**DV162\_16\_PAS On Assigning IP Addresses**

**Possible Answer Sheet**

1. How to assign IPv4 IP addresses for Private IP?  
Ans: It can be done by two ways 1. Manually and 2. By using DHCP  
 -Manually Configured specific IP address, subnet mask, default gateway and DNS server Address  
 for each device in the private network.

-DHCP server automatically assigns the IPs when the device requests them using D-O-R-A steps.

2. What is the process of DHCP (Dynamic Host Configuration Protocol)?  
Ans: The Dynamic Host Configuration Protocol (DHCP) is a client-server protocol that automatically  
 assigns IP addresses and other configuration settings to devices on a network. Here's a detailed  
 breakdown of the DHCP process, often referred as DORA (Discover, Offer, Request,  
 Acknowledge).

3. What is the result of DHCP (Dynamic Host Configuration Protocol)?  
Ans: The primary result of DHCP is the automatic assignment of IP addresses.

4. Features of Static IP address?  
Ans: Manual Assignment, Manual Configuration, Less Scalable, Security Risk if not Managed Properly,  
 More control, remote access servers, Essential for Hosting Servers.

5. Features of Dynamic IP address?  
Ans: Automatic Assignment, Automatic Configuration, More Scalable, Less Security Risk as changing  
 periodically, Less control.

6. What is Automatic Private IP Address (APIPA)?  
Ans: If there is DHCP unavailable and the device is configured to get an IP address using DHCP then APIPA comes into work and assigns an IP Address to the device through which the device can communicate with the local network.

7. What is unicast addresses?  
Ans: Unicast address is a type of IP address used to identify a unique or single interface on a network

8. What is multicast addresses?  
Ans: Multicast address is a type of IP address used to identify group of devices/interfaces on a network

9. What is anycast addresses?  
Ans: An anycast address is a special type of IP address that is assigned to multiple devices or hosts on a network, but data packets sent to the anycast address are routed to only one of the best suited devices.

10. What is BootP?  
Ans: Is stands for BootStrap Protocol, In 1993 the BootP was created for the purpose of automatically assigning the IP addresses but there was lake of some IP configuration issue in it. To correct shortcomings in BootP a newer version of BootP was created and gave it a new name DHCP.