QUESTION 38
Which SNMP verification command shows the encryption and authentication protocols that are used in SNMPV3?

A. show snmp group
B. show snmp user
C. show snmp
D. show snmp view

Answer: B
Explanation:
The command "show snmp user" displays information about the configured characteristics of SNMP users. The following example specifies the username as abcd with authentication method of MD5 and encryption method of 3DES.

```
Router#show snmp user abcd
User name: abcd
Engine ID: 000000090200000000C025808
storage-type: nonvolatile active access-list: 10
Rowstatus: active
Authentication Protocol: MD5
Privacy protocol: 3DES
Group name: VacmGroupName
Group name: VacmGroupName
```

Reference: http://www.cisco.com/c/en/us/td/docs/ios/12_4t/12_4t2/snmpv3ae.html
Note: The command "show snmp group" displays the names of groups on the router and the security model, the status of the different views, and the storage type of each group. Below is an example of this command.

```
R1#show snmp group
groupname: ILMI                                 security model:v1
readview : *ilmi                                writeview: *ilmi
notifyview: <no notifyview specified>
row status: active

groupname: ILMI                                 security model:v2c
readview : *ilmi                                writeview: *ilmi
notifyview: <no notifyview specified>
row status: active
```

Reference: https://www.cisco.com/c/en/us/td/docs/switches/datacenter/sw/5_x/nx-os/system_management/configuration/guide/sm_nx_os_cg/sm_9snmp.html

QUESTION 39
What is the role of a route distinguisher via a VRF-Lite setup implementation?

A. It extends the IP address to identify which VFP instance it belongs to.
B. It manages the import and export of routes between two or more VRF instances
C. It enables multicast distribution for VRF-Lite setups to enhance EGP routing protocol capabilities
D. It enables multicast distribution for VRF-Lite setups to enhance IGP routing protocol capabilities

Answer: A
Explanation:
In VRF-Lite, Route distinguisher (RD) identifies the customer routing table and "allows customers to be assigned overlapping addresses". The below example shows overlapping IP addresses configured on two interfaces which belong to two different VPNs:

```
Router(config)#ip vrf VRF_BLUE
Router(config-vrf)# rd 100:1
Router(config-vrf)# exit
Router(config)#ip vrf VRF_GREEN
Router(config-vrf)# rd 100:2
Router(config-vrf)# exit
Router(config)# interface GigabitEthernet0/1
Router(config-if)# ip vrf forwarding VRF_BLUE
Router(config-if)# ip address 10.0.0.1 255.0.0.0
Router(config-vrf)# exit
Router(config)# interface GigabitEthernet0/2
Router(config-if)# ip vrf forwarding VRF_GREEN
Router(config-if)# ip address 10.0.0.1 255.0.0.0
```

In this example, the RD will be added to the beginning of the IP address. For example with VRF_BLUE (rd 100:1), an IP address will be seen like this: 100:1:10.0.0.1/8 so that it is unique in the routing table.

QUESTION 40
Refer to the following output:

```
Router#show ip nhrp detail
10.1.1.2/8 via 10.2.1.2, Tunnel1 created 00:00:12, expire 01:59:47 TypE. dynamic, Flags:
authoritative unique nat registered used
NBMA address: 10.12.1.2
```

What does the authoritative flag mean in regards to the NHRP information?

A. It was obtained directly from the next-hop server.
B. Data packets are process switches for this mapping entry.
C. NHRP mapping is for networks that are local to this router.
D. The mapping entry was created in response to an NHRP registration request.
E. The NHRP mapping entry cannot be overwritten.

Answer: A

QUESTION 41
Refer to the exhibit. R2 is a route reflector, and R1 and R3 are route reflector clients. The route reflector learns the route to 172.16.25.0/24 from R1, but it does not advertise to R3. What is the reason the route is not advertised?

```
R1 #show ip bgp summary
BGP router identifier 192.168.1.1, local AS number 65000
<output omitted>
Neighbor        V    AS MsgRcvd MsgSent   TblVer  InQ OutQ Up/Down  State/PfxRcd
192.168.2.2     4 65000      28      28       22    0    0 00:21:31        0
R1#show ip bgp
BGP table version is 22, local router ID is 192.168.1.1
Status codes: s suppressed, d damped, h history, * valid, > best, i – internal,
              r RIB-failure, s stale, m multipath, b backup-path, f RT-Filter,
              x best-external, a additional-path, C RIB-compressed,
Origin codes: i – IGP, e – EGP, ? – incomplete
RPKI validation codes: V valid, I invalid, N Not found

     Network          Next Hop            Metric LocPrf Weight Path
*>   172.16.25.0/24   209.165.200.225          0             32768 ?
R1#
```

```
R2 #show ip bgp summary
BGP router identifier 192.168.2.2, local AS number 65000
<output omitted>
Neighbor        V    AS MsgRcvd MsgSent   TblVer  InQ OutQ Up/Down  State/PfxRcd
192.168.1.1     4 65000      29      28        3    0    0 00:22:07        1
192.168.3.3     4 65000       7       8        3    0    0 00:02:55        0
R2#show ip bgp
BGP table version is 3, local router ID is 192.168.2.2
Status codes: s suppressed, d damped, h history, * valid, > best, i – internal,
              r RIB-failure, s stale, m multipath, b backup-path, f RT-Filter,
              x best-external, a additional-path, C RIB-compressed,
Origin codes: i – IGP, e – EGP, ? – incomplete
RPKI validation codes: V valid, I invalid, N Not found

     Network          Next Hop            Metric LocPrf Weight Path
* i  172.16.25.0/24    209.165.200.225          0    100      0 ?
R2#
```

```
R3 #show ip bgp summary
BGP router identifier 192.168.3.3, local AS number 65000
BGP table version is 4, main routing table version 4
Neighbor        V    AS MsgRcvd MsgSent   TblVer  InQ OutQ Up/Down  State/PfxRcd
192.168.2.2     4 65000       8       7        4    0    0 00:03:08        0
R3#
```

A. Route reflector setup requires full BGP mesh between the routers.
B. In route reflector setup only classification prefix are advertised from one client to another.
C. In route reflector setup only classful prefix are advertised to other clients.
D. R2 does not have a route to the next hop, so R2 does not advertise the prefix to the clients.

Answer: D
Explanation:
With route reflector (RR), we only need to establish a BGP session from the RR to each internal peer -> Answer A is not correct.

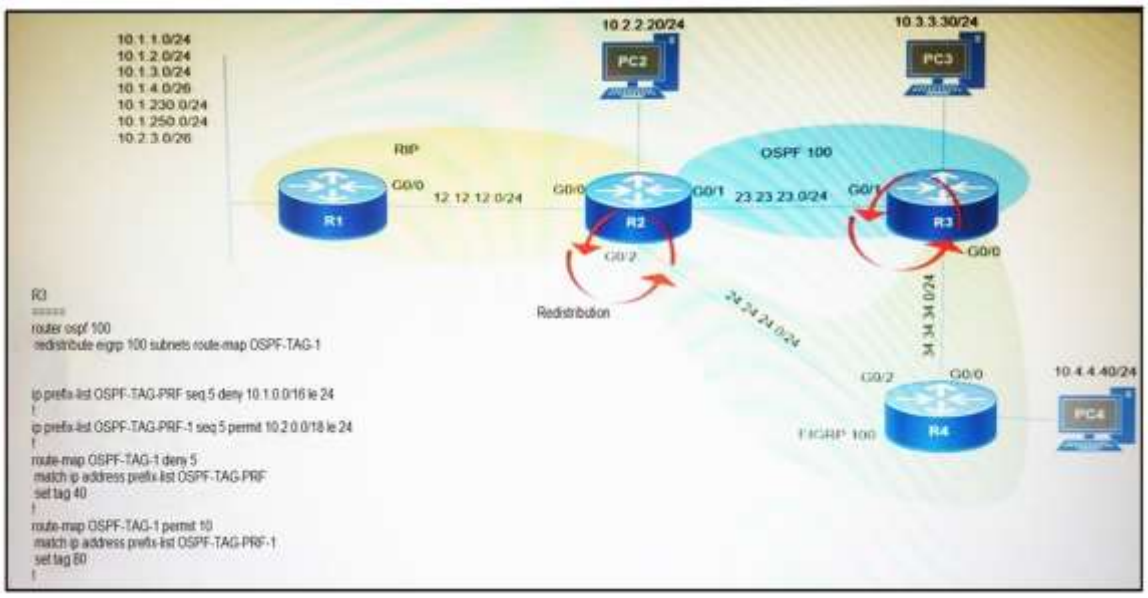
We can advertise both classful and classless prefix to other clients, provided that the prefix satisfies the RR forwarding rules -> Answer B and answer C are not correct.
Therefore only answer D is left. Maybe we are missing an IGP in our topology so R2 did not know how to reach the next hop reported by the prefix.

QUESTION 42
Which method changes the forwarding decision that a router makes first changing the routing table or influencing the IP data plane?

A. Policy-based routing
B. Nonbroadcast multi-access
C. Packet switching
D. Forwarding information base

Answer: A

QUESTION 43
Refer to the exhibit. Which subnet is redistributed from EIGRP to OSPF routing protocols?



A. 10.2.2.0/24
B. 10.1.4.0/24
C. 10.1.2.0/24
D. 10.2.3.0/26

Answer: A
Explanation:
Only the subnet that matches prefix-list OSPF-TAG-PRF-1 will be redistributed into OSPF (as indicated by “route-map OSPF-TAG-1 permit 10”). This subnet must match the prefix-list OSPF-TAG-PRF-1 so it must be 10.2.0.0/18 to 10.2.0.0/24. Only the subnet 10.2.2.0/24 matches this requirement.

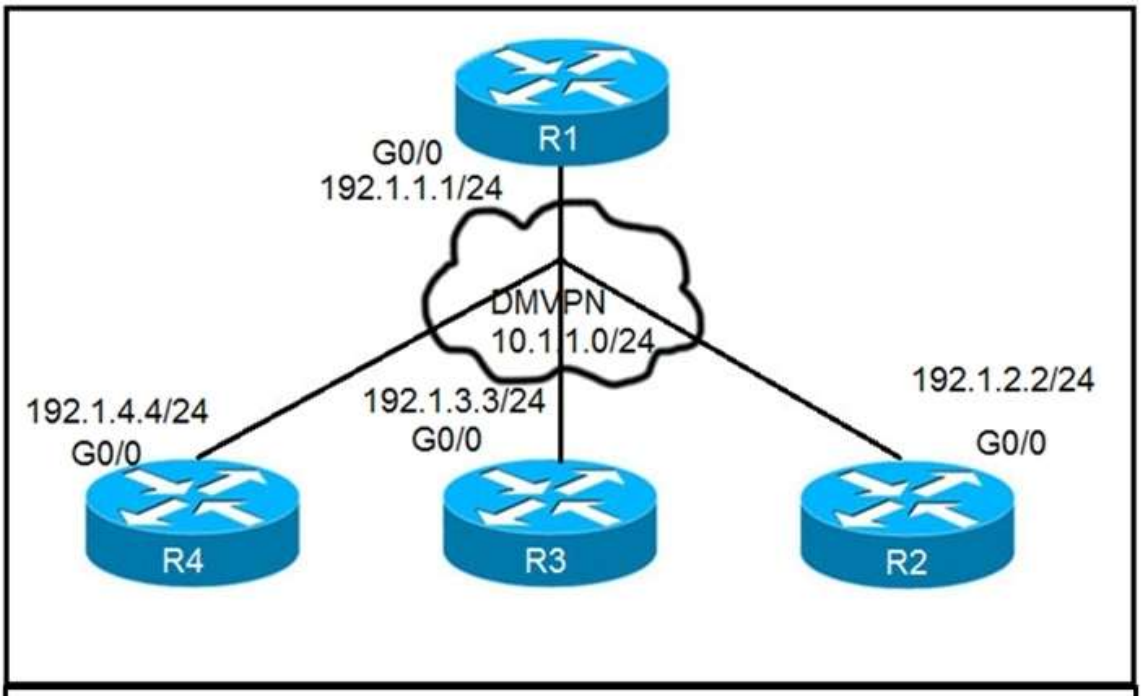
QUESTION 44
Refer to the exhibit. An engineer is trying to redistribute OSPF to BGP, but not all of the routes are redistributed. What is the reason for this issue?

```
Router#sh ip route ospf
<output omitted>
Gateway is last resort is not set

      10.0.0.0/24 is subnetted, 1 subnets
   o  E2     10.0.0.0 [110/20] via 192.168.12.2, 00:00:10, Ethernet0/0
   o       192.168.3.0/24 [110/20] via 192.168.12.2, 00:00:50, Ethernet0/0
Router#

Router#show ip bgp
<output omitted>
     Network          Next Hop      Metric     LocPrf     Weight     Path
>*   192.168.1.1/32   0.0.0.0            0                32768      ?
>*   192.168.3.0      192.168.12.2      20                32768      ?
>*   192.168.12.0     0.0.0.0            0                32768      ?
Router#show running-config | section router bgp
router bgp 65000
 bgp log-neighbor-changes
 redistribute ospf 1
Router#
```

A. By default, only internal OSPF routes are redistributed into BGP
B. By default, only internal routers and external type 1 routes are redistributed into BGP.
C. BGP convergence is slow, so the route will eventually be present in the BGP table.
D. Only classful networks are redistributed from OSPF to BGP.

Answer: A
Explanation:
If you configure the redistribution of OSPF into BGP without keywords, only OSPF intra-area and inter-area routes are redistributed into BGP, by default.
You can redistribute both internal and external (type-1 & type-2) OSPF routes via this command: "Router(config-router)#redistribute ospf 1 match internal external 1 external 2"
Reference: https://www.cisco.com/c/en/us/support/docs/ip/border-gateway-protocol-bgp/5242-bgp-ospf-redis.html

QUESTION 45
Refer to the exhibits. Phase-3 tunnels cannot be established between spoke-to-spoke in DMWN.
Which two commands are missing? (Choose two.)



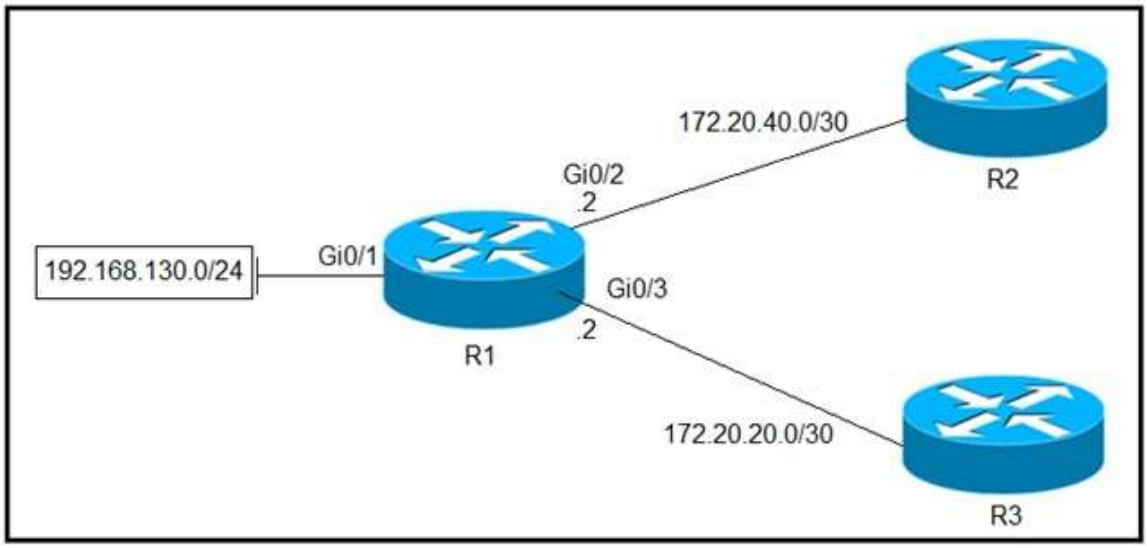

```
On R1:
R1(config)# interface tunnel 1
R1(config-if)# ip address 10.1.1.1 255.255.255.0
R1(config-if)# tunnel source 192.1.1.1
R1(config-if)# tunnel mode gre multipoint
R1(config-if)# ip nhrp network-id 111

On R2:
R2(config)# interface tunnel 1
R2(config-if)# ip address 10.1.1.2 255.255.255.0
R2(config-if)# tunnel source FastEthernet0/0
R2(config-if)# tunnel mode gre multipoint
R2(config-if)# ip nhrp network-id 222
R2(config-if)# ip nhrp nhs 10.1.1.1
R2(config-if)# ip nhrp map 10.1.1.1 192.1.1.1

On R3:
R3(config)# interface tunnel 1
R3(config-if)# ip address 10.1.1.3 255.255.255.0
R3(config-if)# tunnel source FastEthernet0/0
R3(config-if)# tunnel mode gre multipoint
R3(config-if)# ip nhrp network-id 333 R3(config-if)# ip nhrp nhs 10.1.1.1
R3(config-if)# ip nhrp map 10.1.1.1 192.1.1.1

On R4: R4(config)# interface tunnel 1
R4(config-if)# ip address 10.1.1.4 255.255.255.0
R4(config-if)# tunnel source FastEthernet0/0
R4(config-if)# tunnel mode gre multipoint
R4(config-if)# ip nhrp network-id 444
R4(config-if)# ip nhrp nhs 10.1.1.1
R4(config-if)# ip nhrp map 10.1.1.1 192.1.1.1
```

