CCNA 1 v7.0 Modules 1 – 3: Basic Network Connectivity and Communications Exam Answers 2020

1. During a routine inspection, a technician discovered that software that was installed on a computer was secretly collecting data about websites that were visited by users of the computer. Which type of threat is affecting this computer?

DoS attack
identity theft
spyware*
zero-day attack

2. Which term refers to a network that provides secure access to the corporate offices by suppliers, customers and collaborators?

Internet
intranet
extranet*
extendednet

3. A large corporation has modified its network to allow users to access network resources from their personal laptops and smart phones. Which networking trend does this describe?

cloud computing
online collaboration
bring your own device*
video conferencing

4. What is an ISP?

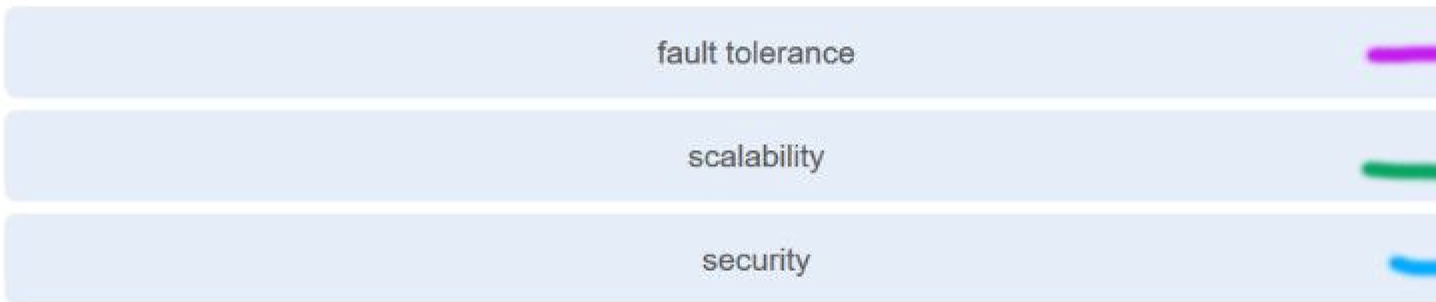
It is a standards body that develops cabling and wiring standards for networking.
It is a protocol that establishes how computers within a local network

communicate.

It is an organization that enables individuals and businesses to connect to the Internet.*

It is a networking device that combines the functionality of several different networking devices in one.

5. Match the requirements of a reliable network with the supporting network architecture. (Not all options are used.)



CCNA 1 v7.0 Modules 1 – 3 Exam Answers p5

6. An employee at a branch office is creating a quote for a customer. In order to do this, the employee needs to access confidential pricing information from internal servers at the Head Office. What type of network would the employee access?

an intranet*
the Internet
an extranet
a local area network

7. Which statement describes the use of powerline networking technology?

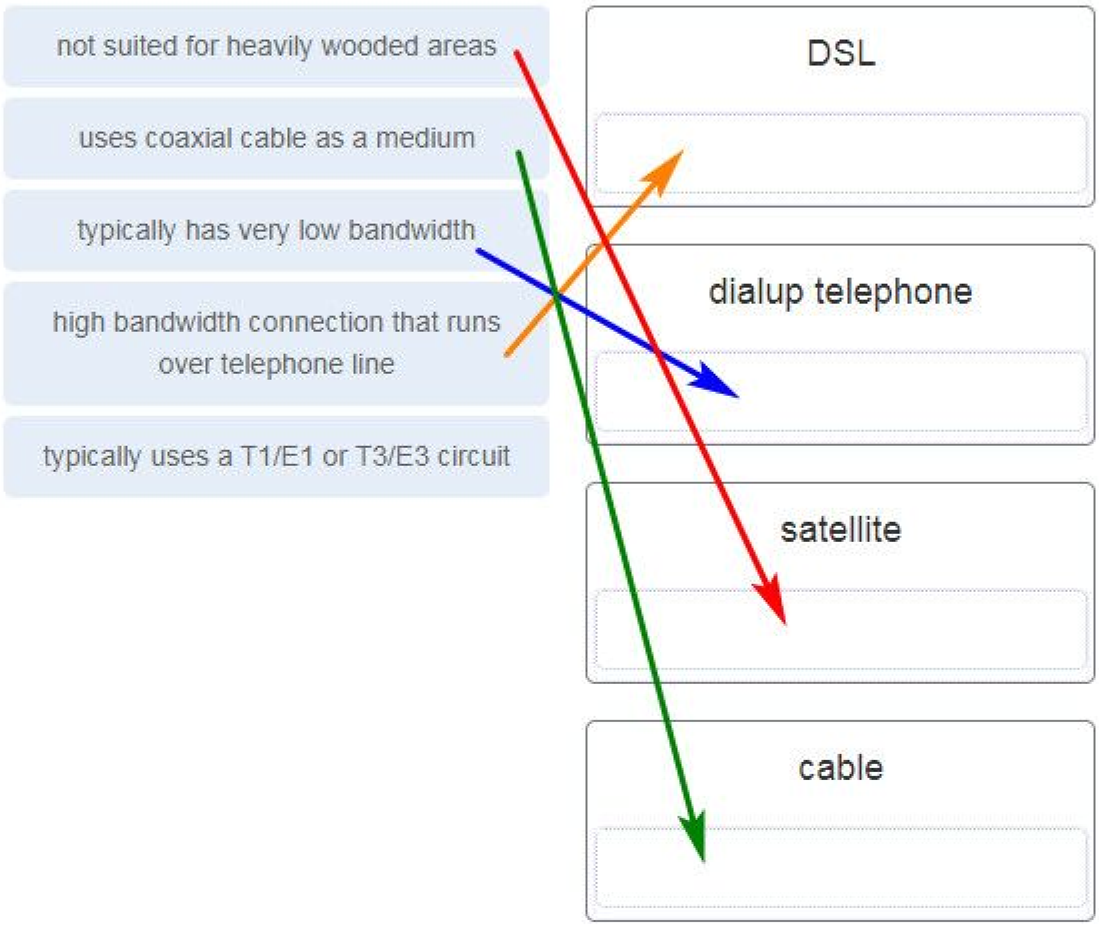
New “smart” electrical cabling is used to extend an existing home LAN.
A home LAN is installed without the use of physical cabling.
A device connects to an existing home LAN using an adapter and an existing electrical outlet.*
Wireless access points use powerline adapters to distribute data through the home LAN.

