

**Cisco 640-821**

**640-821 Introduction to Cisco Networking  
Technologies Exam  
Practice Test  
Version 2.2**

**QUESTION NO: 1**

Refer to the exhibit.

```
WG1R2#telnet 10.3.1.2
Trying 10.3.1.2 ... Open

Password required, but none set

[Connection to 10.3.1.2 closed by foreign host]
WG1R2#_
```

Why was this message received?

- A. No VTY password has been set
- B. No enable password has been set.
- C. No console password has been set.
- D. No enable secret password has been set.
- E. The login command has not been set on CON 0.
- F. The login command has not been set on the VTY ports.

**Answer: A**

**Explanation:**

This error is generated due to unset of telnet password. You need to set the telnet password using:

```
Router( config )#line vty 0 4
Router( config -line)#password telnet
Router( Config -line)#login
```

**QUESTION NO: 2**

A network administrator needs to create 29 subnetworks while maximizing the number of host addresses available on each subnet. How many bits must be borrowed from the host field of the network address to provide the required number of subnets with the most hosts per subnet?

- A. 2
- B. 3
- C. 4
- D. 5
- E. 6
- F. 7

**Answer: D**

**Explanation:**

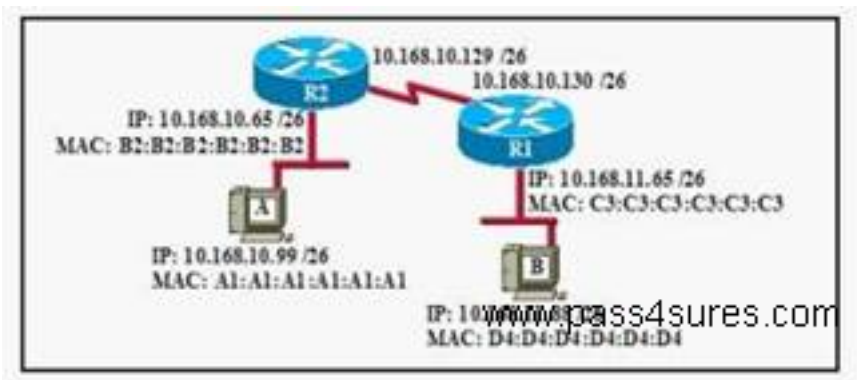
Answer E is correct because when administrator use the 5 bits for network, will gets 32 subnetwork .

11111000.

Subnet mask: 248

**QUESTION NO: 3**

Refer to the exhibit.



If host A sends an IP packet to host B, what will the OSI Layer 3 source address be in the packet when it reaches host B?

- A. 10.168.10.99
- B. 10.168.11.88
- C. 10.168.11.65
- D. A1:A1:A1:A1:A1:A1
- E. B2:B2:B2:B2:B2:B2
- F. C3:C3:C3:C3:C3:C3

**Answer: A**

**Explanation:**

When packets transfer from one host to another, source address is source address, physical address is existing router's interface address. Similarly destination ip address is destination host address as well as physical address is destination router's interface address.

**QUESTION NO: 4**

What is the difference between the Cisco router IOS commands show cdp neighbor detail and show cdp entry?

- A. The showcdp neighbor detail command shows all neighbor information, while show cdp entry displays only one line of output for each neighbor.
- B. The showcdp entry command shows neighbor information for specific neighbors only, while show cdp neighbor detail lists each neighbor with detailed output on each.
- C. The showcdp entry command shows neighbor information for all neighbors with one line of output for each, while show cdp neighbor detail lists each neighbor with detailed output on each.
- D. The showcdp neighbor detail command shows neighbor information for a single neighbor only, while show cdp entry displays detailed output on each neighbor known.

