CCNA 640-802 Bible - Describe the IP Addressing,DHCP and DNS server

1. Which of the following describe private IP addresses? (Choose two.) A:addresses chosen by a company to communicate with the Internet B:addresses that cannot be routed through the public Internet C:addresses that can be routed through the public Internet D:a scheme to conserve public addresses E:addresses licensed to enterprises or ISPs by an Internet registry organization **Correct Answers: B, D** Explanation: Private IP address space has been allocated via RFC 1918. This means the addresses are available for any use by anyone and therefore the same private IP addresses can be reused. However they are defined as not routable on the public Internet. They are used extensively in private networks due to the shortage of publicly registered IP address space and therefore network address translation is required to connect those networks to the Internet. 2. Which host addresses are members of networks that can be routed across the public Internet? (Choose three.) A:172.16.223.125 B:172.64.12.29 C:198.234.12.95 D:212.193.48.254 **Correct Answers: B, C, D Explanation?** Private IP address can't be routable on the public Internet. The current internal private addresses are divided into the following classes: Class A?10.0.0.0--10.255.255.255 Class B?172.16.0.0--172.31.255.255 Class C?192.168.0.0--192.168.255.255 3. How does a DHCP server dynamically assign IP addresses to hosts? A: Addresses are permanently assigned so that the host uses the same address at all times. B: Addresses are assigned for a fixed period of time. At the end of the period, a new request for an address must be made, and another address is then assigned. C: Addresses are leased to hosts. A host will usually keep the same address by periodically contacting the DHCP server to renew the lease. D: Addresses are allocated after a negotiation between the server and the host to determine the length of the agreement. **Correct Answers: C** Explanation: As you know, DHCP clients lease their IP addresses from DHCP servers. When this lease expires, that IP address can no longer be utilized by the DHCP client. For that reason, DHCP client must periodically renew their IP address leases, preferably before the lease has expired or is about to expire. DHCP client passes through the renewing and rebinding states to renew its IP address lease. **Renewing state:** The DHCP client first attempts to renew its lease when 50 percent of the lease time has expired. To renew its lease, the DHCP client sends a directed DHCPREQUEST message to the DHCP server that provided the original lease. If renewal is allowed, the DHCP server automatically renews the lease by responding with a DHCPACK message. This new IP address lease contains not only the original IP address if still available (or another IP address otherwise) but any TCP/IP client configuration information. **Rebinding state:** If, for whatever reason, the DHCP client is not able to communicate with the original DHCP server the executed its lease, it attempts another approach called rebinding. Here the DHCP client attempts to contact any available DHCP server when 87.5 percent of the lease time has expired. The leasing process is akin to that detailed over the last several pages. 4. What TCP/IP stack configuration features can DHCP provide, in addition to assigning an IP address? (Choose three.) A:default gateway B:DNS servers C:FTP server D:helper address E:subnet mask F:TFTP server **Correct Answers: A, B, E** 5. Which statement is correct regarding the operation of DHCP? A: A DHCP server uses a ping to detect address conflicts. B: A DHCP server uses a gratuitous ARP to detect DHCP clients. C: A DHCP client uses a ping to detect address conflicts. D: A DHCP client uses a gratuitous ARP to detect a DHCP server. E: If and address conflict is detected, the address is removed from the pool for an amount of time configurable by the administrator. **Correct Answers: A Explanation?** DHCP has two parts: DHCP client and DHCP server. The DHCP server manages a pool of IP addresses and information about client configuration parameters. The DHCP client will use the IP data assigned by server. When using DHCP to assign IP addresses on the LAN, DHCP server will use a ping to detect address conflicts. 6. Which of the following protocols uses both TCP and UDP ports? A: FTP B: SMTP C: Telnet D: DNS **Correct Answers: D** 7. DNS servers provide what service? A: Given an IP address, they determine the name of the host that is sought. B: They convert domain names into IP addresses. C: They run a spell check on host names to ensure accurate routing. D: They map individual hosts to their specific IP addresses. **Correct Answers: B**