Internet Protocols Quiz #5

Name _____ Student ID _____

1. What is the command on Windows to release an IPv4 address? __ipconfig /release_____[3pts]
2. What is the command on Windows to release an IPv6 address? __ipconfig/release6_____[3pts]
3. When the command in Prob. 1 is executed, which DHCP Message Type would you observe through Wireshark? _____DHCP RELEASE_____[5pts]
4. What is the command on Linux to re-obtain an IPv4 address? _____dhclient_____[3pts]
5. In which field of DHCP packet is the address you get on Prob. 4 carried? _your IP address (yiaddr)_[5pts]
6. What is the DHCP message type that is used to obtain the parameters other than IPv4 address? _____DHCP INFORM_____[5pts]
7. In Stateless DHCPv6, what is used by the client to configure other parameters than IP address? ____INFORMATION REQUEST_____[5pts]
8. Write down at least three values that are contained in DHCP OFFER.

   lease time, renewal time, rebinding time, DNS server address, default router address, ...중 3개

9. In DHCP, when does automatic renewal of the lease take place? (i.e. at what percent of lease time does it happen?) ____50%_____[4pts]
10. Consider the life cycle of IPv6 addresses.
    A. When DAD succeeds in IPv6, in what state is the IP address? ____preferred__[4pts]
    B. What is the state in which the address can be used tentatively until DAD? _optimistic_[4pts]
11. A DHCP client wants to directly communicate with the DHCP server without the help of relay. Which option field of the DHCP reply from the server can be utilized for this purpose? _____server identifier_____[5pts]
12. When a bulk lease query is issued, which transport protocol should be used? ____TCP_____[5pts]
13. In Rapid Commit, which DHCP messages are omitted?
    A. _____OFFER_____[3pts]
    B. _____REQUEST_____[3pts]
14. What are link-local IPv4 addresses? (in CIDR notation) ____169.254.0.0/16_____[5pts]
15. What are the three major steps of IPv6 stateless address autoconfiguration?
    A. _____obtain a link-local address_____[3pts]
    B. _____obtain a global address_____[3pts]
    C. _____DAD_____[3pts]
16. What replaces gratuitous ARP in IPv6? ____Neighbor Solicitation_____[5pts]
17. What is the typical situation in which PPPoE is used to configure client systems instead of using DHCP? __WAN connections such as DSL, where the device acts as a switch or bridge instead of router_ [5pts]
18. What is the rationale behind using PPPoE from the perspective of ISPs? __fine-grained configuration control and audit logs_[10pts]