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100-490

Supporting Cisco Routing and Switching Network Devices v3.0



#### Sections

1. General Networking Knowledge
2. Cisco Equipment and Related Hardware
3. Cisco IOS Software Operation
4. Service-related Knowledge

**Exam A**

**QUESTION 1**

Which protocol does TFTP typically use for transport?

- A. RSVP
- B. TCP
- C. HTTP
- D. UDP

**Correct Answer:** D

**Section:** General Networking Knowledge

**Explanation**

**Explanation/Reference:**

**QUESTION 2** What is the correct IPv6 address notation?

- A. 2001:0DB8::/128
- B. 2001:0DB8:0::
- C. 2001:0DB8::1:1:1:1:1
- D. 2001:0DB8:130F:0000:0000:7000:0000:140B

**Correct Answer:** D

**Section:** General Networking Knowledge

**Explanation**

**Explanation/Reference:**



**QUESTION 3** Which two statements about Telnet and SSH are true?  
(Choose two.)

- A. SSH is a protocol that provides a secure remote access connection to network devices.
- B. SSH uses the well-known TCP port 23 for its communication.
- C. A Telnet network management connection is dropped when a router reboots.
- D. Telnet is a protocol that provides a secure remote access connection to network devices.
- E. Telnet is preferred over SSH for security reasons.

**Correct Answer:** AC

**Section:** General Networking Knowledge

**Explanation**

**Explanation/Reference:**

**QUESTION 4** Which address facilitates the routing of packets over an IP network?

- A. physical
- B. transport
- C. network
- D. MAC

**Correct Answer:** C

**Section:** General Networking Knowledge

**Explanation**

**Explanation/Reference:**

**QUESTION 5** Which two IPv4 addresses can be assigned to a host computer?

(Choose two.)

- A. 255.255.255.255
- B. 10.1.1.20
- C. 0.0.0.0
- D. 192.168.10.15
- E. 292.10.3.4

**Correct Answer:** BD

**Section:** General Networking Knowledge

**Explanation**

**Explanation/Reference:**

**QUESTION 6** What are two components of a WAN connection?

(Choose two.)

- A. CSU/DSU
- B. router
- C. bridgeD. hub
- E. switch

**Correct Answer:** AB

**Section:** General Networking Knowledge

**Explanation**

**Explanation/Reference:**

**QUESTION 7** Which device is

a DTE device?

- A. CSU/DSU
- B. router
- C. cable modem
- D. DSL modem

**Correct Answer:** B

**Section:** General Networking Knowledge

**Explanation**

**Explanation/Reference:**

**QUESTION 8** Which layer of the OSI model defines how data is formatted for transmission and how access to the physical media is controlled?

- A. presentation
- B. data link

- C. network
- D. transport

**Correct Answer:** B

**Section:** General Networking Knowledge

**Explanation**

**Explanation/Reference:**

Reference: <https://itcertzone.wordpress.com/2011/01/24/the-seven-layers-of-the-osi-model/#:~:text=Layer%202%3A%20The%20Data%20Link,reliable%20delivery%20of%20the%20data.>

**QUESTION 9** Which command shows the status of power supplies and sensor temperatures?

- A. **show hardware**
- B. **show module**
- C. **show environment**
- D. **show diag**

**Correct Answer:** C

**Section:** Cisco Equipment and Related Hardware Explanation

**Explanation/Reference:**

Reference: [https://www.cisco.com/c/m/en\\_us/techdoc/dc/reference/cli/n5k/commands/show-environment.html](https://www.cisco.com/c/m/en_us/techdoc/dc/reference/cli/n5k/commands/show-environment.html)

**QUESTION 10** What are two standard fiber-optic connectors? (Choose two.)

- A. Lucent
- B. rollover
- C. subscriber
- D. multidimension
- E. crossover



**Correct Answer:** AC

**Section:** Cisco Equipment and Related Hardware Explanation

**Explanation/Reference:**

**QUESTION 11** Which type of physical connector does a Gigabit Ethernet port typically use?

- A. RJ-9
- B. RJ-45
- C. DB-25
- D. RJ-11

**Correct Answer:** B

**Section:** Cisco Equipment and Related Hardware Explanation

**Explanation/Reference:**

**QUESTION 12**

Which two pairs of LAN Ethernet devices use an RJ-45 straight-through cable? (Choose two.)

