**Part C Lab 1**

Task 3 Step 2

The interface is required to be enabled to be added to the routing table.

Task 3 Step 3

1. yes
   1. Yes
   2. Yes
2. Yes
3. Yes
4. Yes

Task 3 Step 4

Show ip route verified the 172.16.3.0 is in the routing table

Task 3 Step 6

Interface must be enabled

Task 3 Step 7

No shutdown command shows interface being down likely due to serial interface on R2 not enabled

Task 3 Step 9

No shutdown command was required in order to change the state of the Serial interface

1. yes
   1. Yes
   2. Yes
2. Yes
3. Yes
4. Yes

Task 6 Step 1

All ping tests were successful from PC’s

Task 6 Step 2

Ping tests between routers were successful

Task 6 Step 3

All ping tests did fail, reason being is the packets do not have a route to different subnets

Task 7 Step 1

All interfaces are activated

R1 and R3 have 2 interfaces that are in the up and up state

R2 has 3 separate physical connections requiring interfaces

Task 7 Step 2

R1 router missing subnets 192.168.1.0 and 192.168.2.0

R2 router missing subnets 172.16.3.0 and 192.168.2.0

R3 router missing subnets 172.16.3.0 and 172.16.2.0 and 172.16.1.0

The missing routes are because they are not directly connected to the devices interfaces

Static routes will aid in communications between subnets through the routers

Task 8 Step 2

R3 will use the Se0/0/1 interface to reach the 172.16.1.0/24 network

R3 will use the Fa0/0 interface to forward the packets to the known subnet on its routing table

Task 8 Step 3

No, the ping fails

Task 8 Step 4

192.168.1.1 would be the next hop to get to 192.168.2.0/24 subnet

Task 8 Step 6

Successful pings between PC3 and PC2

Task 9 Step 2

Commands are removed by using the “no” command in front of an existing command

Task 9 Step 3

R2 does not know of the subnets from R1 yet, therefore, R2 cannot receive ping replies from all destinations.

Task 10 Step 3

PC2 is able to ping PC1

PC3 is unable to ping PC1

R3 does not know about 172.16.3.0 subnet

Task 10 Step 5

PC3 can successfully ping PC1