

CCNA 4 - Final Exam (A)

1. A network administrator is asked to design a system to allow simultaneous access to the Internet for 250 users. The ISP for this network can only supply five public IPs. What can be used to accomplish this task?

- routable translation
- dynamic translation
- static translation
- port address translation

2. The LAN attached to the Ethernet interface of the Raleigh router shown in the graphic is addressed with private IP addresses. If one public IP is assigned to the company, which commands could be used in a configuration that allows all devices with private IPs in this network to access the Internet? (Choose two.)

- ip nat inside source list 1 interface serial0 overload
- ip nat outside source list 1 interface serial0 overload
- ip nat inside serial0
- ip nat inside source list 1 pool Raleigh overload
- ip nat inside Raleigh overload
- ip inside nat source list 1 interface serial0 Raleigh

3. The command output shown in the graphic was taken from a Cisco 806 broadband router. Which kind of address translation is in effect on this router?

- static
- dynamic
- overload
- private
- public

4. Which of the following IP addresses are defined by RFC 1918 as private addresses? (Choose three.)

- 192.168.146.0/22
- 172.10.25.0/16
- 172.31.0.0/16
- 20.0.0.0/8
- 10.172.92.8/29

5. How will data be transmitted from the router to the ISP if the router has the two links shown in the graphic?

- Both links will transmit data at the same rate.
- 1544 bits can be transmitted simultaneously from the router over the T1 line.

- Both links will transmit bits one by one.
 - The 56K link will transmit a maximum of 53 bits at the same time.
6. Which statements about DHCP are true? (Choose three.)
- DHCP uses TCP.
 - DHCP uses UDP.
 - DHCP sends messages to the server on port 67.
 - DHCP sends messages to the server on port 68.
 - DHCP sends messages to the client on port 67.
 - DHCP sends messages to the client on port 68.
7. Which command would be used to exclude the IP address 192.168.24.5 from the DHCP address pool on a router?
- Router(dhcp-config)# ip dhcp excluded-address 192.168.24.5
 - Router# ip dhcp excluded-address 192.168.24.5
 - Router(config-excluded)# ip dhcp excluded-address 192.168.24.5
 - Router(config)# ip dhcp excluded-address 192.168.24.5
 - Router(config)# excluded-address 192.168.24.5
 - Router(dhcp-config)# excluded-address 192.168.24.5
8. The WAN connection for a nationwide company with 250 offices must support constant connections to core layer services for file sharing, and occasional Internet access. Which combination of WAN technologies will meet these needs with minimum expense?
- Frame Relay PVC for Internet access and ATM for file server access
 - Frame Relay PVC for Internet access and ISDN for file server access
 - ISDN for Internet access and X.25 for file server access
 - ISDN for Internet access and Frame Relay PVC for file server access
9. Which command would produce the output shown in the graphic?
- show ip dhcp server statistics
 - show ip dhcp binding
 - debug ip dhcp server events
 - debug ip dhcp binding
10. Which of the following devices is used to establish the communications link between the customer equipment and the local loop for digital lines?
- terminal adapter
 - modem

- CSU/DSU
- PBX switch
- ISDN switch
- Frame Relay Switch

11. Which of the following statements are true about Frame Relay? (Choose three.)

- Frame Relay operation is defined by a series of ISO standards.
- Frame Relay is a packet switched, connection-oriented, wide area network service.
- Frame Relay only supports point-to-point connections.
- A router can be considered as data terminal equipment (DTE) in a frame relay system.
- Frame Relay is a cell switched, connection-oriented, wide area network service.
- Frame Relay networks use a subset of the HDLC protocol to carry information.

12. ITU-T Q.921 specifies the use of which protocol for sending control and signaling messages between the router and the ISDN switch?

- HDLC
- IPCP
- LAPB
- LAPD
- NCP
- SS7

13. A company needs a WAN connection that is capable of transferring voice, video, and data at a minimum data rate of 155 Mbps. Which WAN connection is the best choice?

- X.25
- DSL
- ATM
- ISDN BRI
- ISDN PRI

14. Which statement explains why basic DSL is an unpopular WAN connectivity choice for enterprise computer departments that support home users?

- DSL offers insufficient bandwidth to home users.
- DSL requires the installation of new cables, which is not always possible for home users.
- DSL dialup connection time is too slow for business use.
- DSL has limited geographical availability.

15. When planning simple WAN connections for a small company, which feature of the three layer hierarchical

model makes it a good choice for the WAN topology.

- It provides for redundancy.
- It allows for easy WAN expansion in case of company growth.
- It is less expensive.
- It provides faster connection time.
- It provides less latency and jitter.