8. A networking technician is working on the wireless network at a medical clinic. The technician accidentally sets up the wireless network so that patients can see the medical records data of other patients. Which of the four network characteristics has been violated in this situation?

fault tolerance
scalability
security*
Quality of Service (QoS)
reliability

Explanation: Network security includes protecting the confidentiality of data that is on the network. In this case, because confidential data has been made available to unauthorized users, the security characteristic of the network has failed.

9. Match each characteristic to its corresponding Internet connectivity type. (Not all options are used.)



CCNA 1 v7.0 Modules 1 – 3 Exam Answers p9

Explanation: DSL is an always-on, high bandwidth connection that runs over telephone lines. Cable uses the same coaxial cable that carries television signals into the home to provide Internet access. Dialup telephone is much slower than either DSL or cable, but is the least expensive option for home users because it can use any telephone line and a simple modem. Satellite requires a clear line of sight and is affected by trees and other obstructions. None of these typical home options use dedicated leased lines such as T1/E1 and T3/E3.

10. What two criteria are used to help select a network medium from various network media? (Choose two.)

the types of data that need to be prioritized
the cost of the end devices utilized in the network
the distance the selected medium can successfully carry a signal*

the number of intermediate devices installed in the network
the environment where the selected medium is to be installed*

11. What type of network traffic requires QoS?

email
on-line purchasing
video conferencing*
wiki

12. A user is implementing security on a small office network. Which two actions would provide the minimum security requirements for this network? (Choose two.)

implementing a firewall*
installing a wireless network
installing antivirus software*
implementing an intrusion detection system
adding a dedicated intrusion prevention device

Explanation: Technically complex security measures such as intrusion prevention and intrusion prevention systems are usually associated with business networks rather than home networks. Installing antivirus software, antimalware software, and implementing a firewall will usually be the minimum requirements for home networks. Installing a home wireless network will not improve network security, and will require further security actions to be taken.

13. Passwords can be used to restrict access to all or parts of the Cisco IOS. Select the modes and interfaces that can be protected with passwords. (Choose three.)

VTY interface
console interface*
Ethernet interface
boot IOS mode
privileged EXEC mode*
router configuration mode

14. Which interface allows remote management of a Layer 2 switch?

the AUX interface
the console port interface
the switch virtual interface*
the first Ethernet port interface
Explanation: In a Layer 2 switch, there is a switch virtual interface (SVI) that provides a means for remotely managing the device.

15. 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.*
Explanation: Pressing the Tab key after a command has been partially typed will cause the IOS to complete the rest of the command.

16. While trying to solve a network issue, a technician made multiple changes to the current router configuration file. The changes did not solve the problem and were not saved. What action can the technician take to discard the changes and work with the file in NVRAM?

Issue the reload command without saving the running configuration.*
Delete the vlan.dat file and reboot the device.
Close and reopen the terminal emulation software.
Issue the copy startup-config running-config command.
Explanation: The technician does not want to make any mistakes trying to remove all the changes that were done to the running configuration file. The solution is to reboot the router without saving the running configuration. The copy startup-config running-config command does not overwrite the running configuration file with the configuration file stored in NVRAM, but rather it just has an additive effect.

17. 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

18. Refer to the exhibit.

```
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 v7.0 Modules 1 – 3 Exam Answers p18

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

letmein
secretin
lineconin*
linevtyin

Explanation: Telnet accesses a network device through the virtual interface configured with the line VTY command. The password configured under this is required to access the user EXEC mode. The password configured under the line console 0 command is required to gain entry through the console port, and the enable and enable secret passwords are used to allow entry into the privileged EXEC mode.

19. A technician configures a switch with these commands:

```
SwitchA(config)# interface vlan 1

SwitchA(config-if)# ip address 192.168.1.1 255.255.255.0

SwitchA(config-if)# no shutdown
```

What is the technician configuring?

Telnet access
SVI*
password encryption
physical switchport access

Explanation: For a switch to have an IP address, a switch virtual interface must be configured. This allows the switch to be managed remotely over the network.

20. Which command or key combination allows a user to return to the previous level in the command hierarchy?

end
exit*
Ctrl-Z
Ctrl-C

Explanation: End and CTRL-Z return the user to the privileged EXEC mode. Ctrl-C ends a command in process. The exit command returns the user to the previous level.

21. What are two characteristics of RAM on a Cisco device? (Choose two.)

RAM provides nonvolatile storage.
The configuration that is actively running on the device is stored in RAM.*
The contents of RAM are lost during a power cycle.*
RAM is a component in Cisco switches but not in Cisco routers.
RAM is able to store multiple versions of IOS and configuration files.

22. Which two host names follow the guidelines for naming conventions on Cisco IOS devices? (Choose two.)

Branch2!
RM-3-Switch-2A4*
Floor(15)
HO Floor 17
SwBranch799*

Explanation: Some guidelines for naming conventions are that names should:

Start with a letter
Contain no spaces
End with a letter or digit
Use only letters, digits, and dashes
Be less than 64 characters in length

23. How is SSH different from Telnet?

SSH makes connections over the network, whereas Telnet is for out-of-band access.

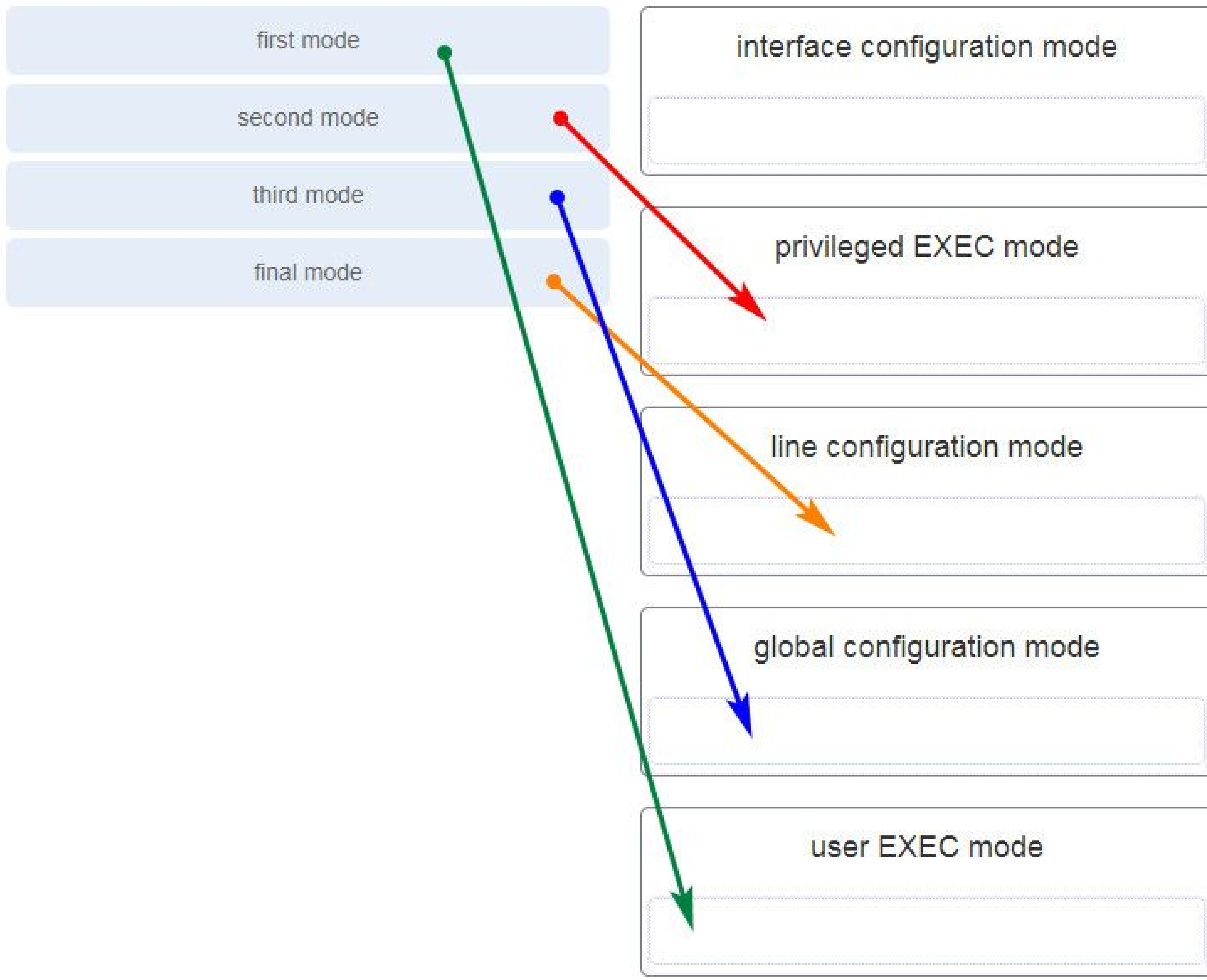
SSH provides security to remote sessions by encrypting messages and using user authentication. Telnet is considered insecure and sends messages in plaintext.*

SSH requires the use of the PuTTY terminal emulation program. Tera Term must be used to connect to devices through the use of Telnet.

SSH must be configured over an active network connection, whereas Telnet is used to connect to a device from a console connection.

Explanation: SSH is the preferred protocol for connecting to a device operating system over the network because it is much more secure than Telnet. Both SSH and Telnet are used to connect to devices over the network, and so are both used in-band. PuTTY and Terra Term can be used to make both SSH and Telnet connections.

24. An administrator is configuring a switch console port with a password. In what order will the administrator travel through the IOS modes of operation in order to reach the mode in which the configuration commands will be entered? (Not all options are used.)



CCNA 1 v7.0 Modules 1 – 3 Exam Answers p24

Explanation: The configuration mode that the administrator first encounters is user EXEC mode. After the enable command is entered, the next mode is privileged EXEC mode. From there, the configure terminal command is entered to move to global configuration mode. Finally, the administrator enters the line console 0 command to enter the mode in which the configuration will be entered.

25. What are three characteristics of an SVI? (Choose three.)

It is designed as a security protocol to protect switch ports.
It is not associated with any physical interface on a switch.*

It is a special interface that allows connectivity by different types of media.
It is required to allow connectivity by any device at any location.
It provides a means to remotely manage a switch.*
It is associated with VLAN1 by default.*

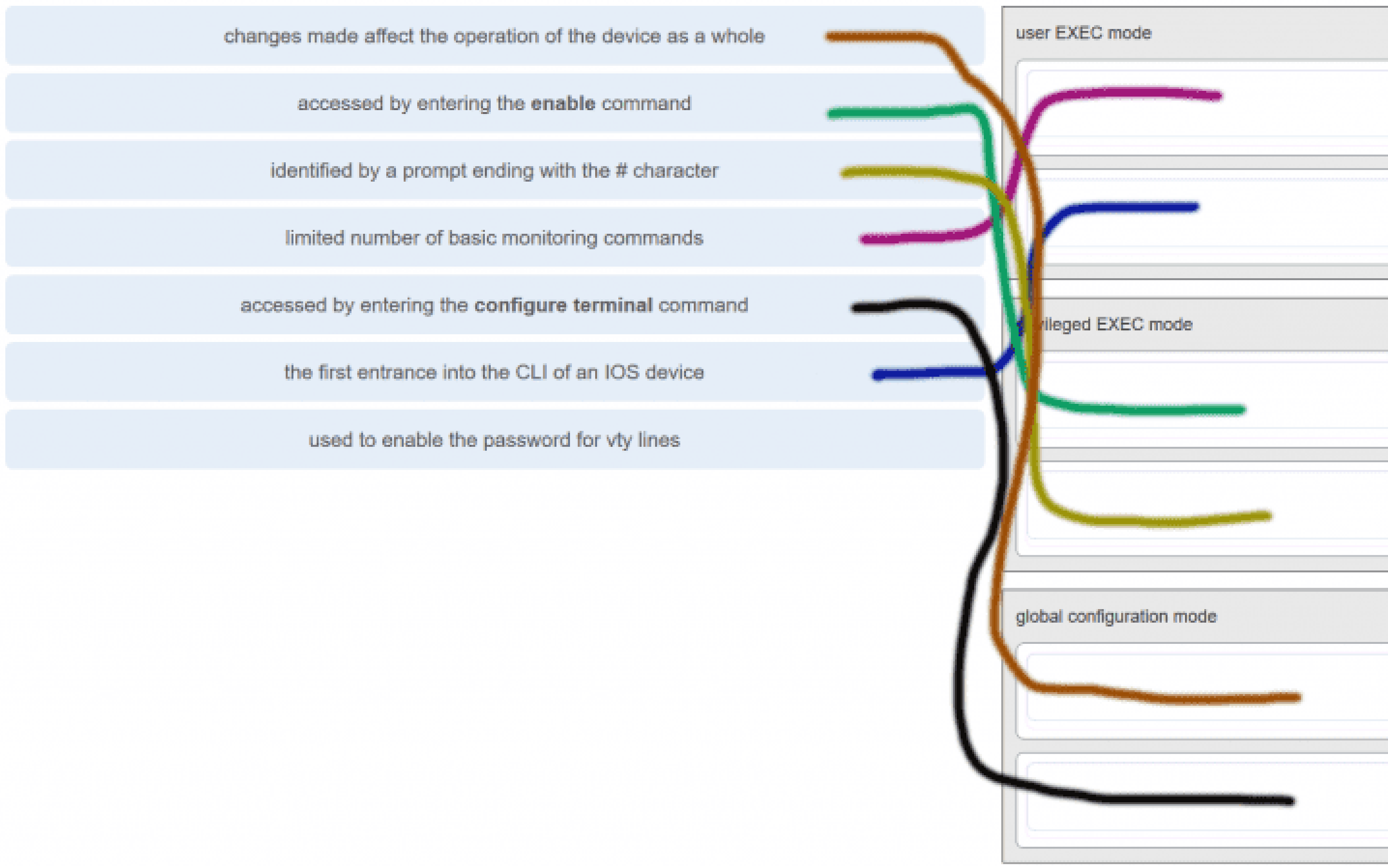
Explanation: Switches have one or more switch virtual interfaces (SVIs). SVIs are created in software since there is no physical hardware associated with them. Virtual interfaces provide a means to remotely manage a switch over a network that is using IP. Each switch comes with one SVI appearing in the default configuration “out-of-the-box.” The default SVI interface is VLAN1.

26. What command is used to verify the condition of the switch interfaces, including the status of the interfaces and a configured IP address?

ipconfig
ping
traceroute
show ip interface brief*

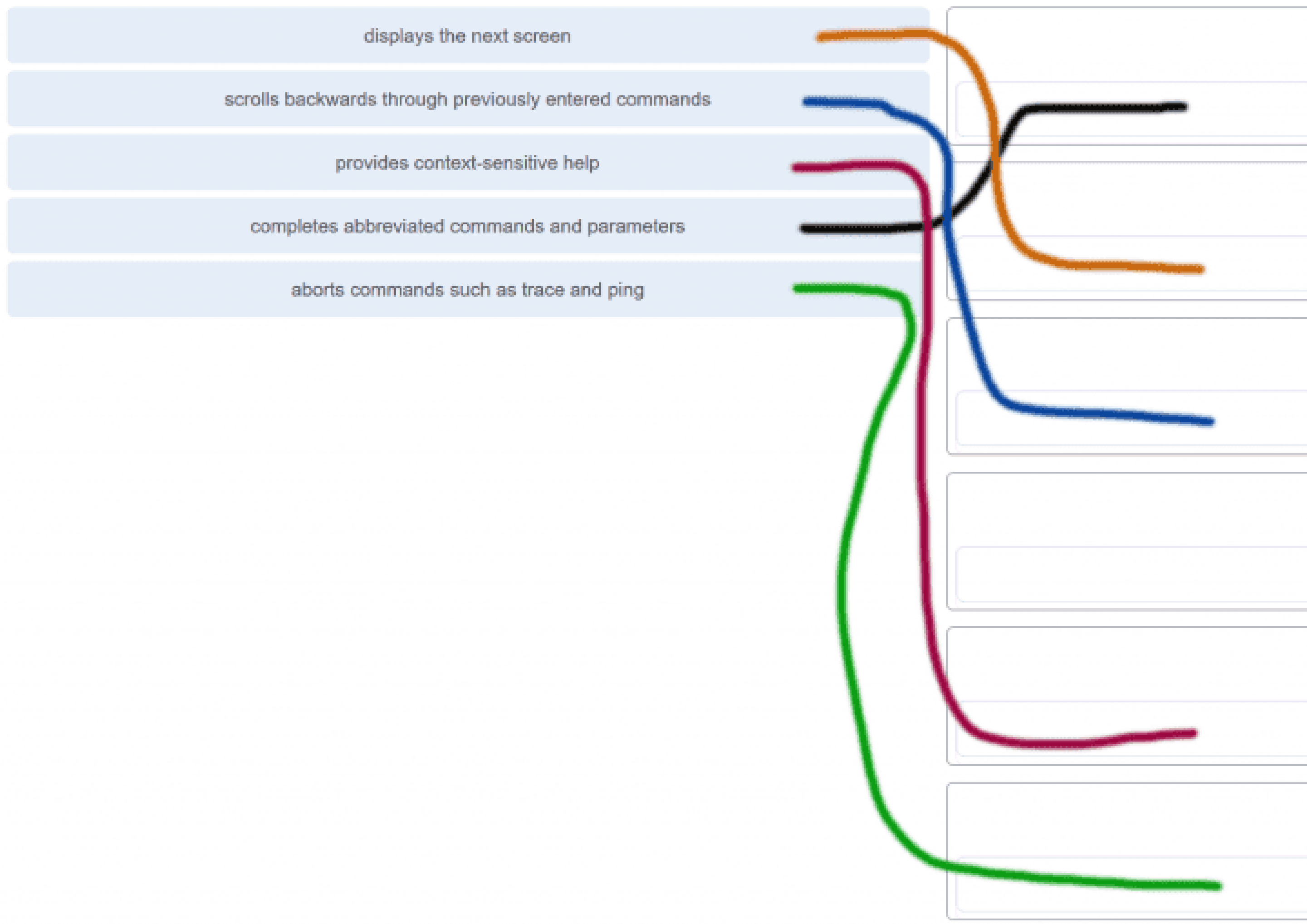
Explanation: The show ip interface brief command is used to display a brief synopsis of the condition of the device interfaces. The ipconfig command is used to verify TCP/IP properties on a host. The ping command is used to verify Layer 3 connectivity. The traceroute command is used to trace the network path from source to destination.

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



CCNA 1 v7.0 Modules 1 – 3 Exam Answers p27

28. Match the definitions to their respective CLI hot keys and shortcuts. (Not all options are used.)



CCNA 1 v7.0 Modules 1 – 3 Exam Answers p28

29. In the show running-config command, which part of the syntax is represented by running-config?

the command
a keyword*
a variable
a prompt

Explanation: The first part of the syntax, show, is the command, and the second part of the syntax, running-config, is the keyword. The keyword specifies what should be displayed as the output of the show command.

