Question 6.2.5

Based on the results, please answer the following questions:

Q 6.2.5a: The name of the flash IOS?
c1841-advipservicesk9-mz.124.15.T1.bin

Q 6.2.5b: How many FastEthernet interfaces?
2 FastEthernet/IEEE 802.3 interfaces

Q 6.2.5c: The amount of NVRAM?
191K bytes of NVRAM

Q 6.2.5d: The amount of flash?
63488K bytes of ATA CompactFlash (Read/Write)

Question 6.2.6

Q 6.2.6a Record commands and results

Router>enable
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname AUS
AUS(config)#enable password cisco
AUS(config)#enable secret cisco1
AUS(config)#exit
AUS#
%SYS-5-CONFIG_I: Configured from console by console
logout
AUS con0 is now available
Press RETURN to get started.

Q 6.2.6b If both are configured (enable password and enable secret), which will serve as the password? Why?
The enable secret password (in this case – cisco1) will supercede the enable password (cisco) because enable secret is a higher level of security than enable password. Enable secret passwords also are encrypted, whereas enable passwords are shown in plain text.
Question 6.2.7

Q 6.2.7a Record commands and the results.

**AUS>enable**
**Password:** I needed to enter the enable secret password – cisco1.
**AUS#conf t**
Enter configuration commands, one per line. End with CNTL/Z.
**AUS(config)#line console 0**
**AUS(config-line)#password cisco**
**AUS(config-line)#login**
**AUS(config-line)#exec-timeout 30 0**
**AUS(config-line)#exit**
**AUS(config)#exit**
**AUS#**
%SYS-5-CONFIG_I: Configured from console by console
logout
AUS con0 is now available
Press RETURN to get started.

After pressing Enter to log in to the user mode, I received the following output.
**User Access Verification**
**Password:** Instead of going directly to user mode, I needed to enter the cisco password that I configured in the **AUS(config-line)#password cisco** command above. Once entered, I saw the next line.
**AUS>enable**
**Password:** This prompt required the cisco1 password that I configured with the **AUS enable secret cisco1** command in question 6.2.6. Then I was allowed into the exec mode, as shown by the next prompt.
**AUS#**
Question 6.2.8

Q 6.2.8a: Record commands and the results.

**Password:** *This was the password cisco.*
**AUS>enable**
**Password:** *This was the enable secret password cisco1.*
**AUS#conf t**
Enter configuration commands, one per line. End with CNTL/Z.
**AUS(config)#line vty 0 4**
**AUS(config-line)#password cisco**
**AUS(config-line)#login**
**AUS(config-line)#exec-timeout 30 0**
**AUS(config-line)#^Z CTRL + Z replaces the exit commands.*
**AUS#**
%SYS-5-CONFIG_I: Configured from console by console
logout
AUS con0 is now available
Press RETURN to get started.

Q 6.2.8b: Based on the commands, how many concurrent Telnet connections are allowed?
There are 5 telnet connections allowed. We set these up in the command
**AUS(config)#line vty 0 4. (connections 0, 1, 2, 3, 4)**

Question 6.3.1

Q 6.3.1a Run “show ip route” on all three routers and record the results

**Albuquerque Configuration**
**Albuquerque>enable**
**Albuquerque#conf t**
Enter configuration commands, one per line. End with CNTL/Z.
**Albuquerque(config)#int fas0/0**
**Albuquerque(config-if)#ip address 10.1.1.251 255.255.255.0**
**Albuquerque(config-if)#no shutdown**
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
Albuquerque(config-if)#exit
Albuquerque(config)#int serial 0/0
Albuquerque(config-if)#ip address 10.1.128.251 255.255.255.0
Albuquerque(config-if)#no shutdown
%LINK-5-CHANGED: Interface Serial0/0, changed state to down
Albuquerque(config-if)#exit
Albuquerque(config)#int serial 0/1
Albuquerque(config-if)#ip address 10.1.130.251 255.255.255.0
Albuquerque(config-if)#clock rate 56000
Albuquerque(config-if)#no shutdown
%LINK-5-CHANGED: Interface Serial0/1, changed state to down
Albuquerque(config-if)^Z
Albuquerque#
%SYS-5-CONFIG_I: Configured from console by console