16. Which of the following terms describes a device that will put data on the local loop?

- DLCI
- CO
- DCE
- DTE
- PRI
- BRI

17. Which of the following are supported by a BRI interface on a router? (Choose two.)

- Two independent channels that can carry analog data with a bandwidth of 64 KHz.
- A single 128 Kbps digital bearer channel.
- Two multiplexed channels carrying digital data.
- A single 64 Kbps signaling channel.
- A multiplexed data channel that can only handle SS7 information.
- A 16 Kbps delta channel used for signaling purposes.

18. A network administrator has been asked to provide the network in the United States with an ISDN WAN link. The router available to provide the WAN connection is a non-modular Cisco router with two serial connections. What must be done to adapt one of the serial interfaces of this router for the ISDN connection?

- Nothing. The router is already suitable.
- Purchase a BRI WAN interface card to install in the router.
- Purchase a U interface to install in the router.
- Purchase a TA/NT1 device to install on the router.

19. (NEED ANSWERS!!!) Which of the following is a function of a DCE device?

- determines the next-hop address for a packet
- multiplexes signals from several sources
- adapts information for use on a service provider's network
- used to directly connect two DTEs to simulate a WAN network

20. Why would data frames be discarded in a Frame Relay network? (Choose two.)

- The frame contains an incorrect IP address.
- An error has been detected in computing the frame check sequence.
- There is not enough bandwidth dedicated for the data contained in the frame.
- Data is transmitted at a rate greater than the access speed.
- The frame contains an incorrect DLCI.

21. Which of the following are commonly used as Data Communications Equipment? (Choose two.)

- modem
- router
- CSU/DSU
- ISDN Switch
- Frame Relay Switch

22. Which of the following LCP options can be configured for PPP? (Choose three.)

- CHAP
- Stacker
- IPCP
- CDPCP
- Multilink

23. Which command will provide for CHAP authentication if the hostname on a challenging router is tampa with a password of florida?

- username tampa password florida
- username tampa florida
- hostname tampa password florida
- hostname tampa florida

24. Which of the following describes the PAP protocol? (Choose two.)

- sends unencrypted authentication passwords
- performs a three-way handshake
- allows repeated login attempts
- uses the remote router hostname to verify identity
- sends a random challenge throughout the session

25. Why was NAT created? (Choose two.)

- to create firewalls on routers
- to conserve IP addresses
- to translate domain names into IP addresses

- to map network addresses to the corresponding data link address

- to hide internal addresses from external devices

26. An ISDN router is configured for DDR as shown in the graphic to provide Internet connectivity for the company. Immediately after a user in the company attempts opens a web browser to connect to the Internet, another user in the company tries to download a file using FTP. What will happen? (Choose two.)

- The user that opened the browser will connect to the Internet because the DDR link will consider this traffic interesting.

- The Internet user will be disconnected because the FTP data will cause the DDR link to shut down.

- The DDR link will allow the FTP traffic because it is interesting.

- The DDR link will not allow the FTP traffic because it is not interesting.

- The FTP connection will fail because the DDR link is already in use for the Internet connection.

- The FTP connection will succeed because the web user already opened the DDR link.

27. Which command configures the SPID on the first B channel of an ISDN interface?

- Router(config)# isdn spid0 spid-number [Idn]

- Router(config)# isdn spid1 spid-number [Idn]

- Router(config-if)# isdn spid0 spid-number [Idn]

- Router(config-if)# isdn spid1 spid-number [Idn]

28. What does the command debug isdn q921 display?

- exchange of call setup and teardown messages

- PAP and CHAP authentication traffic

- Layer 2 messages on the D channel

- protocol errors and statistics

- Layer 2 messages on the B channel

29. When PPP authentication is enabled, which of the following may be checked before establishing a PPP link between two devices? (Choose two.)

- the enable password on the remote device

- the ip host configuration on the remote device

- the security server database for the username and password of the remote device

- the hostname and enable password on the local device

- the local database for the username and password of the remote device

30. How many separate B channel circuits can be provisioned on a PRI interface that uses a T1 line for connectivity?

- 2

- 16
- 23
- 24
- 30
- 128

31. Which operating systems support multiuser capability? (Choose three.)

- Linux
- Windows 98
- Windows ME
- Windows XP
- Windows 2000

32. What is placed in the address field of a frame that will travel from the DC office of ABC company to the Orlando office?

