Internet Protocols Quiz #3

Name _____ Student ID _____

1. Answer the following questions on PPP.
   A. What is the PPP protocol that sets up low-level 2-party communication path over a point-to-point link? _____LCP_____[Hint: does not address resource sharing, a variant of HDLC] [4pts]
   B. What are three authentication protocols/framework available in PPP? _____PAP_____, _____CHAP_____, _____EAP_____ [12pts]
   C. What is the standard NCP for IPv4, and its protocol value? ____IPCP_____, _____0x8021_____ [12pts]
2. What are the typical loopback interface addresses for IPv4 and IPv6, respectively? _____127.0.0.1_____, _____::1_____ [8pts]
3. What are three most common tunneling protocols? _____GRE_____, _____L2TP_____, _____PPTP_____ [12pts]
4. What is the MTU size for Ethernet? _____1500bytes__ [4pts]
5. Define path MTU (PMTU). _Minimum of all MTU sizes of links on the path_____ [8pts]
6. Define the two conditions that make an ARP gratuitous. [14pts]
   A. _____The ARP packet is a request._____
   B. _____Sender IP = Target IP _____
7. Answer the following questions on ARP.
   A. The router sent an Ethernet frame addressed to 00-d0-58-ad-06-ed. If the router has the following ARP cache and routing table, what is the IP address of the destination in the Ethernet frame? _____202.30.1.65_____ [10pts]

routing table (in part)

Destination	next hop	netmask
202.30.1.37	202.30.0.1	255.255.255.255
202.30.1.65	202.30.0.12	255.255.255.255
202.30.0.0	202.30.0.11	255.255.255.0
202.30.0.0	202.30.2.30	255.255.0.0

ARP cache

IP address	physical address
202.30.0.11	00-01-02-92-2b-f0
202.30.0.12	00-d0-58-ad-06-ed
202.30.0.37	00-0e-23-b0-f0-ad

   B. Suppose the first entry in the ARP cache is static. Write the command to insert the first entry in the ARP cache. _____arp –s 202.30.0.11 00-01-02-92-2b-fo_____ [8pts]
8. What is the condition under which you need to update an ARP cache entry when you are not the target of an ARP request? __have an ARP entry for the requesting node in the cache_____[8pts]