- A. switch-to-switch
- B. switch-to-router

- C. switch-to-hub
- D. router-to-router
- E. switch-to-server

**Correct Answer:** BE

**Section:** Cisco Equipment and Related Hardware Explanation

**Explanation/Reference:**

**QUESTION 13** Which two features are associated with single-mode fiber-optic cable? (Choose two.)

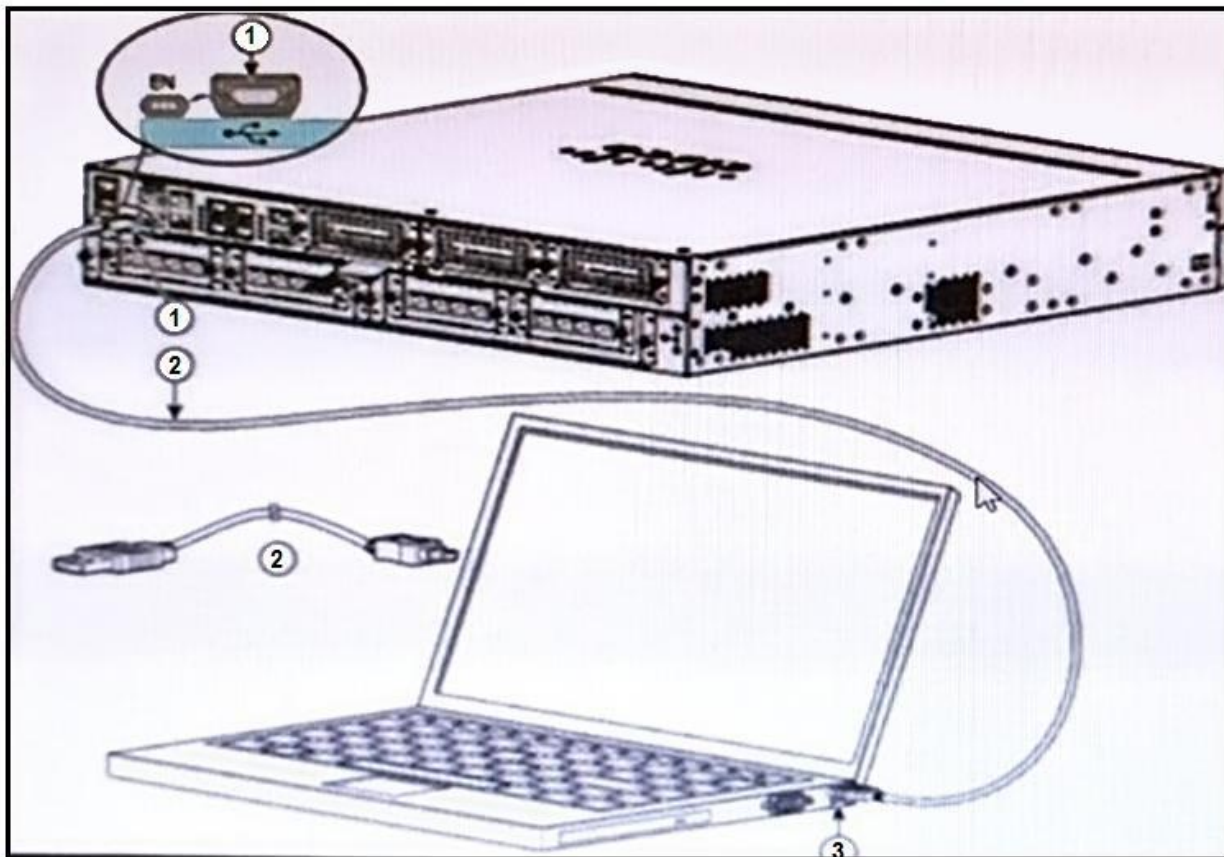
- A. consists of a single strand of glass fiber
- B. has higher attenuation than multimode fiber
- C. carries a higher bandwidth than multimode fiber
- D. costs less than multimode fiber
- E. operates over less distance than multimode fiber

**Correct Answer:** AC

**Section:** Cisco Equipment and Related Hardware Explanation

**Explanation/Reference:**

**QUESTION 14**



Refer to the exhibit. Which two statements about the hardware components are true? (Choose two.)

- A. 2 is an RJ-45 to USB Type A console cable.
- B. 3 is a USB Type A port.
- C. 3 is a USB 5-pin mini USB Type B port.

- D. 1 is a USB Type A port.
- E. 2 is a USB 5-pin mini USB Type B to USB Type A console cable.

