.1
- **127.0.0.1**
- 192.168.1.1
- 255.255.255.255

15. What three application layer protocols are part of the TCP/IP protocol suite? (Choose three.)

- ARP
- DHCP
- DNS
- FTP
- NAT
- PPP

16. Which two protocols function at the internet layer? (Choose two.)

- ARP
- BOOTP
- ICMP
- IP
- PPP

17. Which publicly available resources describe protocols, processes, and technologies for the Internet but do not give implementation details?

- Request for Comments
- IRTF research papers
- protocol models
- IEEE standards

18. Which address on a PC does not change, even if the PC is moved to a different network?

- IP address
- default gateway address
- MAC address
- logical address

19. What is the protocol that is used to discover a physical address from a known logical address and what message type does it use?

- ARP, multicast
- DNS, unicast
- DNS, broadcast
- ARP, broadcast
- PING, multicast
- PING, broadcast

20. What will happen if the default gateway address is incorrectly configured on a host?

- The host cannot communicate with other hosts in the local network.
- The switch will not forward packets initiated by the host.
- The host will have to use ARP to determine the correct address of the default gateway.
- **The host cannot communicate with hosts in other networks.**
- A ping from the host to 127.0.0.1 would not be successful.

21. What is an important function of the physical layer of the OSI model?

- It accepts frames from the physical media.
- It encapsulates upper layer data into frames.
- It defines the media access method performed by the hardware interface.
- **It encodes frames into electrical, optical, or radio wave signals.**

22. Which procedure is used to reduce the effect of crosstalk in copper cables?

- requiring proper grounding connections
- **twisting opposing circuit wire pairs together**
- wrapping the bundle of wires with metallic shielding
- designing a cable infrastructure to avoid crosstalk interference
- avoiding sharp bends during installation

23. Which two statements describe the characteristics of fiber-optic cabling? (Choose two.)

- **Fiber-optic cabling does not conduct electricity.**
- Fiber-optic cabling has high signal loss.
- **Fiber-optic cabling is primarily used as backbone cabling.**
- Multimode fiber-optic cabling carries signals from multiple sending devices.
- Fiber-optic cabling uses LEDs for single-mode cables and laser technology for multimode cables.

24. What is contained in the trailer of a data-link frame?

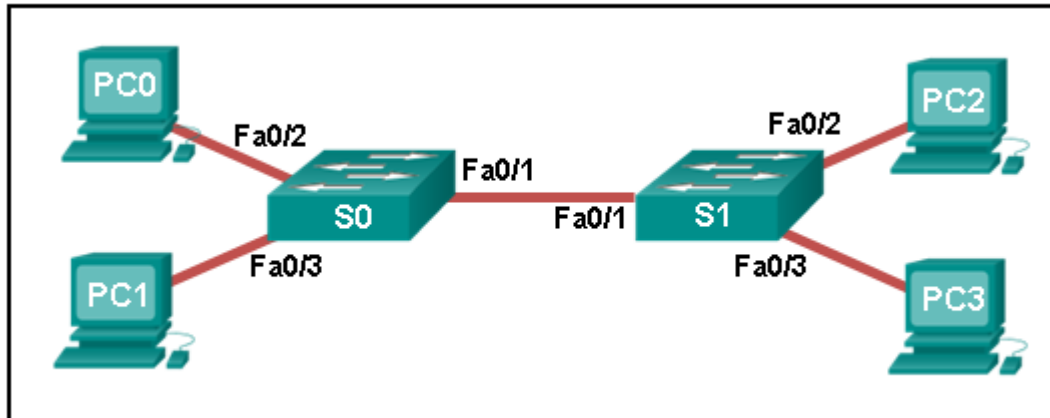
- logical address
- physical address
- data
- **error detection**

25. What is the auto-MDIX feature on a switch?

- the automatic configuration of an interface for 10/100/1000 Mb/s operation
- the automatic configuration of an interface for a straight-through or a
- **crossover Ethernet cable connection**

- the automatic configuration of full-duplex operation over a single Ethernet copper or optical cable
- the ability to turn a switch interface on or off accordingly if an active connection is detected

26. Refer to the exhibit. A ping to PC3 is issued from PC0, PC1, and PC2 in this exact order. Which MAC addresses will be contained in the S1 MAC address table that is associated with the Fa0/1 port?



CCNA 1 Final Exam Answer 005 (v5.02, 2015)

- just PC0 and PC1 MAC addresses
- just the PC0 MAC address
- PC0, PC1, and PC2 MAC addresses
- just the PC1 MAC address
- just the PC2 MAC address?

27. How does a Layer 3 switch differ from a Layer 2 switch?

- A Layer 3 switch supports VLANs, but a Layer 2 switch does not.
- An IP address can be assigned to a physical port of a Layer 3 switch. However, this is not supported in Layer 2 switches.
- A Layer 3 switch maintains an IP address table instead of a MAC address table.
- A Layer 3 switch learns the MAC addresses that are associated with each of its ports. However, a Layer 2 switch does not.

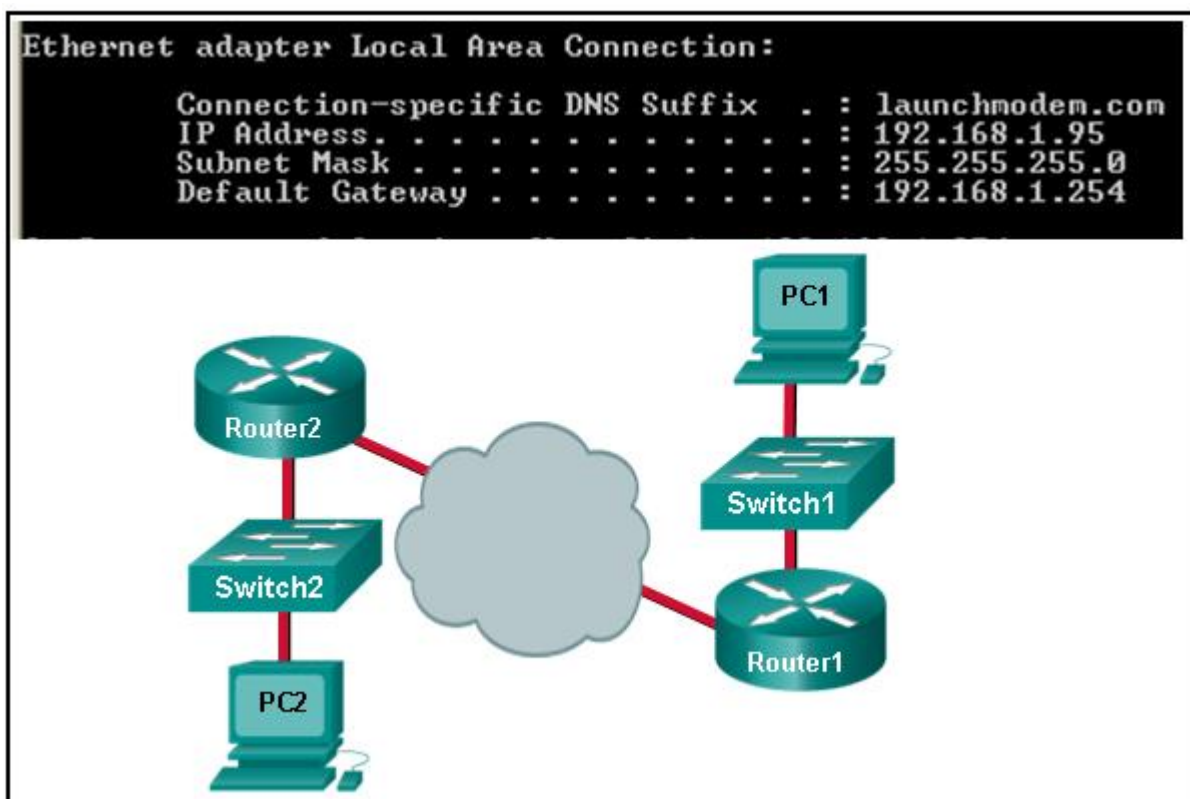
28. What is the purpose of the routing process?

- to encapsulate data that is used to communicate across a network
- to select the paths that are used to direct traffic to destination networks
- to convert a URL name into an IP address
- to provide secure Internet file transfer
- to forward traffic on the basis of MAC addresses

29. Which technology provides a solution to IPv4 address depletion by allowing multiple devices to share one public IP address?

- ARP
- DNS
- **NAT**
- SMB
- DHCP
- HTTP

30. Refer to the exhibit. Consider the IP address configuration shown from PC1. What is a description of the default gateway address?



CCNA 1 Final Exam Answer 006 (v5.02, 2015)

- It is the IP address of the Router1 interface that connects the company to the Internet.
- **It is the IP address of the Router1 interface that connects the PC1 LAN to Router1.**
- It is the IP address of Switch1 that connects PC1 to other devices on the same LAN.
- It is the IP address of the ISP network device located in the cloud.

