ITS 323 – Quiz 6

ID:

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

Last name:

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)

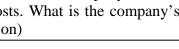


out of 10

YES

Total Marks:

NO



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 0000000 0000000 00000001
 - ii. 11111111 1111111 11111111 1111111
 - iii. 0000000 0000000 0000000 0000000
- 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