code: show ip interface brief

<table>
<thead>
<tr>
<th>Interface</th>
<th>IP-Address</th>
<th>OK?</th>
<th>Method</th>
<th>Status</th>
<th>Protocol</th>
</tr>
</thead>
<tbody>
<tr>
<td>FastEthernet0/0</td>
<td>10.1.1.251</td>
<td>YES</td>
<td>manual</td>
<td>up</td>
<td>up</td>
</tr>
<tr>
<td>FastEthernet0/1</td>
<td>unassigned</td>
<td>YES</td>
<td>unset</td>
<td>administratively down</td>
<td>down</td>
</tr>
<tr>
<td>Serial0/0</td>
<td>10.1.128.251</td>
<td>YES</td>
<td>manual</td>
<td>up</td>
<td>up</td>
</tr>
<tr>
<td>Serial0/1</td>
<td>10.1.130.251</td>
<td>YES</td>
<td>manual</td>
<td>up</td>
<td>up</td>
</tr>
</tbody>
</table>
Albuquerque#

code: show ip route

Albuquerque>show ip route

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

Gateway of last resort is not set

10.0.0.0/24 is subnetted, 3 subnets
C  10.1.1.0 is directly connected, FastEthernet0/0
C  10.1.128.0 is directly connected, Serial0/0
Yosemite Configuration

Yosemite>enable
Yosemite#conf t
Enter configuration commands, one per line. End with CNTL/Z.

Yosemite(config)#int fas0/0
Yosemite(config-if)#ip address 10.1.2.252 255.255.255.0
Yosemite(config-if)#no shutdown
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
Yosemite(config-if)#exit
Yosemite(config)#int serial 0/0
Yosemite(config-if)#ip address 10.1.128.252 255.255.255.0
Yosemite(config-if)#clock rate 56000
Yosemite(config-if)#no shutdown

%LINK-5-CHANGED: Interface Serial0/0, changed state to up
Yosemite(config-if)#exit
Yosemite(config)#int serial 0/1
Yosemite(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0, changed state to up It was interesting that this line of code popped up after I had typed two other commands (exit and int serial 0/1). I’m guessing that the router responded more slowly than usual. I tried to move the cursor up, next to Yosemite(config-if)#, but it wouldn’t allow me to type on that line. So I typed the next line of code on its own line. This happened during configuration of Seville, too.

ip address 10.1.129.252 255.255.255.0
Yosemite(config-if)#no shutdown
%LINK-5-CHANGED: Interface Serial0/1, changed state to down
Yosemite(config-if)#^Z
Yosemite#
%SYS-5-CONFIG_I: Configured from console by console

show ip interface brief

<table>
<thead>
<tr>
<th>Interface</th>
<th>IP-Address</th>
<th>OK?</th>
<th>Method</th>
<th>Status</th>
<th>Protocol</th>
</tr>
</thead>
<tbody>
<tr>
<td>FastEthernet0/0</td>
<td>10.2.2.252</td>
<td>YES</td>
<td>manual</td>
<td>up</td>
<td>up</td>
</tr>
<tr>
<td>FastEthernet0/1</td>
<td>unassigned</td>
<td>YES</td>
<td>unset</td>
<td>administratively down</td>
<td>down</td>
</tr>
</tbody>
</table>
When I ran the `show ip interface brief` command right after configuration, the serial ports came up as manual down down. After waiting a few minutes, I checked the `ip interface status` again. As expected, the serial ports showed as manual up up. That makes more sense to me because the no shutdown command had been applied.

```
show ip route
```

Yosemite> `show ip route`

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

Gateway of last resort is not set

```
     10.0.0.0/24 is subnetted, 3 subnets
        C 10.1.128.0 is directly connected, Serial0/0
        C 10.1.129.0 is directly connected, Serial0/1
        C 10.2.2.0 is directly connected, FastEthernet0/0
```