31. Which of the following are primary functions of a router? (Choose two.)

- **packet switching**

- microsegmentation
- domain name resolution
- **path selection**
- flow control

32. Which two statements correctly describe a router memory type and its contents? (Choose two.)

- ROM is nonvolatile and stores the running IOS.
- FLASH is nonvolatile and contains a limited portion of the IOS?.
- **RAM is volatile and stores the running configuration.**
- NVRAM is nonvolatile and stores a full version of the IOS.
- **ROM is nonvolatile and stores bootup information.**

33. In which default order will a router search for startup configuration information?

- NVRAM, RAM, TFTP
- **NVRAM, TFTP, setup mode**
- setup mode, NVRAM, TFTP
- TFTP, ROM, NVRAM
- flash, ROM, setup mode

34. What happens when part of an Internet VoIP transmission is not delivered to the destination?

- A delivery failure message is sent to the source host.
- The part of the VoIP transmission that was lost is re-sent.
- The entire transmission is re-sent.
- **The transmission continues without the missing portion.**

35. Which three IP addresses are private ? (Choose three.)

- **10.172.168.1**
- 172.32.5.2
- 192.167.10.10
- **172.20.4.4**
- **192.168.5.254**
- 224.6.6.6

36. How many bits make up the single IPv6 hextet :10CD:?

- 4
- 8
- **16**

- 32

37. What is the effect of configuring the ipv6 unicast-routing command on a router?

- to assign the router to the all-nodes multicast group
- **to enable the router as an IPv6 router**
- to permit only unicast packets on the router
- to prevent the router from joining the all-routers multicast group

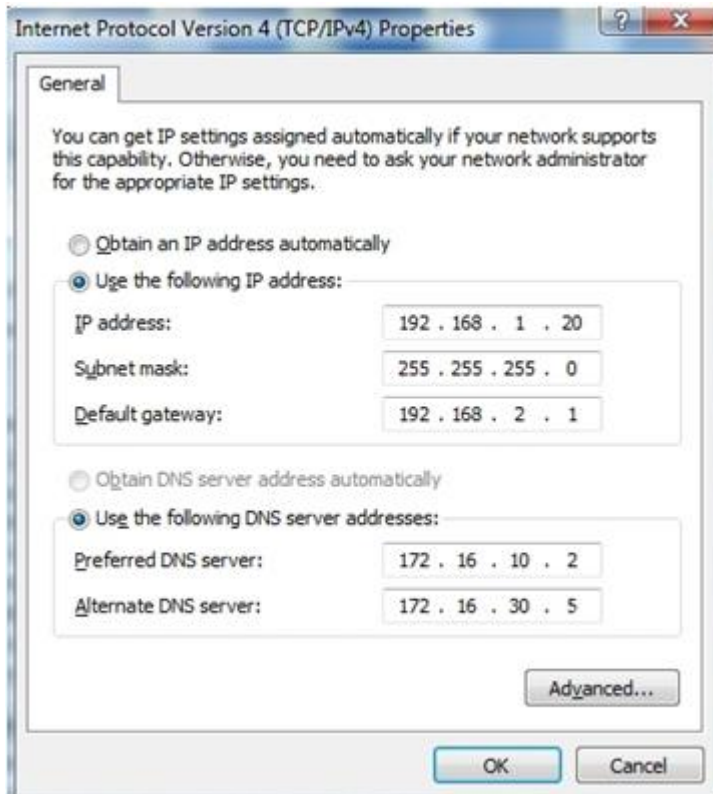
38. Which group of IPv6 addresses cannot be allocated as a host source address?

- FEC0::/10?
- FDFF::/7?
- FEBF::/10?
- **FF00::/8**

39. What is the purpose of ICMP messages?

- to inform routers about network topology changes
- to ensure the delivery of an IP packet
- **to provide feedback of IP packet transmissions**
- to monitor the process of a domain name to IP address resolution

40. Refer to the exhibit. A technician has configured a user workstation with the IP address and default subnet masks that are shown. Although the user can access all local LAN resources, the user cannot access any Internet sites by using either FQDN or IP addresses. Based upon the exhibit, what could account for this failure?



CCNA 1 Final Exam Answer 007 (v5.02, 2015)

- The DNS server addresses are incorrect.
- **The default gateway address is incorrect.**
- The wrong subnet mask was assigned to the workstation.
- The workstation is not in the same network as the DNS servers.

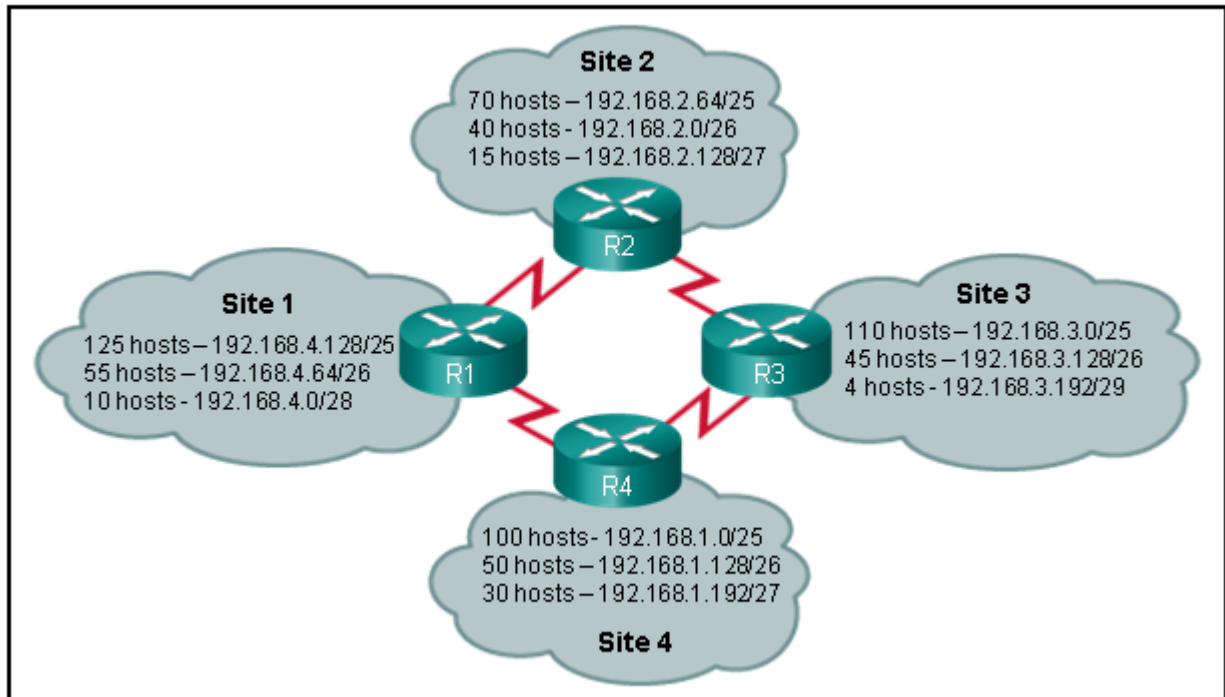
41. Which subnet would include the address 192.168.1.96 as a usable host address?

- **192.168.1.64/26**
- 192.168.1.32/27
- 192.168.1.32/28
- 192.168.1.64/29

42. A network administrator needs to monitor network traffic to and from servers in a data center. Which features of an IP addressing scheme should be applied to these devices?

- random static addresses to improve security
- addresses from different subnets for redundancy
- **predictable static IP addresses for easier identification**
- dynamic addresses to reduce the probability of duplicate addresses

43. Refer to the exhibit. Which IP addressing scheme should be changed?



CCNA 1 Final Exam Answer 008 (v5.02, 2015)

- Site 1
- **Site 2**
- Site 3
- Site 4

44. Which two notations are useable nibble boundaries when subnetting in IPv6? (Choose two.)

- /62
- **/64**
- /66
- **/68**
- /70

45. A host PC has just booted and is attempting to lease an address through DHCP. Which two messages will the client typically broadcast on the network? (Choose two.)

- **DHCPDISCOVER**
- DHCPOFFER
- **DHCPREQUEST**
- DHCPACK
- DHCPNACK

46. What is the purpose of the network security accounting function?

- to require users to prove who they are
- to determine which resources a user can access
- **to keep track of the actions of a user**
- to provide challenge and response questions

47. When applied to a router, which command would help mitigate brute-force password attacks against the router?

- exec-timeout 30
- service password-encryption
- banner motd \$Max failed logins = 5\$
- **login block-for 60 attempts 5 within 60**

48. A particular website does not appear to be responding on a Windows 7 computer. What command could the technician use to show any cached DNS entries for this web page?

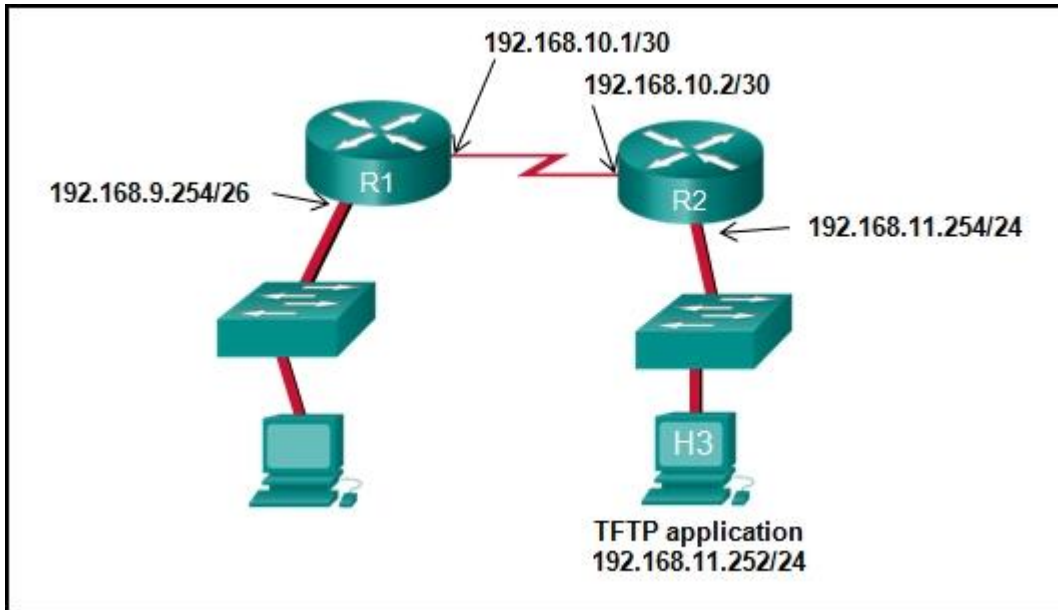
- ipconfig /all
- arp -a
- **ipconfig /displaydns**
- nslookup

49. Refer to the exhibit. The network administrator enters these commands into the R1 router:

R1# copy running-config tftp

Address or name of remote host []?