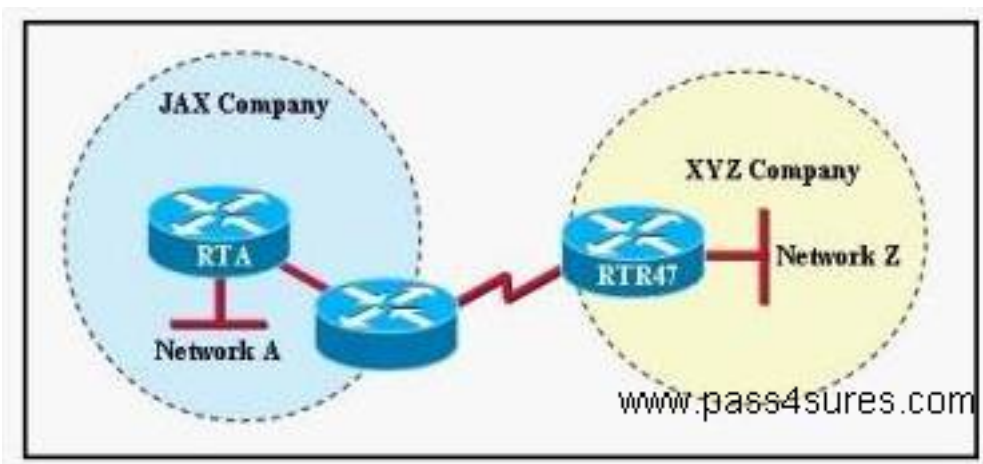
**Answer: B**

**Explanation:**

CDP is a proprietary protocol designed by Cisco to help administrators collect information about both locally attached and remote devices. By using CDP, you can gather hardware and protocol information about neighbor devices majorly useful info for troubleshooting and documenting the network. The show cdp entry command shows neighbor information for specific neighbors only, while show cdp neighbor detail lists each neighbor with detailed output on each.

**QUESTION NO: 5**

Refer to the exhibit.



A person is trying to send a file from a host on Network A of the JAX Company to a server on Network Z of the XYZ Company. The file transfer fails. The host on Network A can communicate with other hosts on Network A. Which command, issued from router RTA, would be the most useful for troubleshooting this problem?

- A. show flash:
- B. show history
- C. show version
- D. show interfaces
- E. show controllers serial

**Answer: D**

**Explanation:**

This problem due to the communication problem with the ftp server. Using the show interface command can verify the ip address, speed and duplex etc configuration. So, this is the most useful tool.

**QUESTION NO: 6 DRAG DROP**

Construct the command sequence to configure an IP address on a serial interface. (Not all options are used.)

|  |                                    |
|--|------------------------------------|
| Hub# interface s0/0                                    | enter global configuration mode    |
| Hub(config)# interface s0/0                            | enter interface configuration mode |
| Hub(config-if)# no shutdown                            | configure the interface IP address |
| Hub(config)# ip address 172.16.20.21 255.255.255.0     | enable the interface               |
| Hub(config-if)# ip address 10.8.5.255 255.255.252.0    | label the interface                |
| Hub(config-if)# enable interface                       |                                    |
| Hub(config-if)# ip address 198.18.2.63 255.255.255.224 |                                    |
| Hub(config-if)# description T1 to WAN                  |                                    |
| Hub(config)# banner motd I T1 to WAN I                 |                                    |
| Hub# configure terminal                                |                                    |

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**Answer:**

Construct the command sequence to configure an IP address on a serial interface. (Not all options are used.)

|  |   |
|--|---|
| Hub# interface s0/0                                    | Hub# configure terminal                             |
| Hub(config)# interface s0/0                            | Hub(config)# interface s0/0                         |
| Hub(config-if)# no shutdown                            | Hub(config-if)# ip address 10.8.5.255 255.255.252.0 |
| Hub(config)# ip address 172.16.20.21 255.255.255.0     | Hub(config-if)# no shutdown                         |
| Hub(config-if)# ip address 10.8.5.255 255.255.252.0    | Hub(config-if)# description T1 to WAN               |
| Hub(config-if)# enable interface                       |   |
| Hub(config-if)# ip address 198.18.2.63 255.255.255.224 |   |
| Hub(config-if)# description T1 to WAN                  |   |
| Hub(config)# banner motd I T1 to WAN I                 |   |
| Hub# configure terminal                                |   |

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**Explanation:**

Construct the command sequence to configure an IP address on a serial interface. (Not all options are used.)

|  |   |
|--|---|
| Hub# interface s0/0                                    | Hub# configure terminal                             |
| Hub(config)# interface s0/0                            | Hub(config)# interface s0/0                         |
| Hub(config-if)# no shutdown                            | Hub(config-if)# ip address 10.8.5.255 255.255.252.0 |
| Hub(config)# ip address 172.16.20.21 255.255.255.0     | Hub(config-if)# no shutdown                         |
| Hub(config-if)# ip address 10.8.5.255 255.255.252.0    | Hub(config-if)# description T1 to WAN               |
| Hub(config-if)# enable interface                       |   |
| Hub(config-if)# ip address 198.18.2.63 255.255.255.224 |   |
| Hub(config-if)# description T1 to WAN                  |   |
| Hub(config)# banner motd ! T1 to WAN !                 |   |
| Hub# configure terminal                                |   |

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### QUESTION NO: 7

Which Layer 4 protocol is used for a Telnet connection?

