ITS 323 – QUIZ 6

First name: _____   Last name: _____

ID: _____   Total Marks: _____

out of 10

Question 1 [2 marks]

Assume Classful Addressing is used.

a) Computer A has IP address 233.131.16.5. What class is it?

b) Computer B has IP address 233.131.91.5. Are A and B on the same network?

YES   NO

c) What IP address identifies the network of Computer A? (answer in dotted decimal notation)

Question 2 [3 marks]

Assume Classless Addressing is used.

a) Computer A has the IP address 63.19.125.5/13. If computer B is outside of computer A's network, then what address would B send to in order to reach all computers on A's network? (answer must be in dotted decimal notation)

b) A company IP network currently as 300 hosts attached. The company plans to double the number of hosts attached to the network in the next year, however the company realised their current IP subnet mask would not support that many hosts. What is the company's current subnet mask? (answer must be in dotted decimal notation)

c) If computer C does not know its own IP address, but wants to send an IP datagram, what value can it use for a source address? (answer in dotted decimal notation)

Question 3 [5 marks]

Multiple choice. Select the (one) answer that is most accurate.

a) A host:

    i.   Will not forward IP datagrams

    ii. Does not have a routing table

    iii. Does not implement IP software

b) Which of the following destination IP addresses would result in a datagram being delivered to all computers on your network:

    i.   01111111 00000000 00000000 00000001

    ii. 11111111 11111111 11111111 11111111

    iii. 00000000 00000000 00000000 00000000

c) An IP datagram is sent from host S to host D, via routers A then B. If the subnet between A and B is Ethernet then:

    i.   The header of the IP datagram from A to B contains the IP address of B as destination

    ii. The header of the Ethernet frame from A to B contains the MAC address of B as destination

    iii. The header of the Ethernet frame from A to B contains the MAC address of D as destination

d) ICMP includes features for:

    i.   Checking the status of network connectivity

    ii. Converting IP addresses to physical addresses

    iii. Providing retransmissions in IP

e) If IP fragmentation and re-assembly is used in the following network, where Source has 3000 Bytes of data to send, what is the size of the fragments (or datagrams) sent over subnet3? (You may ignore headers)

    i.   All 1000 Bytes

    ii. All 2000 Bytes

    iii. One is 2000 Bytes and one is 1000 Bytes

    iv. All 3000 Bytes