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 129.64.130.12. What class is it?

b) Computer B has IP address 129.64.131.12. 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 63.19.125.5/13. 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 200 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) The Time To Live field in a IP datagram header:

     i.   Is used for flow control in IP

     ii. Is decremented by each router that forwards a datagram

     iii. Is used to measure the throughput between source and destination hosts

c) What protocol is used to map IP addresses to physical addresses?

     i.   ICMP

     ii. ARP

     iii. IP

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