When the router prompts for an address or remote host name, what IP address should the administrator enter at the prompt?



CCNA 1 Final Exam Answer 009 (v5.02, 2015)

- 192.168.9.254
- 192.168.10.1
- 192.168.10.2
- **192.168.11.252**
- 192.168.11.254

50. Match the IPv6 address to the IPv6 address type. (Not all options are used.)

Link-Local	FE80:0:56BA:FFEE:A0B4:47FF:FE36:532B
	FE80::1
Multicast	FF02::2
	FF02::1:FF3A:25C9
Global Unicast	2001:DB8:10::12
	2001:DB8:A1:0B:C78::1

CCNA 1 Final Exam Answer 010 (v5.02, 2015)

51. What two preconfigured settings that affect security are found on most new wireless routers? (Choose two.)

- **broadcast SSID**
- MAC filtering enabled
- WEP encryption enabled
- PSK authentication required
- **default administrator password**

52. Which type of wireless security generates dynamic encryption keys each time a client associates with an AP?

- EAP
- PSK
- WEP
- **WPA**

53. Fill in the blank.

TFTP is a best-effort, connectionless application layer protocol that is used to transfer files.

54. Which two components are necessary for a wireless client to be installed on a WLAN? (Choose two.)

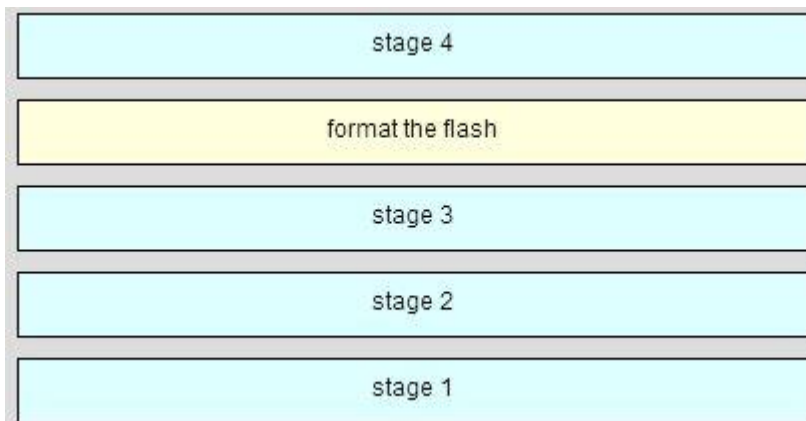
- media
- **wireless NIC**
- custom adapter
- crossover cable
- wireless bridge
- **wireless client software**

55. Consider the following range of addresses:

2001:0DB8:BC15:00A0:0000::
2001:0DB8:BC15:00A1:0000::
2001:0DB8:BC15:00A2:0000::
...

2001:0DB8:BC15:00AF:0000::
The prefix-length for the range of addresses is **/60** .

56. Match the phases to their correct stage in the router bootup process. (Not all options are used.)



CCNA 1 Final Exam Answer 011 (v5.02, 2015)

57. A host is accessing an FTP server on a remote network. Which three functions are performed by intermediary network devices during this conversation? (Choose three.)

- regenerating data signals
- acting as a client or a server
- providing a channel over which messages travel
- applying security settings to control the flow of data
- notifying other devices when errors occur
- serving as the source or destination of the messages

58. When is a dial-up connection used to connect to an ISP?

- when a cellular telephone provides the service
- when a high-speed connection is provided over a cable TV network
- when a satellite dish is used
- when a regular telephone line is used

59. On a school network, students are surfing the web, searching the library database, and attending an audio conference with their sister school in Japan. If network traffic is prioritized with QoS, how will the traffic be classified from highest priority to lowest priority?

- audio conference, database, HTTP
- database, HTTP, audio conference
- audio conference, HTTP, database
- database, audio conference, HTTP

60. During normal operation, from which location do most Cisco routers run the IOS?

- RAM
- flash

- NVRAM
- disk drive

61. Which connection provides a secure CLI session with encryption to a Cisco switch?

- a console connection
- an AUX connection
- a Telnet connection
- **an SSH connection**

62. Which keys act as a hot key combination that is used to interrupt an IOS process?

- Ctrl-Shift-X
- **Ctrl-Shift-6**
- Ctrl-Z
- Ctrl-C

63. Refer to the exhibit. An administrator wants to change the name of a brand new switch, using the hostname command as shown. What prompt will display after the command is issued??

```
Switch(config)# hostname HR Switch
```

CCNA 1 Final Exam Answer 012 (v5.02, 2015)

- HR Switch(config)#?
- **Switch(config)#?**
- HRSwitch(config)#?
- HR(config)#?
- Switch#

64. After making configuration changes on a Cisco switch, a network administrator issues a copy running-config startup-config command. What is the result of issuing this command?

- The new configuration will be stored in flash memory.
- **The new configuration will be loaded if the switch is restarted.**
- The current IOS file will be replaced with the newly configured file.
- The configuration changes will be removed and the original configuration will be restored.

65. On which switch interface would an administrator configure an IP address so that the switch can be managed remotely?

- FastEthernet0/1
- **VLAN 1**
- vty 0
- console 0

66. A technician uses the ping 127.0.0.1 command. What is the technician testing?

- **the TCP/IP stack on a network host**
- connectivity between two adjacent Cisco devices
- connectivity between a PC and the default gateway
- connectivity between two PCs on the same network
- physical connectivity of a particular PC and the network

67. What is the correct order for PDU encapsulation?

The diagram shows four radio button options for PDU encapsulation. The first option is circled in red and has a checkmark, indicating it is the correct answer. The options are:

- Frame Header, Network Header, Transport Header, Data, Frame Trailer
- Network Header, Transport Header, Frame Header, Data, Frame Trailer
- Transport Header, Network Header, Frame Header, Data, Frame Trailer
- Transport Header, Frame Header, Network Header, Data, Frame Trailer

CCNA 1 Final Exam Answer 013 (v5.02, 2015)

68. Which device should be used for enabling a host to communicate with another host on a different network?

- switch
- hub
- **router**
- host

69. A network technician is measuring the transfer of bits across the company backbone for a mission critical application. The technician notices that the network throughput appears lower than the bandwidth expected. Which three factors could influence the differences in throughput? (Choose three.)

- the amount of traffic that is currently crossing the network
- the sophistication of the encapsulation method applied to the data
- the type of traffic that is crossing the network
- the latency that is created by the number of network devices that the data is crossing
- the bandwidth of the WAN connection to the Internet
- the reliability of the gigabit Ethernet infrastructure of the backbone

70. Which characteristics describe fiber optic cable? (Choose two.)

- It is not affected by EMI or RFI.
- Each pair of cables is wrapped in metallic foil.
- It combines the technique of cancellation, shielding and twisting to protect data.
- It has a maximum speed of 100 Mbps.
- It is the most expensive type of LAN cabling

71. What are two features of a physical, star network topology? (Choose two.)

- It is straightforward to troubleshoot.
- End devices are connected together by a bus.
- It is easy to add and remove end devices.
- All end devices are connected in a chain to each other.
- Each end system is connected to its respective neighbor.

72. A frame is transmitted from one networking device to another. Why does the receiving device check the FCS field in the frame?

- to determine the physical address of the sending device
- to verify the network layer protocol information
- to compare the interface media type between the sending and receiving ends
- to check the frame for possible transmission errors
- to verify that the frame destination matches the MAC address of the receiving device

73. What will a Layer 2 switch do when the destination MAC address of a received frame is not in the MAC table?

- It initiates an ARP request.
- It broadcasts the frame out of all ports on the switch.
- It notifies the sending host that the frame cannot be delivered.
- It forwards the frame out of all ports except for the port at which the frame was received.

74. Which switching method has the lowest level of latency?

- cut-through
- store-and-forward

- fragment-free
- **fast-forward**

75. Which parameter does the router use to choose the path to the destination when there are multiple routes available?

- **the lower metric value that is associated with the destination network**
- the lower gateway IP address to get to the destination network
- the higher metric value that is associated with the destination network
- the higher gateway IP address to get to the destination network

76. Which two statements describe the functions or characteristics of ROM in a router? (Choose two.)

- stores routing tables
- allows software to be updated without replacing pluggable chips on the motherboard
- **maintains instructions for POST diagnostics**
- holds ARP cache
- **stores bootstrap program**

77. Which statement describes a characteristic of the Cisco router management ports?

- A console port is used for remote management of the router.
- **A console port is not used for packet forwarding.**
- Serial and DSL interfaces are types of management ports.
- Each Cisco router has a LED indicator to provide information about the status of the management ports.