Seville Configuration
```
Seville> `enable`
Seville# `conf t`
Enter configuration commands, one per line. End with CNTL/Z.
Seville(config)# `int fas0/0`
Seville(config-if)# `ip address 10.1.3.253 255.255.255.0`
Seville(config-if)# `no shutdown`
Seville(config-if)# `exit`
Seville(config)# `int serial 0/0`
Seville(config-if)# `ip address 10.1.130.253 255.255.255.0`
Seville(config-if)# `no shutdown`
%LINK-5-CHANGED: Interface Serial0/0, changed state to up
Seville(config-if)# `exit`
Seville(config)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0, changed state to up
int serial 0/1
```
Seville(config-if)#ip address 10.1.129.253 255.255.255.0
Seville(config-if)#clock rate 56000
Seville(config-if)#no shutdown
%LINK-5-CHANGED: Interface Serial0/1, changed state to up
Seville(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/1, changed state to up
^Z
Seville#
%SYS-5-CONFIG_I: Configured from console by console

show ip interface brief
<table>
<thead>
<tr>
<th>Interface</th>
<th>IP-Address</th>
<th>OK?</th>
<th>Method</th>
<th>Status</th>
<th>Protocol</th>
</tr>
</thead>
<tbody>
<tr>
<td>FastEthernet0/0</td>
<td>10.1.3.253</td>
<td>YES</td>
<td>manual</td>
<td>up</td>
<td>up</td>
</tr>
<tr>
<td>FastEthernet0/1</td>
<td>unassigned</td>
<td>YES</td>
<td>unset</td>
<td>administratively down</td>
<td>down</td>
</tr>
<tr>
<td>Serial0/0</td>
<td>10.1.130.253</td>
<td>YES</td>
<td>manual</td>
<td>up</td>
<td>up</td>
</tr>
<tr>
<td>Serial0/1</td>
<td>10.1.129.253</td>
<td>YES</td>
<td>manual</td>
<td>up</td>
<td>up</td>
</tr>
</tbody>
</table>

Seville#

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

Gateway of last resort is not set

    10.0.0.0/24 is subnetted, 3 subnets
    C   10.1.3.0 is directly connected, FastEthernet0/0
    C   10.1.129.0 is directly connected, Serial0/1
    C   10.1.130.0 is directly connected, Serial0/0

Question 6.3.2

Q 6.3.2a Add static routes to Albuquerque, Yosemite, and Seville. Run “show ip route” and record the results.
Albuquerque Static IPs

Albuquerque>enable
Albuquerque#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Albuquerque(config)#ip route 10.1.2.0 255.255.255.0 10.1.128.252
Albuquerque(config)#ip route 10.1.3.0 255.255.255.0 10.1.130.253
Albuquerque(config)#exit
Albuquerque#
%SYS-5-CONFIG_I: Configured from console by console
show ip route static
  10.0.0.0/24 is subnetted, 5 subnets
 S  10.1.2.0 [1/0] via 10.1.128.252
 S  10.1.3.0 [1/0] via 10.1.130.253

Yosemite Static IPs

Yosemite>enable
Yosemite#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Yosemite(config)#ip route 10.1.1.0 255.255.255.0 10.1.128.251
Yosemite(config)#exit
Yosemite#
%SYS-5-CONFIG_I: Configured from console by console
show ip route static
  10.0.0.0/24 is subnetted, 5 subnets
 S  10.1.1.0 [1/0] via 10.1.128.251
 S  10.1.3.0 [1/0] via 10.1.129.253

Seville Static IPs

Seville>enable
Seville#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Seville(config)#ip route 10.1.1.0 255.255.255.0 10.1.130.251
Seville(config)#ip route 10.1.2.0 255.255.255.0 10.1.129.252
Seville(config)#exit
Seville#
%SYS-5-CONFIG_I: Configured from console by console
show ip route static
  10.0.0.0/24 is subnetted, 5 subnets
Question 6.3.3

Q 6.3.3a Remove static routes in Yosemite and Seville. Run “show ip route” and record results.

Albuquerque Remove Static IPs
Albuquerque>enable
Albuquerque#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Albuquerque(config)#no ip route 10.1.2.0 255.255.255.0 10.1.128.252
Albuquerque(config)#no ip route 10.1.3.0 255.255.255.0 10.1.130.253
Albuquerque(config)#^Z
Albuquerque#
%SYS-5-CONFIG_I: Configured from console by console

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

Gateway of last resort is not set

        10.0.0.0/24 is subnetted, 3 subnets
        C   10.1.1.0 is directly connected, FastEthernet0/0
        C   10.1.128.0 is directly connected, Serial0/0
        C   10.1.130.0 is directly connected, Serial0/1