30. 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.

31. What command will prevent all unencrypted passwords from displaying in plain text in a configuration file?

(config)# enable password secret
(config)# enable secret Secret_Password
(config-line)# password secret
(config)# service password-encryption*
(config)# enable secret Encrypted_Password

32. A network administrator enters the service password-encryption command into the configuration mode of a router. What does this command accomplish?

This command encrypts passwords as they are transmitted across serial WAN links.
This command prevents someone from viewing the running configuration passwords.*
This command enables a strong encryption algorithm for the enable secret password command.
This command automatically encrypts passwords in configuration files that are currently stored in NVRAM.
This command provides an exclusive encrypted password for external service personnel who are required to do router maintenance.

Explanation: The startup-config and running-config files display most passwords in plaintext. Use the service password-encryption global config command to encrypt all plaintext passwords in these files.

33. What method can be used by two computers to ensure that packets are not dropped because too much data is being sent too quickly?

encapsulation
flow control*
access method
response timeout

Explanation: In order for two computers to be able to communicate effectively, there must be a mechanism that allows both the source and destination to set the timing of the transmission and receipt of data. Flow control allows for this by ensuring that data is not sent too fast for it to be received properly.

34. Which statement accurately describes a TCP/IP encapsulation process when a PC is sending data to the network?

Data is sent from the internet layer to the network access layer.
Packets are sent from the network access layer to the transport layer.
Segments are sent from the transport layer to the internet layer.*
Frames are sent from the network access layer to the internet layer.

Explanation: When the data is traveling from the PC to the network, the transport layer sends segments to the internet layer. The internet layer sends packets to the network access layer, which creates frames and then converts the frames to bits. The bits are released to the network media.

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

ARP
DHCP*
DNS*
FTP*
NAT
PPP

Explanation: DNS, DHCP, and FTP are all application layer protocols in the TCP/IP protocol suite. ARP and PPP are network access layer protocols, and NAT is an internet layer protocol in the TCP/IP protocol suite.

36. Match the description to the organization. (Not all options are used.)

CCNA 1 v7.0 Modules 1 – 3 Exam Answers p36

37. Which name is assigned to the transport layer PDU?

bits
data
frame
packet
segment*

Explanation: Application data is passed down the protocol stack on its way to be transmitted across the network media. During the process, various protocols add information to it at each level. At each stage of the process, a PDU (protocol data unit) has a different name to reflect its new functions. The PDUs are named according to the protocols of the TCP/IP suite:
Data – The general term for the PDU used at the application layer.
Segment – transport layer PDU
Packet – network layer PDU
Frame – data link layer PDU
Bits – A physical layer PDU used when physically transmitting data over the medium

38. When IPv4 addressing is manually configured on a web server, which property of the IPv4

configuration identifies the network and host portion for an IPv4 address?

DNS server address
subnet mask*
default gateway
DHCP server address

Explanation: There are several components that need to be entered when configuring IPv4 for an end device:
IPv4 address – uniquely identifies an end device on the network
Subnet mask – determines the network address portion and host portion for an IPv4 address
Default gateway – the IP address of the router interface used for communicating with hosts in another network
DNS server address – the IP address of the Domain Name System (DNS) server
DHCP server address (if DHCP is used) is not configured manually on end devices. It will be provided by a DHCP server when an end device requests an IP address.

39. What process involves placing one PDU inside of another PDU?

Encapsulation*
encoding
segmentation
flow control

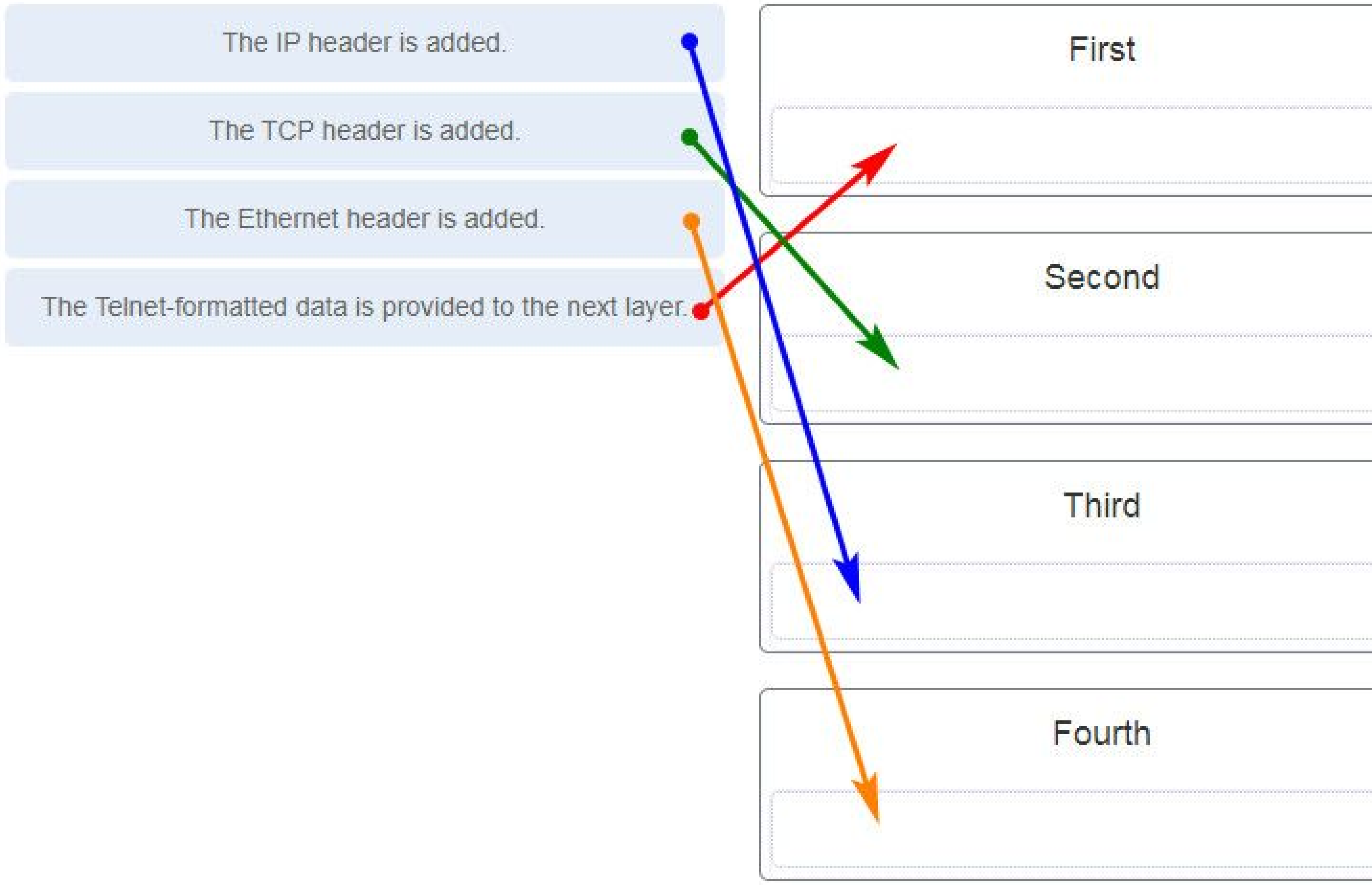
Explanation: When a message is placed inside of another message, this is known as encapsulation. On networks, encapsulation takes place when one protocol data unit is carried inside of the data field of the next lower protocol data unit.

40. What layer is responsible for routing messages through an internetwork in the TCP/IP model?

Internet*
transport
network access
session

Explanation: The TCP/IP model consists of four layers: application, transport, internet, and network access. Of these four layers, it is the internet layer that is responsible for routing messages. The session layer is not part of the TCP/IP model but is rather part of the OSI model.

41. For the TCP/IP protocol suite, what is the correct order of events when a Telnet message is being prepared to be sent over the network?



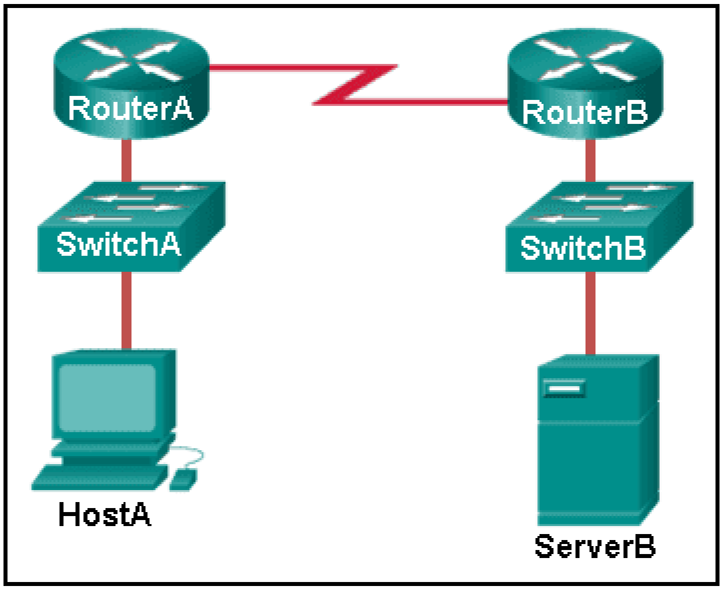
CCNA 1 v7.0 Modules 1 – 3 Exam Answers p41

42. Which PDU format is used when bits are received from the network medium by the NIC of a host?

file
frame*
packet
segment

Explanation: When received at the physical layer of a host, the bits are formatted into a frame at the data link layer. A packet is the PDU at the network layer. A segment is the PDU at the transport layer. A file is a data structure that may be used at the application layer.

43. Refer to the exhibit.



CCNA 1 v7.0 Modules 1 – 3 Exam Answers p43

ServerB is attempting to contact HostA. Which two statements correctly identify the addressing that ServerB will generate in the process? (Choose two.)

ServerB will generate a packet with the destination IP address of RouterB.
ServerB will generate a frame with the destination MAC address of SwitchB.
ServerB will generate a packet with the destination IP address of RouterA.
ServerB will generate a frame with the destination MAC address of RouterB.*
ServerB will generate a packet with the destination IP address of HostA.*
ServerB will generate a frame with the destination MAC address of RouterA.

44. Which method allows a computer to react accordingly when it requests data from a server and the server takes too long to respond?

encapsulation
flow control
access method
response timeout*

45. A web client is receiving a response for a web page from a web server. From the perspective of the client, what is the correct order of the protocol stack that is used to decode the received transmission?

Ethernet, IP, TCP, HTTP*
HTTP, TCP, IP, Ethernet
Ethernet, TCP, IP, HTTP
HTTP, Ethernet, IP, TCP

Explanation:
1. HTTP governs the way that a web server and client interact.
2. TCP manages individual conversations between web servers and clients.
3. IP is responsible for delivery across the best path to the destination.
4. Ethernet takes the packet from IP and formats it for transmission.

46. Which two OSI model layers have the same functionality as a single layer of the TCP/IP model? (Choose two.)

data link*
network
physical*
session
transport

47. At which layer of the OSI model would a logical address be added during encapsulation?

physical layer
data link layer
network layer*
transport layer

48. What is a characteristic of multicast messages?

They are sent to a select group of hosts.*
They are sent to all hosts on a network.

They must be acknowledged.
They are sent to a single destination.

Explanation: Multicast is a one-to-many type of communication. Multicast messages are addressed to a specific multicast group.

49. Which statement is correct about network protocols?

Network protocols define the type of hardware that is used and how it is mounted in racks.
They define how messages are exchanged between the source and the destination.*
They all function in the network access layer of TCP/IP.
They are only required for exchange of messages between devices on remote networks.

50. What is an advantage of network devices using open standard protocols?

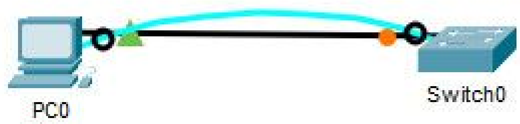
Network communications is confined to data transfers between devices from the same vendor.
A client host and a server running different operating systems can successfully exchange data.*
Internet access can be controlled by a single ISP in each market.
Competition and innovation are limited to specific types of products.

51. Which device performs the function of determining the path that messages should take through internetworks?

a router*
a firewall
a web server
a DSL modem

Explanation: A router is used to determine the path that the messages should take through the network. A firewall is used to filter incoming and outgoing traffic. A DSL modem is used to provide Internet connection for a home or an organization.

52. Open the PT Activity.



CCNA 1 v7.0 Modules 1 – 3 Exam Answers p52

Perform the tasks in the activity instructions and then answer the question.
What is the IP address of the switch virtual interface (SVI) on Switch0?

192.168.5.10*
192.168.10.5
192.168.10.1
192.168.5.0

Explanation: After the enable command is issued, the show running-configuration command or the show ip interfaces brief command will display the IP address of the switch virtual interface (SVI).

53. Why would a Layer 2 switch need an IP address?

to enable the switch to send broadcast frames to attached PCs
to enable the switch to function as a default gateway
to enable the switch to be managed remotely*
to enable the switch to receive frames from attached PCs

