Internet Protocols Quiz #2 Solutions

Name _____ Student ID _____

1. What are the IEEE standards for

   A. Ethernet? _____IEEE 802.3_____ [4pts]

   B. Wireless LAN? _____IEEE 802.11_____ [4pts]

2. What is Ethernet MTU size? _____1500 bytes_____ [4pts]

3. In case a link layer technology is based on a shared medium, the link layer is divided into the following two sublayers:

   _____LLC_____ and _____MAC_____ [8pts]

4. What is Ethernet broadcast address (in hexadecimal notation)? _____ff ff ff ff ff ff_____ [4pts]

5. What are the Ethernet type indicator values for

   A. IPv4? _____0800_____ [4pts]

   B. IPv6? _____86DD_____ [4pts]

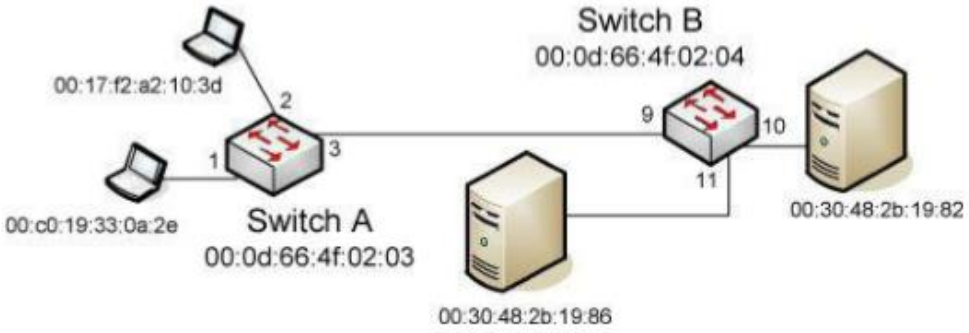
   C. ARP? _____0806_____ [4pts]

6. In Wake-On-LAN (WOL),

   A. how does the magic packet start? _____ff_____ (Hint: 6 bytes of this; used for synchronization) [5pts]

   B. what follows the synchronization stream is 16 repetitions of __destination MAC address_____ [5pts].

7. Complete Switch A's filtering database given the following topology. [14pts]



Station	Port
00:17:f2:a2:10:3d	2
00:c0:19:33:0a:2e	1
00:0d:66:4f:02:03	
00:0d:66:4f:02:04	3
00:30:48:2b:19:82	3
00:30:48:2b:19:86	3

Switch A's Database

8. In the spanning tree protocol (STP), write down the term corresponding to the definition on the right.

   A. _____root port_____: ports at the end of an edge on the spanning tree headed toward the root [4pts]

B. _____designated port_____: ports in the forwarding state acting as the port on the least-cost path to the root from the attached segment [4pts]

9. What is the difference between STP and RSTP?_____RSTP immediately triggers a topology change indication upon indication of failure of each port_____ [4pts]

10. What are the three main types of 802.11 frames?

    A. _____data_____ [4pts]

    B. _____control_____ [4pts]

    C. _____management_____ [4pts]

11. What frames are used to prevent the hidden terminal problem in Wireless LAN? ___RTS___ and ___CTS___ [8pts]

12. Which is more robust between A-MSDU and A-MPDU? _____A-MPDU_____ [4pts] And which is more efficient between A-MSDU and A-MPDU? _____A-MSDU_____ [4pts]