Yosemite Remove Static IPs
Yosemite>enable
Yosemite#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Yosemite(config)#no ip route 10.1.1.0 255.255.255.0 10.1.128.251
Yosemite(config)#no ip route 10.1.3.0 255.255.255.0 10.1.129.253
Yosemite(config)#^Z
Yosemite#
%SYS-5-CONFIG_I: Configured from console by console

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

Gateway of last resort is not set

10.0.0.0/24 is subnetted, 3 subnets
C  10.1.128.0 is directly connected, Serial0/0
C  10.1.129.0 is directly connected, Serial0/1
C  10.2.2.0 is directly connected, FastEthernet0/0

Seville Remove Static IPs
Seville>enable
Seville#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Seville(config)#no ip route 10.1.1.0 255.255.255.0 10.1.130.251
Seville(config)#no ip route 10.1.2.0 255.255.255.0 10.1.129.252
Seville(config)#^Z
Seville#
%SYS-5-CONFIG_I: Configured from console by console

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

Gateway of last resort is not set

10.0.0.0/24 is subnetted, 3 subnets
C 10.1.3.0 is directly connected, FastEthernet0/0
C 10.1.129.0 is directly connected, Serial0/1
C 10.1.130.0 is directly connected, Serial0/0

Question 6.4.1

Q 6.4.1a Run “show ip route” and record results.
PC1/R1 Show IP Route

R1#show ip route

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

Gateway of last resort is not set

10.0.0.0/30 is subnetted, 1 subnets
C 10.10.1.0 is directly connected, Serial0/0
172.20.0.0/27 is subnetted, 1 subnets
C 172.20.15.0 is directly connected, FastEthernet0/0

PC2/R2 Show IP Route
R2#show ip route

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

Gateway of last resort is not set

    10.0.0.0/30 is subnetted, 1 subnets
C     10.10.1.0 is directly connected, Serial0/1
    192.168.25.0/27 is subnetted, 1 subnets
C     192.168.25.0 is directly connected, FastEthernet0/0

6.4.3 Verifying Configurations

Run show ip interface brief to verify configurations.

R1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R1(config)#hostname LAN-A
LAN-A(config)#exit

LAN-A>enable
LAN-A#show ip int brief

<table>
<thead>
<tr>
<th>Interface</th>
<th>IP-Address</th>
<th>OK?</th>
<th>Method</th>
<th>Status</th>
<th>Protocol</th>
</tr>
</thead>
<tbody>
<tr>
<td>FastEthernet0/0</td>
<td>172.20.15.1</td>
<td>YES</td>
<td>manual up</td>
<td>up</td>
<td></td>
</tr>
<tr>
<td>FastEthernet0/1</td>
<td>unassigned</td>
<td>YES</td>
<td>unset</td>
<td>administratively down down</td>
<td></td>
</tr>
<tr>
<td>Serial0/0</td>
<td>10.10.1.1</td>
<td>YES</td>
<td>manual up</td>
<td>up</td>
<td></td>
</tr>
<tr>
<td>Serial0/1</td>
<td>unassigned</td>
<td>YES</td>
<td>unset</td>
<td>administratively down down</td>
<td></td>
</tr>
</tbody>
</table>

R2#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R2(config)#hostname LAN-B
LAN-B(config)#exit
**LAN-B>enable**

**LAN-B#show ip int brief**

<table>
<thead>
<tr>
<th>Interface</th>
<th>IP-Address</th>
<th>OK? Method</th>
<th>Status</th>
<th>Protocol</th>
</tr>
</thead>
<tbody>
<tr>
<td>FastEthernet0/0</td>
<td>192.168.25.16</td>
<td>YES</td>
<td>manual up</td>
<td>up</td>
</tr>
<tr>
<td>FastEthernet0/1</td>
<td>unassigned</td>
<td>YES</td>
<td>unset</td>
<td>administratively down down</td>
</tr>
<tr>
<td>Serial0/0</td>
<td>unassigned</td>
<td>YES</td>
<td>manual down</td>
<td>down</td>
</tr>
<tr>
<td>Serial0/1</td>
<td>10.10.1.2</td>
<td>YES</td>
<td>manual up</td>
<td>up</td>
</tr>
</tbody>
</table>

**Question 6.4.4**

Q 6.4.4a Run “show ip route” on LAN-A and record results.