**Correct Answer:** BE

**Section:** Cisco Equipment and Related Hardware Explanation

**Explanation/Reference:**

Reference: [https://www.cisco.com/c/en/us/td/docs/routers/access/2900/hardware/installation/guide/Hardware\\_Installation\\_Guide/Install\\_Connect.html](https://www.cisco.com/c/en/us/td/docs/routers/access/2900/hardware/installation/guide/Hardware_Installation_Guide/Install_Connect.html)

**QUESTION 15** Which type of transceiver module is used for 40 Gigabit Ethernet connectivity?

- A. SFP+
- B. GBIC
- C. QSFP+
- D. XFP

**Correct Answer:** C

**Section:** Cisco Equipment and Related Hardware Explanation

**Explanation/Reference:**

Reference: <https://www.cisco.com/c/en/us/products/interfaces-modules/40-gigabit-modules/index.html#:~:text=The%20Cisco%20QSFP%20BiDi%20transceiver,10%20Gigabit%20Ethernet%20fiber%20infrastructure>

**QUESTION 16** What is the line speed of a DS0 in North America?

- A. 16 kbps
- B. 32 kbps
- C. 64 kbps
- D. 128 kbps



**Correct Answer:** C

**Section:** Cisco Equipment and Related Hardware Explanation

**Explanation/Reference:**

**QUESTION 17** Which two ports on a laptop are used to gain console access to a Cisco switch? (Choose two.)

- A. DB-9
- B. USB
- C. DVI
- D. RJ-11
- E. RJ-45 Ethernet

**Correct Answer:** AB

**Section:** Cisco Equipment and Related Hardware

**Explanation**

**Explanation/Reference:**

**QUESTION 18** Which two statements about a SmartJack are true? (Choose two.)

- A. It provides signal conversion.
- B. It acts as a concentration point for dial-in and dial-out connections.

- C. It operates at Layer 2 of the OSI model.
- D. It provides channel testing.
- E. It regenerates the signal to compensate for signal degradation from line transmission.

**Correct Answer:** AE

**Section:** Cisco Equipment and Related Hardware Explanation

**Explanation/Reference:**

**QUESTION 19** The colored wires at one end of a cable are in reverse sequence to the colored wires at the other end of the cable. Which cable does this configuration describe?

- A. rolled
- B. crossover
- C. coaxial
- D. straight-through

**Correct Answer:** B

**Section:** Cisco Equipment and Related Hardware Explanation

**Explanation/Reference:**

**QUESTION 20**

Which Cisco CPAK 100GBASE module supports Multimode Fiber cable?

- A. Cisco CPAK-100G-CWDM4
- B. Cisco CPAK-100G-LR4
- C. Cisco CPAK-100G-ER4L
- D. Cisco CPAK-100G-SR4



**Correct Answer:** D

**Section:** Cisco Equipment and Related Hardware Explanation

**Explanation/Reference:**

Reference: [https://www.cisco.com/c/en/us/products/collateral/interfaces-modules/transceiver-modules/data\\_sheet\\_c78-728110.html](https://www.cisco.com/c/en/us/products/collateral/interfaces-modules/transceiver-modules/data_sheet_c78-728110.html)

**QUESTION 21** The pins on an RJ-45 cable plug are numbered from 1 through 8. When the metal pins of the plug are facing toward you, pin 1 is the leftmost pin. Which two sets of pins are looped on an RJ-45 56K loopback plug? (Choose two.)

- A. pins 2 and 7 B. pins 2 and 8
- C. pins 2 and 5 D. pins 1 and 7
- E. pins 1 and 4

**Correct Answer:** CE

**Section:** Cisco Equipment and Related Hardware Explanation

**Explanation/Reference:**

**QUESTION 22** How many pairs of copper wire does a UTP cable have?

- A. 2
- B. 3
- C. 4
- D. 5

**Correct Answer:** C

**Section:** Cisco Equipment and Related Hardware Explanation

**Explanation/Reference:**

**QUESTION 23** Which two Cisco Nexus 3400 Series switches support 400-Gbps Ethernet ports? (Choose two.)

- A. Cisco Nexus 34180YC
- B. Cisco Nexus 34200YC-SM
- C. Cisco Nexus 3432D-S
- D. Cisco Nexus 3408-S
- E. Cisco Nexus 3464C