78. What happens when part of an Internet radio transmission is not delivered to the destination?

- A delivery failure message is sent to the source host.
- The part of the radio transmission that was lost is re-sent.
- The entire transmission is re-sent.
- **The transmission continues without the missing portion.**

79. What is the dotted decimal representation of the IPv4 address 11001011.00000000.01110001.11010011?

- 192.0.2.199
- 198.51.100.201
- **203.0.113.211**
- 209.165.201.223

80. Which three IP addresses are private ? (Choose three.)

- 10.20.30.1
- 172.32.5.2
- 192.167.10.10
- 172.30.5.3
- 192.168.5.5
- 224.6.6.6

81. What types of addresses make up the majority of addresses within the /8 block IPv4 bit space?

- private addresses
- public addresses
- multicast addresses
- experimental addresses

82. Refer to the exhibit. What is the maximum TTL value that is used to reach the destination www.cisco.com??

```
C:\Users> tracert www.cisco.com

Tracing route to e144.dscb.akamaiedge.net [184.85.128.170]
over a maximum of 30 hops:

  1    15 ms    2 ms     3 ms    192.168.0.1
  2    11 ms    12 ms    13 ms    <output omitted> [177.142.64.1]
  3    13 ms    15 ms    21 ms    <output omitted> [201.17.0.24]
  4    20 ms    19 ms    19 ms    <output omitted> [201.17.0.11]
  5    29 ms    22 ms    21 ms    <output omitted> [201.73.3.5]

<output omitted>

 12    98 ms    58 ms    60 ms    <output omitted> [177.159.118.34]
 13    65 ms    58 ms    66 ms    <output omitted> [184.85.128.170]

Trace complete.
```

CCNA 1 Final Exam Answer 014 (v5.02, 2015)

- 11
- 12
- 13
- 14

83. A company has a network address of 192.168.1.64 with a subnet mask of 255.255.255.192. The company wants to create two subnetworks that would contain 10 hosts and 18 hosts respectively. Which two networks would achieve that? (Choose two.)

- 192.168.1.16/28

- 192.168.1.64/27
- 192.168.1.128/27
- 192.168.1.96/28
- 192.168.1.192/28

84. In a network that uses IPv4, what prefix would best fit a subnet containing 100 hosts?

- /23
- /24
- /25
- /26

85. Which protocol supports rapid delivery of streaming media?

- Transmission Control Protocol
- Real-Time Transport Protocol
- Secure File Transfer Protocol
- Video over Internet Protocol

86. Why would a network administrator use the tracer utility?

- to determine the active TCP connections on a PC
- to check information about a DNS name in the DNS server
- to identify where a packet was lost or delayed on a network
- to display the IP address, default gateway, and DNS server address for a PC

87. Refer to the exhibit. What is the significance of the asterisk (*) in the exhibited output?

```

ATC_R1#show file systems
File Systems:

      Size (b)      Free (b)      Type  Flags  Prefixes
*      64016384      12822561     flash  rw     flash:
      29688         23590       nvram  rw     nvram:
ATC_R1#

```

CCNA 1 Final Exam Answer 015 (v5.02, 2015)

- The asterisk shows which file system was used to boot the system.
- The asterisk designates which file system is the default file system.
- An asterisk indicates that the file system is bootable.
- An asterisk designates that the file system has at least one file that uses that file system.

88. Which WLAN security protocol generates a new dynamic key each time a client establishes a connection with the AP?

- EAP
- PSK
- WEP
- **WPA**

89. Fill in the blank.

Point-to-point communications where both devices can transmit and receive on the medium at the same time are known as **full-duplex** .

90. Match each characteristic to the appropriate email protocol. (Not all options are used.)

POP
does not require a centralized backup solution
mail is deleted as it is downloaded
desirable for an ISP or large business

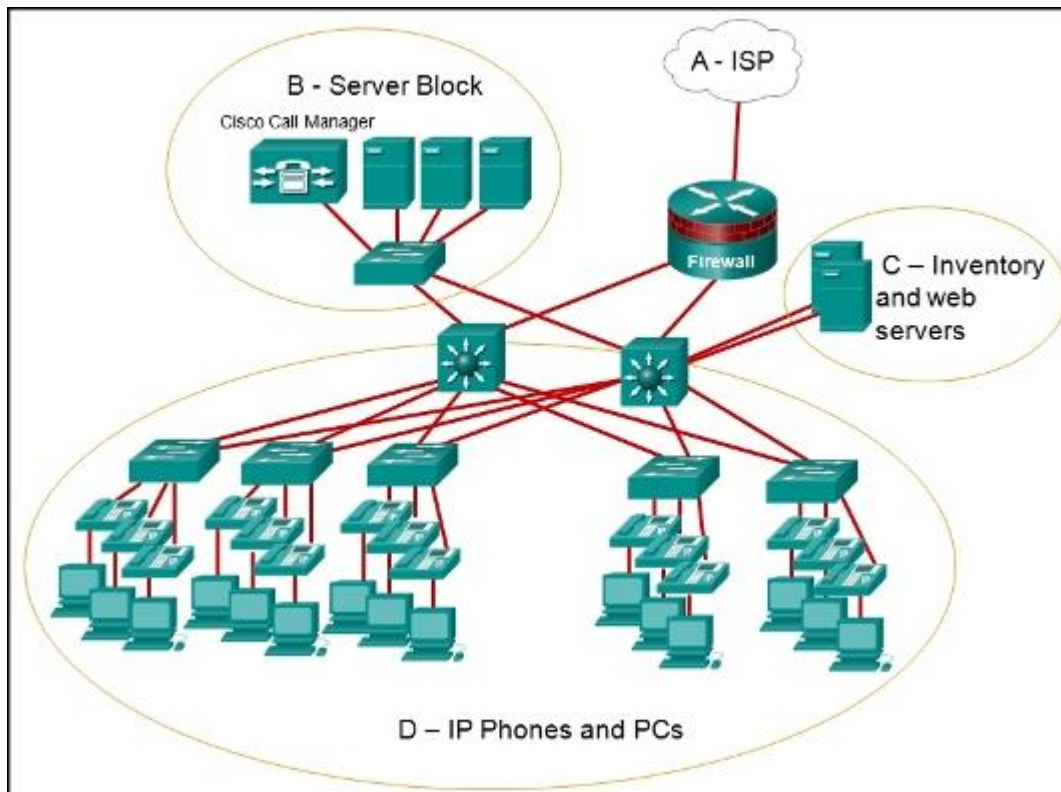
IMAP
downloads copies of email messages to the client
original messages must be manually deleted
requires a larger amount of disk space

CCNA 1 Final Exam Answer 016 (v5.02, 2015)

91. A host is accessing a Telnet server on a remote network. Which three functions are performed by intermediary network devices during this conversation? (Choose three.)

- **regenerating data signals**
- acting as a client or a server
- providing a channel over which messages travel
- **applying security settings to control the flow of data**
- **notifying other devices when errors occur**
- serving as the source or destination of the messages

92. Refer to the exhibit. Which area would most likely be an extranet for the company network that is shown?



CCNA 1 Final Exam Answer 017 (v5.02, 2015)

- area A
- area B
- **area C**
- area D

93. What is the purpose of having a converged network?

- to provide high speed connectivity to all end devices
- to make sure that all types of data packets will be treated equally
- to achieve fault tolerance and high availability of data network infrastructure devices
- **to reduce the cost of deploying and maintaining the communication infrastructure**

94. Three office workers are using the corporate network. The first employee uses a web browser to view a company web page in order to read some announcements. The second employee accesses the corporate database to perform some financial transactions. The third employee participates in an important live audio conference with other office workers in branch offices. If QoS is implemented on this network, what will be the priorities from highest to lowest of the different data types?

- **audio conference, financial transactions, web page**

- financial transactions, web page, audio conference
- audio conference, web page, financial transactions
- financial transactions, audio conference, web page

95. During normal operation, from which location do most Cisco switches and routers run the IOS?

- **RAM**
- flash
- NVRAM
- disk drive

96. A network administrator is making changes to the configuration of a router. After making the changes and verifying the results, the administrator issues the copy running-config startup-config command. What will happen after this command executes?

- The configuration will be copied to flash.
- **The configuration will load when the router is restarted.**
- The new configuration file will replace the IOS file.
- The changes will be lost when the router restarts.

97. What information does the loopback test provide?

- **The TCP/IP stack on the device is working correctly.**
- The device has end-to-end connectivity.
- DHCP is working correctly.
- The Ethernet cable is working correctly.
- The device has the correct IP address on the network.

98. What is a characteristic of the LLC sublayer?

- It provides the logical addressing required that identifies the device.
- It provides delimitation of data according to the physical signaling requirements of the medium.
- **It places information in the frame allowing multiple Layer 3 protocols to use the same network interface and media.**
- It defines software processes that provide services to the physical layer.

99. What method is used to manage contention-based access on a wireless network?

- CSMA/CD
- priority ordering
- **CSMA/CA**
- token passing

100. What happens when a switch receives a frame and the calculated CRC value is different than the value that is in the FCS field?