**LAN-A OSPF Configuration**

```
LAN-A>enable
LAN-A#conf t
Enter configuration commands, one per line. End with CNTL/Z.
LAN-A(config)#router ospf 100
LAN-A(config-router)#network 172.20.15.0 0.0.0.255 area 0
LAN-A(config-router)#exit
LAN-A(config)#router ospf 100
LAN-A(config-router)#network 192.168.25.0 0.0.0.255 area 0
LAN-A(config-router)#exit
LAN-A(config)#router ospf 100
LAN-A(config-router)#network 10.10.1.0 0.0.0.255 area 0
LAN-A(config-router)#
```

```
01:02:21: %OSPF-5-ADJCHG: Process 100, Nbr 192.168.25.16 on Serial0/0 from
LOADING to FULL, Loading Done
```

**LAN-A OSPF Show IP Route**

```
LAN-A#
%SYS-5-CONFIG_I: Configured from console by console
show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
        D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
        N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
        E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
        i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
```
Gateway of last resort is not set

10.0.0.0/30 is subnetted, 1 subnets
C  10.10.1.0 is directly connected, Serial0/1
172.20.0.0/27 is subnetted, 1 subnets
O  172.20.15.0 [110/65] via 10.10.1.1, 00:03:21, Serial0/1
192.168.25.0/27 is subnetted, 1 subnets
C  192.168.25.0 is directly connected, FastEthernet0/0

LAN-B OSPF Configuration
LAN-B>enable
LAN-B#conf t
Enter configuration commands, one per line. End with CNTL/Z.
LAN-B(config)#router ospf 100
LAN-B(config-router)#network 172.20.15.0 0.0.0.255 area 0
LAN-B(config-router)#exit
LAN-B(config)#router ospf 100
LAN-B(config-router)#network 192.168.25.0 0.0.0.255 area 0
LAN-B(config-router)#exit
LAN-B(config)#router ospf 100
LAN-B(config-router)#network 10.10.1.0 0.0.0.255 area 0
LAN-B(config-router)#
01:02:21: %OSPF-5-ADJC: Process 100, Nbr 172.20.15.1 on Serial0/1 from LOADING to FULL, Loading Done

LAN-B OSPF Show IP Route
LAN-B#
%SYS-5-CONFIG_I: Configured from console by console
show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
* - candidate default, U - per-user static route, o - ODR
P - periodic downloaded static route
Gateway of last resort is not set

10.0.0.0/30 is subnetted, 1 subnets
C 10.10.1.0 is directly connected, Serial0/1
172.20.0.0/27 is subnetted, 1 subnets
O 172.20.15.0 [110/65] via 10.10.1.1, 00:03:21, Serial0/1
192.168.25.0/27 is subnetted, 1 subnets
C 192.168.25.0 is directly connected, FastEthernet0/0

Question 6.4.5

Q 6.4.5a Run “show ip protocols” on LAN-A and record results.

LAN-A#show ip protocol

Routing Protocol is "ospf 100"
Outgoing update filter list for all interfaces is not set
Incoming update filter list for all interfaces is not set
Router ID 172.20.15.1
Number of areas in this router is 1. 1 normal 0 stub 0 nssa
Maximum path: 4
Routing for Networks:
  172.20.15.0 0.0.0.255 area 0
  192.168.25.0 0.0.0.255 area 0
  10.10.1.0 0.0.0.255 area 0
Routing Information Sources:
  Gateway Distance  Last Update
  172.20.15.1 110     00:01:17
  192.168.25.16 110   00:01:17
Distance: (default is 110)

Question 6.4 Pinging From LAN-A to LAN-B

All the configuration is complete and all lights are green, so I issued the extended ping command via LAN-A’s CLI. Here are the results of that ping.

LAN-A#ping
Protocol [ip]: I didn’t realize that I needed to press enter to get to the next line. No other keys needed to be pressed, but once I pressed enter, the line “target IP address:” appeared. The same thing happened for the other command lines below.

Target IP address: 192.168.25.16
Repeat count [5]:
Datagram size [100]:
Timeout in seconds [2]:
Extended commands [n]: y
Source address or interface: 172.20.15.1
Type of service [0]:
Set DF bit in IP header? [no]:
Validate reply data? [no]:
Data pattern [0xABCD]:
Loose, Strict, Record, Timestamp, Verbose [none]:
Sweep range of sizes [n]:
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.25.16, timeout is 2 seconds:
Packet sent with a source address of 172.20.15.1
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 3/4/6 ms