**Correct Answer:** CD

**Section:** Cisco Equipment and Related Hardware Explanation

**Explanation/Reference:**

Reference: [https://www.cisco.com/c/en/us/td/docs/switches/datacenter/nexus3400s/sw/922/interfaces/configuration/guide/b\\_Cisco\\_Nexus\\_3400\\_NX-OS\\_Interfaces\\_Configuration\\_Guide\\_922/b\\_Cisco\\_Nexus\\_3400\\_NX-OS\\_Interfaces\\_Configuration\\_Guide\\_922\\_chapter\\_010.html](https://www.cisco.com/c/en/us/td/docs/switches/datacenter/nexus3400s/sw/922/interfaces/configuration/guide/b_Cisco_Nexus_3400_NX-OS_Interfaces_Configuration_Guide_922/b_Cisco_Nexus_3400_NX-OS_Interfaces_Configuration_Guide_922_chapter_010.html)

**QUESTION 24** Which type of memory stores the configuration of a router or switch by default?

- A. RAM
- B. ROM
- C. NVRAM
- D. flash



**Correct Answer:** A

**Section:** Cisco Equipment and Related Hardware Explanation

**Explanation/Reference:**

**QUESTION 25** Which two commands identify the serial number of a Cisco router? (Choose two.)

- A. **show run**
- B. **show inventory**
- C. **show environment**
- D. **show version** E. **show archive**

**Correct Answer:** BD

**Section:** Cisco Equipment and Related Hardware Explanation

**Explanation/Reference:**

**QUESTION 26** Which two commands set the configuration register value? (Choose two.)



- A. `rommon>confreg 0x2102`
- B. `router(config)#confreg 0x2102`
- C. `rommon>config-register 0x2102`
- D. `router(config)#configuration-register 0x2102`
- E. `router(config)#config-register 0x2102`

**Correct Answer:** AE

**Section:** Cisco IOS Software Operation

**Explanation**

**Explanation/Reference:**

**QUESTION 27** Which bits represent the boot field in the configuration register value?

- A. highest two bits
- B. lowest two bits
- C. highest four bits
- D. lowest four bits

**Correct Answer:** D

**Section:** Cisco IOS Software Operation

**Explanation**

**Explanation/Reference:**

**QUESTION 28** Which type of memory stores the decompressed form of Cisco IOS Software and the running configuration?

- A. flash
- B. ROM
- C. NVRAM
- D. DRAM

**Correct Answer:** D

**Section:** Cisco IOS Software Operation

**Explanation**

**Explanation/Reference:**

**QUESTION 29** Which type of memory is used to permanently store Cisco IOS Software?

- A. NVRAM
- B. flash
- C. SRAM
- D. DRAM

**Correct Answer:** A

**Section:** Cisco IOS Software Operation

**Explanation**

**Explanation/Reference:**

**QUESTION 30** What is the default operating mode when you initially log in to a router?

- A. user EXEC
- B. global configuration
- C. privileged EXEC
- D. ROM monitor

**Correct Answer:** A

**Section:** Cisco IOS Software Operation

**Explanation**

**Explanation/Reference:**

**QUESTION 31** When you deploy Cisco Catalyst 3850 Series switches, which two modes of operation can you choose from?

- A. Active mode and Standby mode
- B. Install mode and Bundle mode
- C. Boot mode and Run mode
- D. Exec mode and User mode

**Correct Answer:** B

**Section:** Cisco IOS Software Operation

**Explanation**

**Explanation/Reference:**



**QUESTION 32** Which command displays a list of file systems that are available on Cisco devices?

- A. **show memory**
- B. **show directory**
- C. **show file system**
- D. **show version**

**Correct Answer:** C

**Section:** Cisco IOS Software Operation

**Explanation**

**Explanation/Reference:**

**QUESTION 33** Which two pieces of information are displayed when you use the **show ip interface brief** command? (Choose two.)

- A. Layer 2 address
- B. keepalive
- C. Layer 3 address
- D. encapsulation type
- E. interface status

**Correct Answer:** CE

**Section:** Cisco IOS Software Operation

**Explanation**

**Explanation/Reference:**

**QUESTION 34** Which command sends an echo request packet to the target host and then waits for an echo response message?

- A. **echo**
- B. **access**
- C. **ping**
- D. **connect**

**Correct Answer: C**

**Section: Cisco IOS Software Operation**

**Explanation**

**Explanation/Reference:**

**QUESTION 35** Which command displays information about the carrier network, cell site, and available service?

- A. **show cellular unit network**
- B. **show cellular unit radio**
- C. **show cellular unit hardware**
- D. **show cellular unit profile**

**Correct Answer: A**

**Section: Cisco IOS Software Operation**

**Explanation**



**Explanation/Reference:**

Reference: <https://www.cisco.com/c/en/us/td/docs/solutions/Verticals/EE/IG-WAN/EE-WAN-IG/EE-WAN-IGch2.html>

**QUESTION 36** Which two pieces of information about a neighboring device are displayed when you use the CLI command show cdp neighbor? (Choose two.)