- The switch places the new CRC value in the FCS field and forwards the frame.
- The switch notifies the source of the bad frame.
- **The switch drops the frame.**
- The switch floods the frame to all ports except the port through which the frame arrived to notify the hosts of the error.

101. Which destination address is used in an ARP request frame?

- 0.0.0.0
- 255.255.255.255
- **FFFF.FFFF.FFFF**
- 127.0.0.1
- 01-00-5E-00-AA-23

102. What is the auto-MDIX feature on a switch?

- the automatic configuration of an interface for 10/100/1000 Mb/s operation
- **the automatic configuration of an interface for a straight-through or a crossover Ethernet cable connection**
- the automatic configuration of full-duplex operation over a single Ethernet copper or optical cable
- the ability to turn a switch interface on or off accordingly if an active connection is detected

103. Which frame forwarding method receives the entire frame and performs a CRC check to detect errors before forwarding the frame?

- cut-through switching
- **store-and-forward switching**
- fragment-free switching
- fast-forward switching

104. What are the two main components of Cisco Express Forwarding (CEF)? (Choose two.)

- **adjacency tables**
- MAC-address tables
- routing tables
- ARP tables
- **forwarding information base (FIB)**

105. Which statement describes the sequence of processes executed by a router when it receives a packet from a host to be delivered to a host on another network?

- It receives the packet and forwards it directly to the destination host.
- **It de-encapsulates the packet, selects the appropriate path, and encapsulates the packet to forward it toward the destination host.**
- It de-encapsulates the packet and forwards it toward the destination host.
- It selects the path and forwards it toward the destination host.

106. Which technology provides a solution to IPv4 address depletion by allowing multiple devices to share one public IP address?

- ARP
- DNS
- **NAT**
- SMB
- DHCP
- HTTP

107. Refer to the exhibit. Router R1 has two interfaces that were configured with correct IP addresses and subnet masks. Why does the show ip route command output not display any information about the directly connected networks??

```
R1# show ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

R1#
```

CCNA 1 Final Exam Answer 018 (v5.02, 2015)

- The directly connected networks have to be created manually to be displayed in the routing table.
- The routing table will only display information about these networks when the router receives a packet.

- The no shutdown command was not issued on these interfaces.
- The gateway of last resort was not configured.

108. What happens when part of an Internet television transmission is not delivered to the destination?

- A delivery failure message is sent to the source host.
- The part of the television transmission that was lost is re-sent.
- The entire transmission is re-sent.
- The transmission continues without the missing portion.

109. Which three statements characterize the transport layer protocols? (Choose three.)

- TCP and UDP port numbers are used by application layer protocols.
- TCP uses port numbers to provide reliable transportation of IP packets.
- UDP uses windowing and acknowledgments for reliable transfer of data.
- TCP uses windowing and sequencing to provide reliable transfer of data.
- TCP is a connection-oriented protocol. UDP is a connectionless protocol.

110. A user opens three browsers on the same PC to access www.cisco.com to search for certification course information. The Cisco web server sends a datagram as a reply to the request from one of the web browsers. Which information is used by the TCP/IP protocol stack in the PC to identify the destination web browser?

- the destination IP address
- the destination port number
- the source IP address
- the source port number

111. Which statement is true regarding the UDP client process during a session with a server?

- Datagrams that arrive in a different order than that in which they were sent are not placed in order.
- A session must be established before datagrams can be exchanged.
- A three-way handshake takes place before the transmission of data begins.
- Application servers have to use port numbers above 1024 in order to be UDP capable.

112. Which two components are configured via software in order for a PC to participate in a network environment? (Choose two.)

- MAC address
- IP address

- kernel
- shell
- subnet mask

113. What are three characteristics of multicast transmission? (Choose three.)

- The source address of a multicast transmission is in the range of 224.0.0.0 to 224.0.0.255.
- A single packet can be sent to a group of hosts.
- Multicast transmission can be used by routers to exchange routing information.
- Routers will not forward multicast addresses in the range of 224.0.0.0 to 224.0.0.255.
- Computers use multicast transmission to request IPv4 addresses.
- Multicast messages map lower layer addresses to upper layer addresses.

114. Which two reasons generally make DHCP the preferred method of assigning IP addresses to hosts on large networks? (Choose two.)

- It eliminates most address configuration errors.
- It ensures that addresses are only applied to devices that require a permanent address.
- It guarantees that every device that needs an address will get one.
- It provides an address only to devices that are authorized to be connected to the network.
- It reduces the burden on network support staff.

115. What is the subnet address for the address 2001:DB8:BC15:A:12AB::1/64?

- 2001:DB8:BC15::0
- 2001:DB8:BC15:A::0
- 2001:DB8:BC15:A:1::1
- 2001:DB8:BC15:A:12::0

116. Which two tasks are functions of the presentation layer? (Choose two.)

- compression
- addressing
- encryption
- session control
- authentication

117. What is the purpose of the network security authentication function?

- to require users to prove who they are

- to determine which resources a user can access
- to keep track of the actions of a user
- to provide challenge and response questions

118. Which type of wireless security makes use of dynamic encryption keys each time a client associates with an AP?

- EAP
- PSK
- WEP
- **WPA**

119. Fill in the blank.

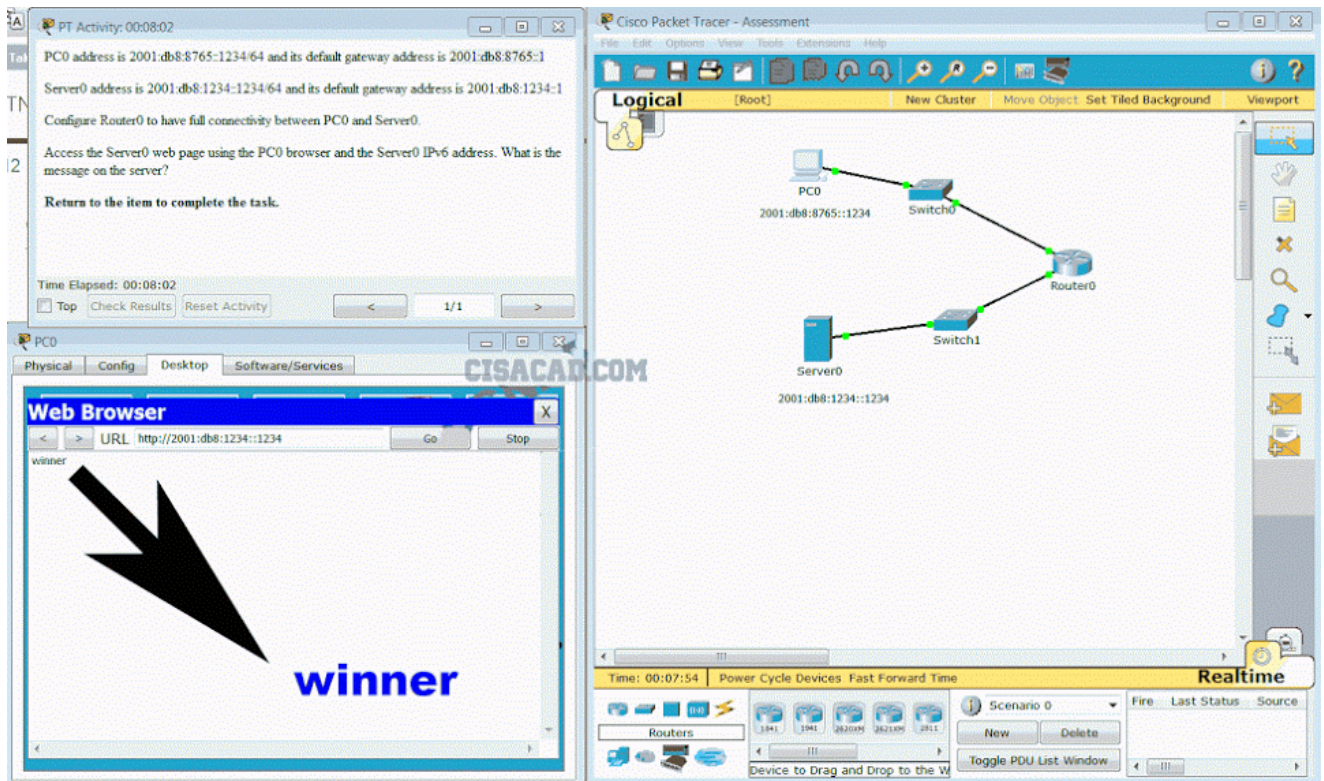
During data communications, a host may need to send a single message to a specific group of destination hosts simultaneously. This message is in the form of a **Multicast** message.

120. Match the description with the associated IOS mode. (Not all options are used.)

user EXEC mode	limited number of basic monitoring commands
	the first entrance into the CLI of an IOS device
privileged EXEC mode	accessed by entering the enable command
	identified by a prompt ending with the # character
global configuration mode	changes made affect the operation of the device as a whole
	accessed by entering the configure terminal command

CCNA 1 Final Exam Answer 019 (v5.02, 2015)

121. 121. Launch PT – Hide and Save PT.



Open the PT activity. Perform the tasks in the activity instructions and then fill in the blank.

The Server0 message is . " winner "

122. A PC is configured to obtain an IP address automatically from network 192.168.1.0/24. The network administrator issues the arp -a command and notices an entry of 192.168.1.255 ff-ff-ff-ff-ff-ff. Which statement describes this entry?

