**DV162\_15\_PAS On IPv4 and IPv6**

**Possible Answer Sheet**

1. How many bits are in an IPv4 address?  
Ans: 32 bits

2. How many bits are in an IPv6 address?  
Ans: 128 bits

3. What are the first 64 bits in an IPv6 address?  
Ans: Network Address

4. What are the second 64 bits in an IPv6 address?  
Ans: Host Address

5. What is the highest possible digit/number for each byte in an IPv4 address?  
Ans: 255

6. What settings to check when troubleshooting IPv4?  
Ans: Check IP configuration, proper subnet mask configured, Default Gateway (Router) address is configured correctly, Check DNS is working properly or available, Check IP address conflict, DHCP Configuration in work and physical connectivity.

7. What is Dynamic Host Configuration Protocol (DHCP)?  
Ans: DHCP simplifies the process of IP address allocation by dynamically assigning IP addresses to devices as they connect to the network, eliminating the need for manual configuration of network settings.

8. What port does a device use to broadcast to DHCP server?  
Ans: udp/ port 67.

9. What port does DHCP server use to broadcast to a device?  
Ans: DHCP servers do not broadcast, they rely on devices to broadcast or send out DHCP discovery messages. But it replies to device broadcast on udp\ port 68.

10. What is a subnet mask?  
Ans: A subnet mask is 32 bits number that act like divider, separating an IP address into two Portions: The Network address and the Host Address. It defines which portion of IP address is identifies network address and which portion is the host(device) address.

11. What is default gateway?  
Ans: The IP address of the router is called default gateway as It allows communication outside the local subnet.