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 126.64.130.12. What class is it?

b) Computer B has IP address 126.64.131.12. 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 63.19.125.5/17. 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 100 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 router:

   i. Has two or more IP addresses

   ii. Only has a single IP address

   iii. Cannot be a source of an IP datagram

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) IP supports the following protocol functions:

   i. Flow control, addressing and multiplexing

   ii. Addressing, retransmissions and fragmentation/re-assembly

   iii. Fragmentation/re-assembly, addressing and multiplexing

e) If IP fragmentation and re-assembly is used in the following network, where Source has 4000 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 3000 Bytes and one is 1000 Bytes

   iv. All 4000 Bytes