- A. platform
- B. uptime
- C. device ID
- D. Cisco IOS Software version
- E. IP address

**Correct Answer: AC**

**Section: Cisco IOS Software Operation**

**Explanation**

**Explanation/Reference:**

**QUESTION 37** Cisco NX-OS has added the ability to use which type of custom scripting to help manage user networks?

- A. C++
- B. Collective
- C. SQL
- D. Python

**Correct Answer: D**

**Section: Cisco IOS Software Operation**  
**Explanation**

**Explanation/Reference:**

**QUESTION 38** Which command displays the configuration register setting?

- A. **show flash**
- B. **show running-config**
- C. **show version**
- D. **show config-register**

**Correct Answer: C**

**Section: Cisco IOS Software Operation**  
**Explanation**

**Explanation/Reference:**

**QUESTION 39** At the interface configuration prompt, which command returns you to the main configuration prompt?

- A. **end**
- B. **clear**
- C. **quit**
- D. **exit**

**Correct Answer: D**

**Section: Cisco IOS Software Operation**  
**Explanation**

**Explanation/Reference:**

**QUESTION 40** Which command provides detailed information about the components that are installed on a router, such as the model, PID, and serial number?

- A. **show chassis**
- B. **show items**
- C. **show inventory**
- D. **show router**

**Correct Answer: C**

**Section: Cisco IOS Software Operation**  
**Explanation**

**Explanation/Reference:**

**QUESTION 41** Which Windows-based text editor is preferred for working with a simple text document, such as a Cisco configuration?

- A. Microsoft Word
- B. Microsoft Notepad
- C. Microsoft Access



D. Microsoft Excel

**Correct Answer:** B

**Section:** Service-related Knowledge

**Explanation**

**Explanation/Reference:**

**QUESTION 42** From a Windows command prompt, which command displays the local IP address of a computer?

- A. ipconfiguration
- B. ip configuration
- C. ipconfig
- D. ip config

**Correct Answer:** C

**Section:** Service-related Knowledge

**Explanation**

**Explanation/Reference:**

**QUESTION 43** What is the Windows-based program that executes the ping command to test network connectivity?

- A. cmd
- B. Find
- C. Start
- D. ipconfig



**Correct Answer:** A

**Section:** Service-related Knowledge

**Explanation**

**Explanation/Reference:**

**QUESTION 44**

Which type of port on a laptop is used to connect to an Ethernet port on a Cisco switch?

- A. DVI
- B. RJ-11
- C. DB-9
- D. RJ-45

**Correct Answer:** D

**Section:** Service-related Knowledge

**Explanation**

**Explanation/Reference:**

**QUESTION 45** Which type of Cisco console cable is used to connect a laptop to the console port on a Cisco router?

- A. straight-through
- B. fiber

- C. crossover
- D. rollover

**Correct Answer:** D

**Section:** Service-related Knowledge

**Explanation**

**Explanation/Reference:**

**QUESTION 46** An Ethernet interface is up and the line protocol is down. What are two possible causes? (Choose two.)

- A. There is a speed or duplex mismatch with the remote device.
- B. There is a Layer 2 mismatch in the encapsulation type.
- C. The Ethernet interface has been manually disabled.
- D. Keepalives are not being received by the local device.
- E. The Ethernet cable might not be attached properly.

**Correct Answer:** AB

**Section:** Service-related Knowledge

**Explanation**

**Explanation/Reference:**

**QUESTION 47** From the enable mode, which command loads the configuration during the password recovery process on a Cisco router?

- A. **load\_helper**
- B. **configure terminal**
- C. **copy running-config startup-config**
- D. **copy startup-config running-config**



**Correct Answer:** D

**Section:** Service-related Knowledge

**Explanation**

**Explanation/Reference:**

**QUESTION 48** Which command initiates the copying of a Cisco IOS image to a Cisco device?

- A. **copy tftp nvram**
- B. **copy tftp flash**
- C. **copy flash tftp**
- D. **copy xmodem flash**

**Correct Answer:** B

**Section:** Service-related Knowledge

**Explanation**

**Explanation/Reference:**

**QUESTION 49**

TFTP is a simple protocol for transferring files, such as a Cisco IOS or configuration file, from one device to another. Which device can be configured as a TFTP server?