Explanation: A switch, as a Layer 2 device, does not need an IP address to transmit frames to attached devices. However, when a switch is accessed remotely through the network, it must have a Layer 3 address. The IP address must be applied to a virtual interface rather than to a physical interface. Routers, not switches, function as default gateways.

54. Refer to the exhibit.

CCNA 1 v7.0 Modules 1 – 3 Exam Answers p54

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

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.

Explanation: In order to enter global configuration mode, the command configure terminal, or a shortened version such as config t, must be entered from privileged EXEC mode. In this scenario the administrator is in user EXEC mode, as indicated by the > symbol after the hostname. The administrator would need to use the enable command to move into privileged EXEC mode before entering the configure terminal command.

55. What term describes a network owned by one organization that provides safe and secure access to individuals who work for a different organization?

Extranet*
cloud
BYOD
quality of service

56. What term describes storing personal files on servers over the internet to provide access anywhere, anytime, and on any device?

Cloud*
BYOD
quality of service
converged network

57. What term describes a network where one computer can be both client and server?

peer-to-peer*
cloud

BYOD
quality of service

58. What term describes a type of network used by people who work from home or from a small remote office?

SOHO network*
BYOD
quality of service
converged network

59. What term describes a computing model where server software runs on dedicated computers?

client/server*
internet
intranet
extranet

60. What term describes a type of network used by people who work from home or from a small remote office?

SOHO network*
internet
intranet
extranet

61. What term describes a technology that allows devices to connect to the LAN using an electrical outlet?

powerline networking*
internet
intranet
extranet

62. What term describes a policy that allows network devices to manage the flow of data to give priority to voice and video?

quality of service*
internet

intranet
extranet

63. What term describes a private collection of LANs and WANs that belongs to an organization?

Intranet*
internet
extranet
peer-to-peer

64. What term describes the ability to use personal devices across a business or campus network?

BYOD*
internet
intranet
extranet

65. At which OSI layer is a source IP address added to a PDU during the encapsulation process?

network layer*
data link layer
transport layer
application layer

66. At which OSI layer is a destination port number added to a PDU during the encapsulation process?

transport layer*
data link layer
network layer
application layer

67. At which OSI layer is data added to a PDU during the encapsulation process?

application layer*
data link layer
network layer
transport layer

68. At which OSI layer is a source IP address added to a PDU during the encapsulation process?

network layer*
data link layer
application layer
presentation layer

69. At which OSI layer is data added to a PDU during the encapsulation process?

application layer*
transport layer
network layer
presentation layer

70. At which OSI layer is a destination IP address added to a PDU during the encapsulation process?

network layer*
application layer
transport layer
presentation layer

71. At which OSI layer is a source MAC address added to a PDU during the encapsulation process?

data link layer*
application layer
transport layer
presentation layer

72. At which OSI layer is a source port number added to a PDU during the encapsulation process?

transport layer*
application layer
network layer
presentation layer

73. At which OSI layer is a destination MAC address added to a PDU during the encapsulation process?

data link layer*
transport layer
application layer
network layer

74. At which OSI layer is a source port number added to a PDU during the encapsulation process?

transport layer*
network layer
application layer
data link layer

Modules 1 – 3: Basic Network Connectivity and Communications Exam Answers (Additional)

1. During a routine inspection, a technician discovered that software that was installed on a computer was secretly collecting data about websites that were visited by users of the computer. Which type of threat is affecting this computer?

DoS attack
identity theft
spyware*
zero-day attack

2. Which term refers to a network that provides secure access to the corporate offices by suppliers, customers and collaborators?

Internet
intranet
extranet*
extendednet

3. A large corporation has modified its network to allow users to access network resources from their personal laptops and smart phones. Which networking trend does this describe?

loud computing
online collaboration
bring your own device*
video conferencing

4. What is an ISP?

It is a standards body that develops cabling and wiring standards for networking.