- MAC address of the Orlando router
- MAC address of the DC router
- 192.168.1.25
- 192.168.1.26
- DLCI 100
- DLCI 200

33. What does a DLCI of 0 indicate about a frame? (Choose two.)

- This is the first data frame sent by the router.
- This is a management frame.
- The encapsulation type is Cisco.
- The encapsulation type is IETF.
- The LMI type is Ansi or q933a.
- The LMI type is Cisco.

34. Which of the following protocols can be used to encapsulate data traffic sent from a router BRI interface?

(Choose two.)

- Link Access Protocol - Data
- High-Level Data Link Control
- Logical Link Control
- Serial Data Link Control
- Point to Point protocol

- Binary Synchronous Control protocol

35. An administrator consoled into the Jelly router needs to telnet to the Butter router. What DLCI will the Jelly router place in the frame to perform this operation?

- 110
- 115
- 220
- 225

36. Which commands can be used to identify which DLCIs are active? (Choose two.)

- show frame-relay map
- show frame-relay lmi
- show frame-relay pvc
- show frame-relay interface
- show interfaces
- show ip route

37. A technician is testing the functionality of a recently installed router. The technician is unable to ping the serial interface of a remote router. The technician executes the show interface serial0/0 command on the local router and sees the following line in the output:

Serial0/0 is up, line protocol is down

What are possible causes for this command output? (Choose three.)

- remote CSU/DSU failure
- serial cable missing
- interface shutdown
- keepalives not being sent
- clocking signal missing

38. A router needs to forward a message received from a host. How does the router identify the correct VC to forward the message? (Choose two.)

- The router forwards the frame to all ports in the network and learns the address from the reply frame.
- The destination host IP address is embedded in the DLCI.
- The router searches Inverse ARP tables for maps of DLCIs to IP addresses.
- A table of static mappings can be searched.
- The router broadcasts a request for the required IP address.

39. Which of the following statements regarding point-to-point subinterfaces are true? (Choose two.)

- A point-to-point subinterface on one router must be connected to a similar subinterface on a remote router.

- Each point-to-point subinterface connection is configured with its own subnet.
 - The DLCIs configured on the remote and local routers must be the same for the PVC.
 - LMI frames are not transmitted through a subinterface.
 - Routing updates in point-to-point networks are not subject to the split-horizon rule.
40. Which of the following can be concluded from the router output displayed in the graphic? (Choose two.)
- The local DLCI number of this PVC is 100.
 - The interface has been configured for subinterfaces and this map is for subinterface 0.
 - Inverse ARP has determined the remote ip address as 10.140.1.1.
 - The LMI type is ANSI (0x64).
 - There is currently no congestion on the link.
41. Which of the following are functions of the Local Management Interface used in Frame Relay networks? (Choose three.)
- exchange information about the status of virtual circuits
 - map DLCIs to network addresses
 - provide flow control
 - provide error notification
 - provide congestion notification
 - send keepalive packets to verify operation of the PVC
42. Which of the following describe functions of the Point-to-Point protocol with regards to the OSI model? (Choose three.)
- PPP uses Layer 3 of the OSI model to establish and maintain a session between devices.
 - PPP operates at all layers of the OSI model.
 - PPP uses the data link layer to configure such options as error detection and compression.
 - PPP provides a mechanism to multiplex several network layer protocols.
 - PPP uses Network Control Protocols (NCP) to test and maintain connectivity between devices.
 - PPP can be configured on both synchronous and asynchronous serial interfaces.
43. Which of the following describes the CHAP protocol? (Choose three.)
- exchanges a random challenge number during the session to verify identity
 - sends authentication password to verify identity
 - prevents transmission of login information in plain text
 - disconnects the PPP session if authentication fails
 - initiates a two-way handshake
44. Which of the following switching types will allow the communication devices in the provider's network to be

shared and only allocated to an individual subscriber during data transfer?

- circuit-switched
- **packet-switched**
- frame-switched
- dedicated-switched lines
- lease-switched

45. How does Frame Relay technology process frames that contain errors? (Choose two.)

- **Frame Relay services depend on the upper layer protocols to handle error recovery.**
- It requires the receiving device to request that the sender retransmit erroneous frames.
- FECN, BECN, and DE bits are set in the frames to minimize errors.
- **The receiving device drops any frames that contain errors without notifying the sender.**
- The frame relay switch notifies the sender that errors were detected.

46. Which of the following describes the WAN devices and cabling shown in the graphic? (Choose two.)

- A null-modem cable is used between RouterD and DeviceC for connectivity.
- A DB-25 or DB-9 serial cable is connected to interface S0/0 of RouterA.
- **DeviceB and DeviceC are DCE devices.**
- **The same encoding scheme must be used by DeviceB and DeviceC.**
- A synchronous serial connection exists between DeviceB and DeviceC