- A. Cisco Content Engine
- B. modem
- C. Cisco router
- D. CSU/DSU

**Correct Answer:** C

**Section:** Service-related Knowledge

**Explanation**

**Explanation/Reference:**

**QUESTION 50** What is the primary method for recovering or upgrading a Cisco network device system image?

- A. USB storage
- B. FTP
- C. the **tftpdnld** command
- D. the **xmodem** command

**Correct Answer:** C

**Section:** Service-related Knowledge

**Explanation**

**Explanation/Reference:**

**QUESTION 51** Which two commands are valid for copying a saved configuration to RAM? (Choose two.)

- A. **copy startup-config running-config**
- B. **copy running-config startup-config**
- C. **copy tftp running-config**
- D. **copy running-config tftp**
- E. **copy tftp startup-config**

**Correct Answer:** AC

**Section:** Service-related Knowledge

**Explanation**

**Explanation/Reference:**

**QUESTION 52** What are two purposes of a USB thumb drive? (Choose two.)

- A. to save the system log
- B. to copy configuration files to and from a PC
- C. to save router hardware information
- D. to copy IOS images to and from a PC
- E. to increase system memory size

**Correct Answer:** BD

**Section:** Service-related Knowledge

**Explanation**

**Explanation/Reference:**

**QUESTION 53** Which method is the fastest way to recover a software version that supports a USB flash port on a Cisco device?

- A. **tfpt** command
- B. **xmodem transfer** command
- C. **copy** command with USB memory
- D. **copy tfpt flash:** command

**Correct Answer:** C

**Section:** Service-related Knowledge

**Explanation**

**Explanation/Reference:**

**QUESTION 54** Which command initiates the transfer of a Cisco IOS image over IP from ROMMON?

- A. **Xmodem**
- B. **copy tfpt: flash:**
- C. **copy flash: tfpt:**
- D. **tfptdnld**

**Correct Answer:** D

**Section:** Service-related Knowledge

**Explanation**

**Explanation/Reference:**



**QUESTION 55** What does Cisco use for Return Materials Authorization tracking of field-replaceable parts?

- A. product number
- B. serial number
- C. RMA number
- D. FRU number

**Correct Answer:** C

**Section:** Service-related Knowledge

**Explanation**

**Explanation/Reference:**

**QUESTION 56**

Which set of steps best describes how to assign a static IP address to the Ethernet port on a computer?

- A. From the Network and Sharing Center, click **Internet Protocol (TCP/IP)**, and follow the New Connection Wizard instructions.
- B. From the Network and Sharing Center, click **Change adapter**, then double-click a local area connection. Select **Internet Protocol (TCP/IP) > Properties > Use the Following Address**, and then configure the IP information.
- C. Click **Start**. Enter **cmd** and click **OK**. Enter the IP address **XXX.XXX.XXX.XXX**.
- D. From the Network and Sharing Center, double-click Local Area Connection. Select **Properties > iPass Protocol (IEEE 802.1x) > Properties > Static IP**.

**Correct Answer:** B

**Section:** Service-related Knowledge

**Explanation**

**Explanation/Reference:**



**QUESTION 57**

Which router port is used for dial-in access to the router for CLI management purposes and does not usually pass normal network traffic?

- A. Fast Ethernet
- B. channelized serial
- C. AUX
- D. Gigabit Ethernet

**Correct Answer: C**

**Section: Service-related Knowledge**

**Explanation**

**Explanation/Reference:**

**QUESTION 58** ESD is the sudden and momentary electric current that flows between two objects at different electrical potentials, caused by direct contact or induced by an electrostatic field. Which three tools are used to avoid ESD? (Choose three.)

- A. negative static bag
- B. antistatic mat
- C. ESD wrist strap
- D. negative static mat
- E. antistatic bag
- F. latex gloves

**Correct Answer: BCE**

**Section: Service-related Knowledge**

**Explanation**

**Explanation/Reference:**



**QUESTION 59** Which type of port is used to connect a laptop to an Ethernet port on a Cisco router?

- A. rollover
- B. fiber
- C. straight-through
- D. crossover

**Correct Answer: C**

**Section: Service-related Knowledge**

**Explanation**

**Explanation/Reference:**

**QUESTION 60** Which Xmodem option is used to enhance error checking of an image that is copied to flash memory?

- A. -e
- B. -r
- C. -c
- D. -x

**Correct Answer: C**

Section: Service-related Knowledge  
Explanation

Explanation/Reference:

