**Name: Ashish kumar sahni**

**Assignment Module -8: Ccna -Infrastructure Services**

1. **Host A and Host B sit in two different subnets. The path between the subnets of these two hosts runs through three different Layer 3 forwarding devices (routers and Layer 3 switches). A network engineer uses the APIC-EM Path Trace ACL Analysis tool to analyze the path used for Host A to send packets to Host B. Which part of the function is done specifically by the ACL Analysis or ACL Trace part of the tool?**

**A. Discovery of the topology that exists between the two hosts**

**B. Analysis of the Layer 3 forwarding decisions in the path from Host A to B**

**C. Analysis of the Layer 2 forwarding decisions in the path from Host A to B**

**D. Analysis of the impact of ACLs on the packets that would flow from Host A to B**

**Ans:** D) Analysis of the impact of ACLs on the packets that would flow Host A to B

**Explanation-** The ACL analysis or ACL Trace part of the APIC-EM path trace ACL analysis tool looks at how ACLs affect the traffic between host A and host B. It helps to see if any ACLs on the path are blocking or allowing the traffic, making it easier to troubleshoot network connecting problems. Other parts of the tool focus on finding the network layout or analyzing how data is forwarded on layer 2 and layer, but those are different form the ACL analysis.

**2- Which IPv6 address is the equivalent of the IPv4 interface loopback address 127.0.0.1?**

**A. ::1**

**B. ::**

**C. 2000::/3**

**D. 0::/10**

**Ans: a) ::1**

**Explanation:** In IPc6 ::1 is the equivalent of the IPv4 loopback address 127.0.0.1. it is used for loopback testing and refers to the local host.

**3. Which command is used to apply an ACL to an interface?**

**A. access-group**

**B. ip access-group**

**C. ip access-list**

**D. ip access-class**

**E. access-class**

**F. access-list**

**Ans: B.**  ip access-group

Explanation- the ip access-group command is what you use to attach an ACL (access control list) to a network interface. It controls which traffic is allowed or blocked as it comes into or leaves the interface. You also specify whether you want the ACL to filter incoming or outgoing traffic.

**4. Which command and mode will successfully configure a hostname of R1 on a Cisco IOS router?**

**A. Router(config)#name R1**

**B. Router# hostname R1**

**C. Router(config)#hostname R1**

**D. Router#name R1**

**E. Router>hostname R1**

**F. Router>name R1**

**Ans:** c) router(config)#hostname R1

To configure a hostname on a cisco IOS router, we need to be in global configuration mode. The correct command is (hostname R1) while in (config) mode.

**5. Which of the following reserved IPv4 addresses has binary 0s in all of the host bit positions?**

**A. Local broadcast address**

**B. Loopback address**

**C. Directed broadcast address**

**D. Network address**

**E. All zeros address**

**Ans: d) Network address**

**Explanation-** The network address is the one where all the bits for the host part are set to 0. It identifies the entire network, not any individual device on it.

Example the network 192.168.1.0/24, the 192.168.1.0 address is the network address.