A. The ip nhrp redirect command is missing on the spoke routers.
B. The ip nhrp shortcut command is missing on the spoke routers.
C. The ip nhrp redirect commands is missing on the hub router.
D. The ip nhrp shortcut commands is missing on the hub router.

E. The ip nhrp command is missing on the hub router.

Answer: BC
Explanation:
DMVPN Phase III is same as Phase 2 but removes some restrictions and complexities of Phase 2. Also allows greater variety of DMVPN network designs we use:
+ ip nhrp redirect in hub: tells the initiator spoke to look for a better path to the destination spoke than through the Hub. Upon receiving the NHRP redirect message the spokes communicate with each other over the hub and they have their NHRP replies for the NHRP Resolution Requests that they sent out.
+ ip nhrp shortcut in spokes: overwrite the CEF table on the spoke. It basically overrides the next-hop value for a remote spoke network from the default initial hub tunnel IP address to the NHRP resolved remote spoke tunnel IP address)

QUESTION 46
Refer to the exhibit. Which configuration configures a policy on R1 to forward any traffic that is sourced from the 192.168.130.0/24 network to R2?



A.
```
access-list 1 permit 192.168.130.0 0.0.0.255
!
interface Gi0/2
ip policy route-map test
!
route-map test permit 10
match ip address 1
set ip next-hop 172.20.20.2
```

B.
```
access-list 1 permit 192.168.130.0 0.0.0.255
!
interface Gi0/1
ip policy route-map test
!
route-map test permit 10
match ip address 1
set ip next-hop 172.20.40.2
```

C.
```
access-list 1 permit 192.168.130.0 0.0.0.255
!
interface Gi0/2
ip policy route-map test
!
route-map test permit 10
match ip address 1
set ip next-hop 172.20.20.1
```

D.
```
access-list 1 permit 192.168.130.0 0.0.0.255
!
interface Gi0/1
ip policy route-map test
!
route-map test permit 10
match ip address 1
set ip next-hop 172.20.40.1
```

Answer: D

QUESTION 47
Which protocol is used to determine the NBMA address on the other end of a tunnel when mGRE is used?

A. NHRP
B. IPsec
C. MP-BGP
D. OSPF

Answer: A
Explanation:
NHRP is used to map tunnel IP addresses to “physical” or “real” IP addresses (NBMA addresses), used by endpoint routers. It resolves private addresses (those behind mGRE and optionally IPsec) to a public address.

QUESTION 48
Which two protocols can cause TCP starvation? (Choose two)

A. TFTP
B. SNMP
C. SMTP
D. HTTPS
E. FTP

Answer: AB