It is a protocol that establishes how computers within a local network communicate.
It is an organization that enables individuals and businesses to connect to the Internet.*
It is a networking device that combines the functionality of several different networking devices in one.

5. In which scenario would the use of a WISP be recommended?

an Internet cafe in a city
a farm in a rural area without wired broadband access*
any home with multiple wireless devices
an apartment in a building with cable access to the Internet

6. What characteristic of a network enables it to quickly grow to support new users and applications without impacting the performance of the service being delivered to existing users?

reliability
scalability*
quality of service
accessibility

7. A college is building a new dormitory on its campus. Workers are digging in the ground to install a new water pipe for the dormitory. A worker accidentally damages a fiber optic cable that connects two of the existing dormitories to the campus data center. Although the cable has been cut, students in the dormitories only experience a very short interruption of network services. What characteristic of the network is shown here?

quality of service (QoS)
scalability
security
fault tolerance*
integrity

8. What are two characteristics of a scalable network? (Choose two.)

easily overloaded with increased traffic
grows in size without impacting existing users*
is not as reliable as a small network
suitable for modular devices that allow for expansion*
offers limited number of applications

9. Which device performs the function of determining the path that messages should take through internetworks?

a router*
a firewall
a web server
a DSL modem

10. Which two Internet connection options do not require that physical cables be run to the building? (Choose two.)

DSL
Celular*
Satellite*
dialup
dedicated leased line

11. What type of network must a home user access in order to do online shopping?

an intranet
the Internet*
an extranet
a local area network

12. How does BYOD change the way in which businesses implement networks?

BYOD requires organizations to purchase laptops rather than desktops.
BYOD users are responsible for their own network security, thus reducing the need for organizational security policies.
BYOD devices are more expensive than devices that are purchased by an organization.

BYOD provides flexibility in where and how users can access network resources.*

13. An employee wants to access the network of the organization remotely, in the safest possible way. What network feature would allow an employee to gain secure remote access to a company network?

ACL
IPS
VPN*
BYOD

14. What is the Internet?

It is a network based on Ethernet technology.
It provides network access for mobile devices.
It provides connections through interconnected global networks.*
It is a private network for an organization with LAN and WAN connections.

15. What are two functions of end devices on a network? (Choose two.)

They originate the data that flows through the network.*
They direct data over alternate paths in the event of link failures.
They filter the flow of data to enhance security.
They are the interface between humans and the communication network.*
They provide the channel over which the network message travels.

16. Which statement is true about the running configuration file in a Cisco IOS device?

It affects the operation of the device immediately when modified.*
It is stored in NVRAM.
It should be deleted using the erase running-config command.
It is automatically saved when the router reboots.

17. Which two statements are true regarding the user EXEC mode? (Choose two.)

All router commands are available.
Global configuration mode can be accessed by entering the enable command.
The device prompt for this mode ends with the “>” symbol.*
Interfaces and routing protocols can be configured.
Only some aspects of the router configuration can be viewed.*

18. Which type of access is secured on a Cisco router or switch with the enable secret command?

virtual terminal
privileged EXEC*
AUX port
console line

19. What is the default SVI on a Cisco switch?

VLAN1*
VLAN99
VLAN100
VLAN999

20. When a hostname is configured through the Cisco CLI, which three naming conventions are part of the guidelines? (Choose three.)

the hostname should be fewer than 64 characters in length*
the hostname should be written in all lower case characters
the hostname should contain no spaces*
the hostname should end with a special character
the hostname should begin with a letter*

21. What is the function of the shell in an OS?

It interacts with the device hardware.
It interfaces between the users and the kernel.*
It provides dedicated firewall services.
It provides the intrusion protection services for the device.

22. A router with a valid operating system contains a configuration file stored in NVRAM. The configuration file has an enable secret password but no console password. When the router boots up, which mode will display?