- This entry refers to the PC itself.
- This entry maps to the default gateway.
- This is a static map entry.***
- This is a dynamic map entry.

123. Which field in an IPv4 packet header will typically stay the same during its transmission?

- Packet Length
- Destination Address***
- Flag
- Time-to-Live

124. Launch PT – Hide and Save PT

2. Refer to the exhibit. A network administrator is configuring access control to switch SW1. If the administrator has already logged into a Telnet session on the switch, which password is needed to access privileged EXEC mode?

```
Enter configuration commands, one per line. End with CNTL/Z.
SW1(config)# enable password letmein
SW1(config)# enable secret secretin
SW1(config)# line console 0
SW1(config-line)# password lineconin
SW1(config-line)# login
SW1(config-line)# exit
SW1(config)# line vty 0 15
SW1(config-line)# password linevtyin
SW1(config-line)# login
SW1(config-line)# end
SW1#
```

CCNA 1 Final Exam Answer 020 (v5.02, 2015)

- letmein
 - secretin
 - lineconin
 - linevtyin
- 3.
4. What are the three primary functions provided by Layer 2 data encapsulation? (Choose three.)
- error correction through a collision detection method
 - session control using port numbers
 - data link layer addressing
 - placement and removal of frames from the media
 - detection of errors through CRC calculations
 - delimiting groups of bits into frames
 - conversion of bits into data signals
5. What must be configured to enable Cisco Express Forwarding (CEF) on most Cisco devices that perform Layer 3 switching?
- Manually configure next-hop Layer 2 addresses.
 - Issue the no shutdown command on routed ports.
 - CEF is enabled by default, so no configuration is necessary.
 - Manually map Layer 2 addresses to Layer 3 addresses to populate the forwarding information base (FIB).

6. What is the purpose of adjacency tables as used in Cisco Express Forwarding (CEF)?

- to populate the forwarding information base (FIB)
- **to maintain Layer 2 next-hop addresses**
- to allow the separation of Layer 2 and Layer 3 decision making
- to update the forwarding information base (FIB)

7. Which statement describes a characteristic of the network layer in the OSI model?

- It manages the data transport between the processes running on each host.
- In the encapsulation process, it adds source and destination port numbers to the IP header.
- When a packet arrives at the destination host, its IP header is checked by the network layer to determine where the packet has to be routed.
- **Its protocols specify the packet structure and processing used to carry the data from one host to another.**

8. A user gets an IP address of 192.168.0.1 from the company network administrator. A friend of the user at a different company gets the same IP address on another PC. How can two PCs use the same IP address and still reach the Internet, send and receive email, and search the web?

- Both users must be using the same Internet Service Provider.
- **ISPs use Network Address Translation to change a user IP address into an address that can be used on the Internet.**
- ISPs use Domain Name Service to change a user IP address into a public IP address that can be used on the Internet.
- Both users must be on the same network.

9. At a minimum, which address is required on IPv6-enabled interfaces?

- **link-local**
- unique local
- site local
- global unicast

10. Why does HTTP use TCP as the transport layer protocol?

- to ensure the fastest possible download speed
- because HTTP is a best-effort protocol
- because transmission errors can be tolerated easily
- **because HTTP requires reliable delivery**

11. What is the binary representation of 0xCA?

- 10111010

- 11010101
- **11001010**
- 11011010

12. What is the valid most compressed format possible of the IPv6 address 2001:0DB8:0000:AB00:0000:0000:1234?

- **2001:DB8:0:AB00::1234**
- 2001:DB8:0:AB::1234
- 2001:DB8::AB00::1234
- 2001:DB8:0:AB:0:1234

13. Refer to the exhibit. What is the maximum TTL value that is used to reach the destination www.cisco.com?

```
C:\Users> tracert www.cisco.com

Tracing route to e144.dscb.akamaiedge.net [184.85.128.170]
over a maximum of 30 hops:

  1    15 ms    2 ms    3 ms    192.168.0.1
  2    11 ms    12 ms   13 ms   <output omitted> [177.142.64.1]
  3    13 ms    15 ms   21 ms   <output omitted> [201.17.0.24]
  4    20 ms    19 ms   19 ms   <output omitted> [201.17.0.11]
  5    29 ms    22 ms   21 ms   <output omitted> [201.73.3.5]

<output omitted>

 12    98 ms    58 ms   60 ms   <output omitted> [177.159.118.34]]
 13    65 ms    58 ms   66 ms   <output omitted> [184.85.128.170]

Trace complete.
```

CCNA 1 Final Exam Answer 021 (v5.02, 2015)

- 11
- 12
- **13**
- 14

14. What field content is used by ICMPv6 to determine that a packet has expired?

- TTL field
- CRC field
- **Hop Limit field**
- Time Exceeded field

15. Which statement is true about variable-length subnet masking?

- Each subnet is the same size.

- The size of each subnet may be different, depending on requirements.
- Subnets may only be subnetted one additional time.
- Bits are returned, rather than borrowed, to create additional subnets.

16. Which firewall technique blocks incoming packets unless they are responses to internal requests?

- port filtering
- **stateful packet inspection**
- URL filtering
- application filtering

17. A network technician is investigating network connectivity from a PC to a remote host with the address 10.1.1.5. Which command issued on the PC will return to the technician the complete path to the remote host?

- trace 10.1.1.5
- traceroute 10.1.1.5
- **tracert 10.1.1.5**
- ping 10.1.1.5

18. Fill in the blank.

To prevent faulty network devices from carrying dangerous voltage levels, equipment must be **grounded** correctly

19. A network engineer is measuring the transfer of bits across the company backbone for a mission critical database application. The engineer notices that the network throughput appears lower than the bandwidth expected. Which three factors could influence the differences in throughput? (Choose three.)

- **the amount of traffic that is currently crossing the network**
- the sophistication of the encapsulation method applied to the data
- **the type of traffic that is crossing the network**
- **the latency that is created by the number of network devices that the data is crossing**
- the bandwidth of the WAN connection to the Internet
- the reliability of the gigabit Ethernet infrastructure of the backbone

20. What is a possible hazard that can be caused by network cables in a fire?

- **The cable insulation could be flammable.**
- Users could be exposed to excessive voltage.
- Network cables could be exposed to water.
- The network cable could explode.

21. What device is commonly used to verify a UTP cable?

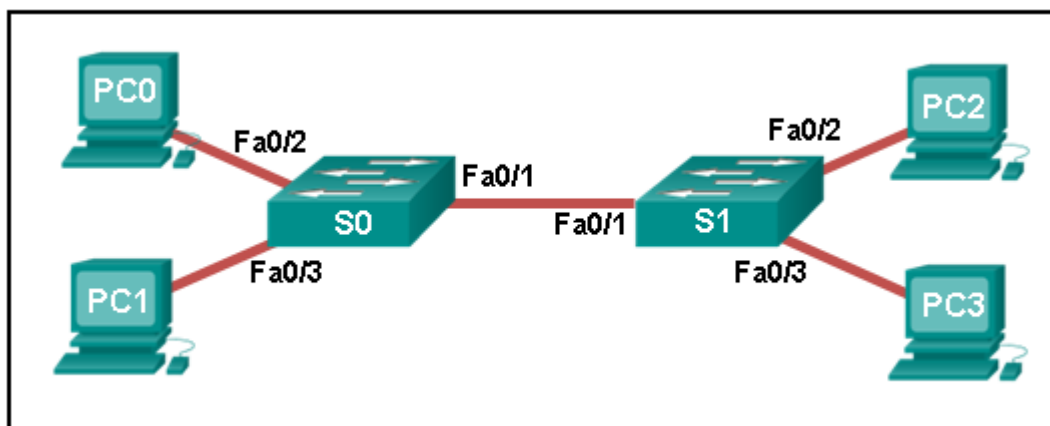
- a multimeter
- an Optical Time Domain Reflectometer
- **a cable tester**

- an ohmmeter

22. What needs to be checked when testing a UTP network cable?

- capacitance
- **wire map**
- inductance
- flexibility

23. Refer to the exhibit. A ping to PC2 is issued from PC0, PC1, and PC3 in this exact order. Which MAC addresses will be contained in the S1 MAC address table that is associated with the Fa0/1 port?



CCNA 1 Final Exam Answer 022 (v5.02, 2015)

- **just PC0 and PC1 MAC addresses**
- just the PC0 MAC address
- PC0, PC1, and PC2 MAC addresses
- just the PC1 MAC address
- just the PC2 MAC address

24. Which function is provided by TCP?

- data encapsulation
- **detection of missing packets**
- communication session control
- path determination for data packets

25. What does a router use to determine where to send data it receives from the network?

- an ARP table
- **a routing table**
- the destination PC physical address
- a switching table

26. Which router interface should be used for direct remote access to the router via a modem?

- an inband router interface
- a console port
- a serial WAN interface
- an AUX port

27. A technician is configuring a router to allow for all forms of management access. As part of each different type of access, the technician is trying to type the command login. Which configuration mode should be entered to do this task?

- user executive mode
- global configuration mode
- any line configuration mode
- privileged EXEC mode

28. Which three statements characterize the transport layer protocols? (Choose three.)

- TCP and UDP port numbers are used by application layer protocols.
- TCP uses port numbers to provide reliable transportation of IP packets.
- UDP uses windowing and acknowledgments for reliable transfer of data.
- TCP uses windowing and sequencing to provide reliable transfer of data.
- TCP is a connection-oriented protocol. UDP is a connectionless protocol.