- A. IP
- B. TCP
- C. UDP
- D. ICMP
- E. DNS

**Answer: B**

#### Explanation:

TCP is a reliable connection-oriented protocol. TCP uses acknowledgments, sequencing, and flow control to ensure reliability (please refer back to the "Transport Layer" section of the OSI model for definitions of these terms). A TCP segment contains fields for the Sequence, Acknowledgment, and Windowing numbers. These fields help make sure that datagrams arrive undamaged. This is considered to be reliable delivery.

TCP uses Positive Acknowledgment and Retransmission ( PAR) :

The source device begins a timer when a segment is sent and retransmits if the timer runs out before an acknowledgment is received.

The source device keeps track of segments that are sent and requires an acknowledgment for each segment.

The destination device acknowledges when a segment is received by sending a packet to the source that iterates the next sequence number it is looking for from the source.

**QUESTION NO: 8**

What is the subnet address of 172.16.159.159/22?

- A. 172.16.0.0
- B. 172.16.128.0
- C. 172.16.156.0
- D. 172.16.159.0
- E. 172.16.159.128
- F. 172.16.192.0

**Answer: C**

**Explanation:**

In question total 6 bits borrowed from the host address so subnet mask is 255.255.252. And network address is : 256-252=4

There can be four host in one network but valid address is only two because one reserved for broadcast and another reserved to network.

So B answer is correct.

**QUESTION NO: 9**

What is the purpose of flow control?

- A. to ensure data is retransmitted if an acknowledgment is not received
- B. to reassemble segments in the correct order at the destination device
- C. to provide a means for the receiver to govern the amount of data sent by the sender
- D. to regulate the size of each segment

**Answer: C**

**Explanation:**

Flow control does not regulate the size of each datagram (D); rather it provides a mechanism for the receiver to control the transmission speed. So C is the correct answer.

**QUESTION NO: 10**

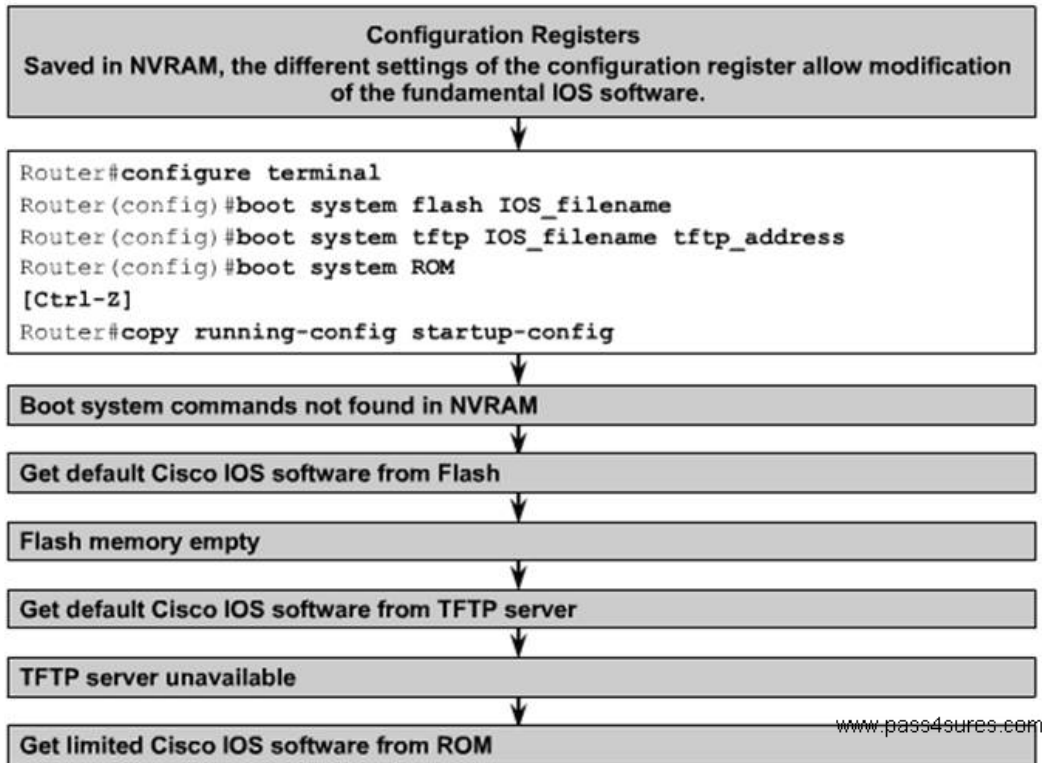
During the boot sequence, a 2600 series router needs to locate and load an operating system. What is the default order the router uses to find an operating system?