global configuration mode
setup mode
privileged EXEC mode
user EXEC mode*

23. An administrator has just changed the IP address of an interface on an IOS device. What else must be done in order to apply those changes to the device?

Copy the running configuration to the startup configuration file.
Copy the information in the startup configuration file to the running configuration.
Reload the device and type yes when prompted to save the configuration.
Nothing must be done. Changes to the configuration on an IOS device take effect as soon as the command is typed correctly and the Enter key has been pressed.*

24. Which memory location on a Cisco router or switch will lose all content when the device is restarted?

ROM
flash
NVRAM
RAM*

25. Why would a technician enter the command copy startup-config running-config?

to remove all configurations from the switch
to save an active configuration to NVRAM
to copy an existing configuration into RAM*
to make a changed configuration the new startup configuration

26. Which functionality is provided by DHCP?

automatic assignment of an IP address to each host*
remote switch management
translation of IP addresses to domain names
end-to-end connectivity test

27. Which two functions are provided to users by the context-sensitive help feature of the Cisco IOS CLI? (Choose two.)

providing an error message when a wrong command is submitted
displaying a list of all available commands within the current mode*
allowing the user to complete the remainder of an abbreviated command with the TAB key
determining which option, keyword, or argument is available for the entered command*
selecting the best command to accomplish a task

28. Which memory location on a Cisco router or switch stores the startup configuration file?

RAM
ROM
NVRAM*
flash

29. To what subnet does the IP address 10.1.100.50 belong if a subnet mask of 255.255.0.0 is used?

10.1.0.0*
10.0.0.0
10.1.100.32
10.1.100.0

30. Which three acronyms/initialisms represent standards organizations? (Choose three.)

IANA*
TCP/IP
IEEE*
IETF*
OSI
MAC

31. What type of communication will send a message to all devices on a local area network?

Broadcast*
multicast

unicast
allcast

32. In computer communication, what is the purpose of message encoding?

to convert information to the appropriate form for transmission*
to interpret information
to break large messages into smaller frames
to negotiate correct timing for successful communication

33. Which message delivery option is used when all devices need to receive the same message simultaneously?

duplex
unicast
multicast
broadcast*

34. What are two benefits of using a layered network model? (Choose two.)

It assists in protocol design.*
It speeds up packet delivery.
It prevents designers from creating their own model.
It prevents technology in one layer from affecting other layers.*
It ensures a device at one layer can function at the next higher layer.

35. What is the purpose of protocols in data communications?

specifying the bandwidth of the channel or medium for each type of communication
specifying the device operating systems that will support the communication
providing the rules required for a specific type of communication to occur*
dictating the content of the message sent during communication

36. Which logical address is used for delivery of data to a remote network?

destination MAC address
destination IP address*
destination port number
source MAC address
source IP address

37. What is the general term that is used to describe a piece of data at any layer of a networking model?

frame
packet
protocol data unit*
segment

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

POP
BOOTP
ICMP*
IP*
PPP

39. Which layer of the OSI model defines services to segment and reassemble data for individual communications between end devices?

application
presentation
session
transport*
network

40. Which type of communication will send a message to a group of host destinations simultaneously?

broadcast
multicast*
unicast
anycast

41. What process is used to receive transmitted data and convert it into a readable message?

access control
decoding*
encapsulation
flow control

42. What is done to an IP packet before it is transmitted over the physical medium?

It is tagged with information guaranteeing reliable delivery.
It is segmented into smaller individual pieces.
It is encapsulated into a TCP segment.
It is encapsulated in a Layer 2 frame.*

43. What process is used to place one message inside another message for transfer from the source to the destination?

access control
decoding
encapsulation*
flow control

44. A web client is sending a request for a webpage to a web server. From the perspective of the client, what is the correct order of the protocol stack that is used to prepare the request for transmission?

HTTP, IP, TCP, Ethernet
HTTP, TCP, IP, Ethernet*
Ethernet, TCP, IP, HTTP
Ethernet, IP, TCP, HTTP