29. Refer to the exhibit. A TCP segment from a server has been captured by Wireshark, which is running on a host. What acknowledgement number will the host return for the TCP segment that has been received?

- 2
- 21
- 250
- 306
- 2921

30. Which statement is true about an interface that is configured with the IPv6 address command?

- IPv6 traffic-forwarding is enabled on the interface.
- **A link-local IPv6 address is automatically configured on the interface.**
- A global unicast IPv6 address is dynamically configured on the interface.
- Any IPv4 addresses that are assigned to the interface are replaced with an IPv6 address.

31. Refer to the exhibit. The network administrator for a small advertising company has chosen to use the 192.168.5.96/27 network for internal LAN addressing. As shown in the exhibit, a static IP address is assigned to the company web server. However, the web server cannot access the Internet. The administrator verifies that local workstations with IP addresses that are assigned by a DHCP server can access the Internet, and the web server is able to ping local workstations. Which component is incorrectly configured?

The screenshot shows a 'General' tab in a network configuration window. It contains the following text and controls:

You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

Obtain an IP address automatically

Use the following IP address:

IP address:	192 . 168 . 5 . 98
Subnet mask:	255 . 255 . 255 . 224
Default gateway:	192 . 168 . 5 . 1

Obtain DNS server address automatically

Use the following DNS server addresses:

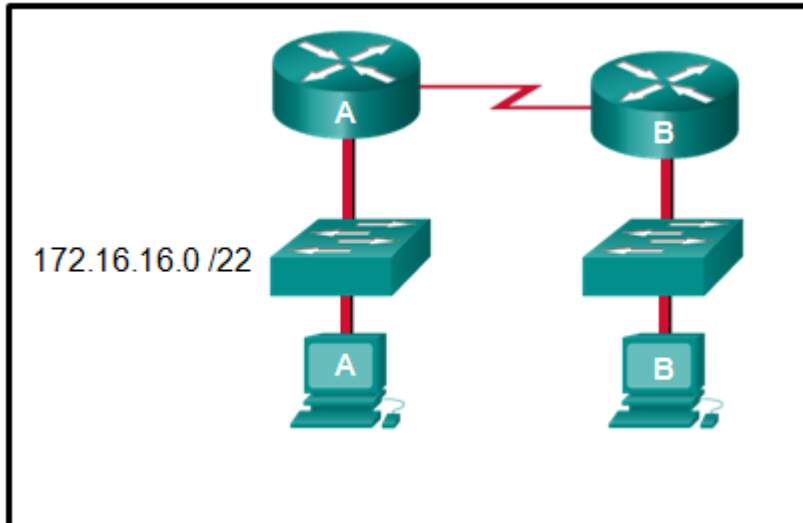
Preferred DNS server:	128 . 208 . 3 . 254
Alternate DNS server:	. . .

CCNA 1 Final Exam Answer 024 (v5.02, 2015)

- subnet mask
- DNS address
- host IP address

- default gateway address

32. Refer to the exhibit. An administrator must send a message to everyone on the router A network. What is the broadcast address for network 172.16.16.0/22?



CCNA 1 Final Exam Answer 025 (v5.02, 2015)

- 172.16.16.255
- 172.16.20.255
- **172.16.19.255**
- 172.16.23.255
- 172.16.255.255

33. A network administrator is variably subnetting a given block of IPv4 addresses. Which combination of network addresses and prefix lengths will make the most efficient use of addresses when the need is for 2 subnets capable of supporting 10 hosts and 1 subnet that can support 6 hosts?

- **10.1.1.128/28**
10.1.1.144/28
10.1.1.160/29
- 10.1.1.128/28
10.1.1.144/28
10.1.1.160/28
- 10.1.1.128/28
10.1.1.140/28
10.1.1.158/26
- 10.1.1.128/26
10.1.1.144/26
10.1.1.160/26

- 10.1.1.128/26
- 10.1.1.140/26
- 10.1.1.158/28

34. How many additional bits should be borrowed from a /26 subnet mask in order to create subnets for WAN links that need only 2 useable addresses?

- 2
- 3
- **4**
- 5
- 6

35. A network administrator requires access to manage routers and switches locally and remotely. Match the description to the access method. (Not all options are used.)

remote access method that uses encryption
preferred out-of-band access method
FTP
remote access via a dialup connection
unsecure remote access

CCNA 1 Final Exam Answer 026 (v5.02, 2015)

36. Refer to the exhibit. The administrator configured the access to the console and the vty lines of a router. Which conclusion can be drawn from this configuration?

```
Router(config)# line vty 0 15
Router(config-line)# password cisco
Router(config-line)# exit
Router(config)# line console 0
Router(config-line)# password cisco
Router(config-line)# login
Router(config-line)# exit
Router(config)#
```

CCNA 1 Final Exam Answer 027 (v5.02, 2015)

- Unauthorized individuals can connect to the router via Telnet without entering a password.
- **Because the IOS includes the login command on the vty lines by default, access to the device via Telnet will require authentication.**
- Access to the vty lines will not be allowed via Telnet by anyone.
- Because the login command was omitted, the password cisco command is not applied to the vty lines.

37. An administrator issued the service password-encryption command to apply encryption to the passwords configured for enable password, vty, and console lines. What will be the consequences if the administrator later issues the no service password-encryption command?

- It will remove encryption from all passwords.
- It will reverse only the vty and console password encryptions.
- **It will not reverse any encryption.**
- It will reverse only the enable password encryption.

38. After making configuration changes, a network administrator issues a copy running-config startup-config command in a Cisco switch. What is the result of issuing this command?

- The new configuration will be stored in flash memory.
- **The new configuration will be loaded if the switch is restarted.**
- The current IOS file will be replaced with the newly configured file.
- The configuration changes will be removed and the original configuration will be restored.

39. What are two features of ARP? (Choose two.)

- **If a host is ready to send a packet to a local destination device and it has the IP address but not the MAC address of the destination, it generates an ARP broadcast.**
- An ARP request is sent to all devices on the Ethernet LAN and contains the IP address of the destination host and its multicast MAC address.
- When a host is encapsulating a packet into a frame, it refers to the MAC address table to determine the mapping of IP addresses to MAC addresses.
- If no device responds to the ARP request, then the originating node will broadcast the data packet to all devices on the network segment.
- **If a device receiving an ARP request has the destination IPv4 address, it responds with an ARP reply.**

40. What are two examples of the cut-through switching method? (Choose two.)

- store-and-forward switching
- **fast-forward switching**
- CRC switching
- **fragment-free switching**
- QOS switching

41. A network administrator is enabling services on a newly installed server. Which two statements describe how services are used on a server? (Choose two.)

- Data sent with a service that uses TCP is received in the order the data was sent.
- A port is considered to be open when it has an active server application that is assigned to it.
- An individual server can have two services that are assigned to the same port number.
- An individual server cannot have multiple services running at the same time.
- Server security can be improved by closing ports that are associated with unused services.

42. Why does a Layer 3 device perform the ANDing process on a destination IP address and subnet mask?

- to identify the broadcast address of the destination network
- to identify the host address of the destination host
- to identify faulty frames
- to identify the network address of the destination network

43. Given the binary address of 11101100 00010001 00001100 00001010, which address does this represent in dotted decimal format?

- 234.17.10.9
- 234.16.12.10
- 236.17.12.6
- 236.17.12.10

44. A particular telnet site does not appear to be responding on a Windows 7 computer. What command could the technician use to show any cached DNS entries for this web page?

- ipconfig /all
- arp -a
- ipconfig /displaydns
- nslookup

45. Fill in the blank.

Network devices come in two physical configurations. Devices that have expansion slots that provide the flexibility to add new modules have a **Modular** configuration.

45. Refer to the exhibit. What is the maximum TTL value that is used to reach the destination www.cisco.com?

```

C:\Users> tracert www.cisco.com

Tracing route to e144.dscb.akamaiedge.net [184.85.128.170]
over a maximum of 30 hops:

  1    15 ms    2 ms    3 ms    192.168.0.1
  2    11 ms    12 ms   13 ms   <output omitted> [177.142.64.1]
  3    13 ms    15 ms   21 ms   <output omitted> [201.17.0.24]
  4    20 ms    19 ms   19 ms   <output omitted> [201.17.0.11]
  5    29 ms    22 ms   21 ms   <output omitted> [201.73.3.5]

<output omitted>

 12    98 ms    58 ms   60 ms   <output omitted> [177.159.118.34]]
 13    65 ms    58 ms   66 ms   <output omitted> [184.85.128.170]

Trace complete.

```

- 11
- 12
- 13*
- 14

46. Which statement is true about DHCP operation?

When a device that is configured to use DHCP boots, the client broadcasts a DHCPDISCOVER message to identify any available DHCP servers on the network.*

A client must wait for lease expiration before it sends another DHCPREQUEST message.

The DHCPDISCOVER message contains the IP address and sub net mask to be assigned, the IP address of the DNS server, and the IP address of the default gateway.

If the client receives several DHCPOFFER messages from different servers, it sends a unicast DHCPREQUEST message to the server from which it chooses to obtain the IP information.

47. Which type of wireless security is easily compromised?

- EAP
- PSK
- WEP*
- WPA

48. A network administrator notices that the throughput on the network appears lower than expected when compared to the end-to-end network bandwidth. Which three factors can explain this difference? (Choose three.)