- A. Flash, TFTP server, ROM
- B. Flash, TFTP server, RAM

- C. Flash, NVRAM, TFTP server
- D. ROM, TFTP server, Flash 3
- E. Flash, ROM, TFTP server

**Answer: A**

**Explanation:**



### QUESTION NO: 11

What is the subnet address for the IP address 172.19.20.23/28?

- A. 172.19.20.0
- B. 172.19.20.15
- C. 172.19.20.16
- D. 172.19.20.20
- E. 172.19.20.32

**Answer: C**

**Explanation:**

In this question total 4 bits is borrowed from the host address so 240 is the subnet mask.

11110000 : total Network is 16 and total Valid number of hosts on per network is 14.

Network ID: 256-240=16

Second Range of subnetted address is between 16-32 So D answer is correct.



**QUESTION NO: 12**

Which two statements describe the IP address 10.16.3.65/23? (Choose two.)

- A. The subnet address is 10.16.3.0 255.255.254.0.
- B. The lowest host address in the subnet is 10.16.2 1 255.255.254.0
- C. The last valid host address in the subnet is 10.16.2.254 255.255.254.0
- D. The broadcast address of the subnet is 10.16.3.255 255.255.254.0. \_|
- E. The network is notsubnetted.

**Answer: B,D**

**Explanation:**

Total 7 bits borrowed from the host address so 255.255.254 is the subnetmask .

**QUESTION NO: 13**

An administrator issues the show ip interface sO/0 command and the output displays the line Serialu/O is up, line protocol is upWhat does "line protocol is up" specifically indicate about the interface?

- A. Keepalives are being received on the interface.
- B. The cable is attached properly.
- C. CDP has discovered the connected device.
- D. A carrier detect signal has been received from the connected device.
- E. IP is correctly configured on the interface.

**Answer: A**

**Explanation:**

Line serial0/0 is up : This statement represents that the physical connection is good. And line protocol is up : represents that datalink layer is ok so receiving the keepalives are being received on the interface.

```
Router>show interface ethernet 0
```

```
Ethernet0 is administratively down, line protocol is down , using hub 0
```

```
Hardware is Lance, address is 0010.7b3a.cf84 ( bia 0010.7b3a.cf84)
```

```
MTU 1500 bytes, BW 10000 Kbit, DLY 1000 usec , rely 255/255, load 1/255
```

```
Encapsulation ARPA, loopback not set, keepalive set (10 sec)
```

```
ARP type: ARPA, ARP Timeout 04:00:00
```

```
Last input never, output 01:05:35, output hang never
```

```
Last clearing of "show interface" counters never
```

```
Queueing strategy: fifo
```

```
Output queue 0/40, 0 drops; input queue 0/75, 0 drops
```

```

5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
0 packets input, 0 bytes, 0 no buffer
Received 0 broadcasts, 0 runts, 0 giants, 0 throttles
0 input errors, 0 CRC, 0 frame , 0 overrun, 0 ignored, 0 abort
0 input packets with dribble condition detected
63 packets output, 11676 bytes, 0 underruns
0 output errors, 0 collisions, 1 interface resets
0 babbles, 0 late collision , 0 deferred
0 lost carrier, 0 no carrier
0 output buffer failures, 0 output buffers swapped out
Router>

```

**QUESTION NO: 14**


The Hub and Spoke routers are directly connected through their serial interfaces for purposes of testing. Based on the output shown in the exhibit,

```

Hub# show controllers s0/0
Interface Serial0/0
Hardware is PowerQUICC MPC860
DTE V.35 clocks stopped.
idb at 0x81DE2098, driver data structure at 0x81DE4DF4
SCC Registers:

Hub# show ip interface s0/0
Serial0/0 is up, line protocol is down
Internet address is 192.168.1.2/24
Broadcast address is 255.255.255.255

```



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<some output omitted>

what must be done to make the serial line operational?

- A. Start the clock on the Hub router.
- B. Change the IP address on the Spoke router.
- C. Configure the serial 0/0 interface on the Spoke router with a clockrate.
- D. Replace the broken cable between the two devices.
- E. Use the no shutdown command on the Hub router.

**Answer: C**

**Explanation:**

Data communications equipment (DCE expansion). Provides clocking to the data terminal equipment (DTE), data circuit-terminating equipment (ITU-T expansion). Devices and connections