- the amount of traffic*
- the type of data encapsulation in use

the type of traffic*

the number and type of network devices that the data is crossing*

the bandwidth of the connection to the ISP

the reliability of the network backbone

49. A host PC is attempting to lease an address through DHCP. What message is sent by the server to the client know it is able to use the provided IP information?

DHCPDISCOVER

DHCPOFFER*

DHCPPREQUEST

DHCPACK

DHCPNACK

50. A network administrator is configuring access control to switch SW1. If the administrator uses console line to connect to the switch, which password is needed to access user EXEC mode?

```
Enter configuration commands, one per line. End with CNTL/Z.
SW1(config)# enable password letmein
SW1(config)# enable secret secretin
SW1(config)# line console 0
SW1(config-line)# password lineconin
SW1(config-line)# login
SW1(config-line)# exit
SW1(config)# line vty 0 15
SW1(config-line)# password linevtyin
SW1(config-line)# login
SW1(config-line)# end
SW1#
```

letmein

secretin

lineconin*

linevtyin

**51. What is a characteristic of UTP cabling?
cancellation***

cladding

immunity to electrical hazards

woven copper braid or metallic foil

52. How many bits would need to be borrowed if a network admin were given the IP addressing scheme of 172.16.0.0/16 and needed no more than 16 subnet with equal number of hosts?

10

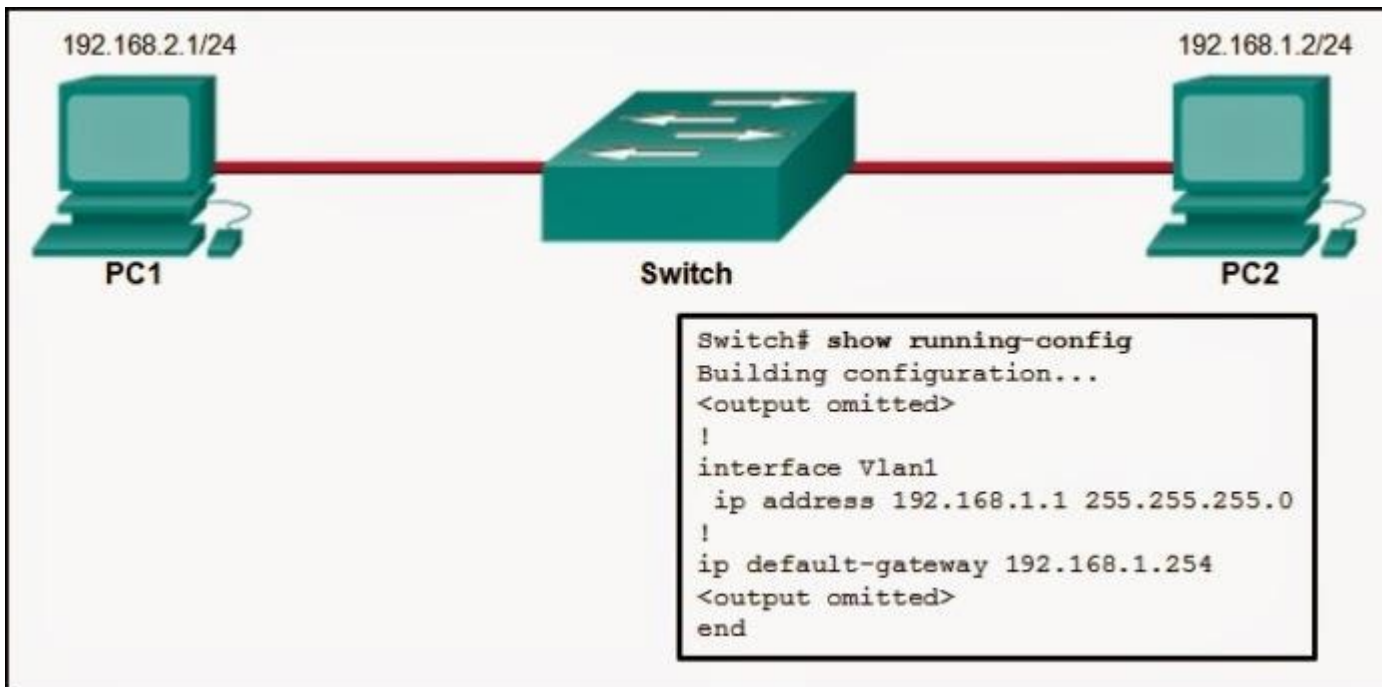
12

- 2
- 4*
- 8

53. A network administrator requires access to manage routers and switches locally and remotely. Match the description to the access method. (Not all options are used.)

remote access method that uses encryption
preferred out-of-band access method
FTP
remote access via a dialup connection
unsecure remote access

54.



It will give 4 options about ping, the correct one is:
 The PC2 will be able to ping 192.168.1.1*

55. Which statement best describes the operation of the File Transfer Protocol?

An FTP client uses a source port number of 21 and a randomly generated destination port number during the establishment of control traffic with an FTP Server.

An FTP client uses a source port number of 20 and a randomly generated destination port number during the establishment of data traffic with an FTP Server.

An FTP server uses a source port number of 20 and a randomly generated destination port number during the establishment of control traffic with an FTP client.*

An FTP server uses a source port number of 21 and a randomly generated destination port number during the establishment of control traffic with an FTP client.

56. A client is establishing a TCP session with a server. How is the acknowledgment number in the response segment to the client determined? The acknowledgment number field is modified by adding 1 to the randomly chosen initial sequence number in response to the client.*

The acknowledgment number is set to 11 to signify an acknowledgment packet and synchronization packet back to the client.

The acknowledgment number field uses a random source port number in response to the client.

The acknowledgment number is set to 1 to signify an acknowledgment packet back to the client.

57. Why does layer 3 device perform the ANDing process on a destination IP and subnet Mask?

to identify host address and destination host;

to identify network address of destination host;*

to identify faulty frames;

to identify broadcast address of destination network;

58. There was also a question about if you activated service password encryption in the past and you prompt “no service password encryption” what password are modified ?

no password at all;*

password of the lines are in clear;

login password;

?

59. What type of communication rule would best describe CSMA/CD?

message encapsulation

flow control

message encoding

access method*

60. What is the primary reason to subnet IPv6 prefixes?

to conserve IPv6 addresses
to avoid wasting IPv6 addresses
to conserve IPv6 prefixes
to create a hierarchical Layer 3 network design*

61. What type of IPv6 address is FE80::1?

multicast
global unicast
link-local*
loopback

62. Which statement describes data throughput?

It is the measure of the bits transferred across the media under perfect conditions.
It is the measure of the bits transferred across the media over a given period of time.*

It indicates the capacity of a particular medium to carry data.
It is the guaranteed data transfer rate offered by an ISP.

63. Fill in the blank. Use a number.

IPv4 multicast addresses are directly mapped to IEEE 802 (Ethernet) MAC addresses using the last 4 of the 28 available bits in the IPv4 multicast group address.

64. How could a faulty network device create a source of hazard for a user? (Choose two.)

It could stop functioning.*
It could apply dangerous voltage to other pieces of equipment.
It could explode.*
It could produce an unsafe electromagnetic field.
It could apply dangerous voltage to itself.

65. What are three important considerations when planning the structure of an IP addressing scheme? (Choose three.)

preventing duplication of addresses*
providing and controlling access*
documenting the network
monitoring security and performance
conserving addresses*
implementing new services

66. What is the metric value that is used to reach the 10.1.1.0 network in the following routing table entry?

D 10.1.1.0/24 [90/2170112] via 209.165.200.226, 00:00:05, Serial0/0/0

24
90
05
2170112*

67. Which two services or protocols use the preferred UDP protocol for fast transmission and low overhead? (Choose two)

VoIP*
DNS*
HTTP
FTP
POP3

68. What action does a DHCPv4 client take if it receives more than one DHCPOFFER from multiple DHCP servers?

It sends a DHCPREQUEST that identifies which lease offer the client is accepting.*

It sends a DHCPNAK and begins the DHCP process over again.

It discards both offers and sends a new DHCPDISCOVER.

It accepts both DHCPOFFER messages and sends a DHCPACK.

69. To what legacy address class does the address 10.0.0.0 belong?

Class B
Class D
Class A*
Class C
Class E

70. What type of communication medium is used with a wireless LAN connection?

radio waves
fiber
microwave*
UTP

71. Which method of IPv6 prefix assignment relies on the prefix contained in RA messages?

EUI-64
static
SLAAC*
stateful DHCPv6

72. What is a characteristic of DNS?

DNS servers can cache recent queries to reduce DNS query traffic.*

DNS servers are programmed to drop requests for name translations that are not within their zone.

All DNS servers must maintain mappings for the entire DNS structure.

DNS relies on a hub-and-spoke topology with centralized servers.

73. What is the prefix for the host address 2001:DB8:BC15:A:12AB::1/64?

2001:DB8:BC15

2001:DB8:BC15:A*

2001:DB8:BC15:A:1

2001:DB8:BC15:A:12

74. What are two services provided by the OSI network layer? (Choose two.)

collision detection

placement of frames on the media

performing error detection

encapsulating PDUs from the transport layer*

routing packets toward the destination*

75. What information is maintained in the CEF adjacency table?

Layer 2 next hops

MAC address to IPv4 address mappings

IP address to interface mappings

the IP addresses of all neighboring routers