ITS 323 – QUIZ 7 (CSA ANSWERS)

First name: _____   Last name: _____

ID: _____   Total Marks: _____

out of 10

Question 1 [2 marks]

Match the address/identifier types to their correct meaning (write either the letter or the full name). You can select from the following address/identifier types:

 a. Port number

 b. Hardware address

 c. Protocol number

 d. Domain name

 e. IP address

_____   Logical addresses identifying a network interface

_____   Physical addresses specific to a LAN or WAN technology

_____   Identify the transport protocol

_____   Identify application protocols

Answers

Port number: Identify application protocols

Hardware address: Physical addresses specific to a LAN or WAN technology

Protocol number: Identify the transport protocol

Domain name: User-friendly identifiers for IP interfaces

IP address: Logical addresses identifying a network interface

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Question 2 [marks]

True or false:

 a) A single TCP segment may contain data, as well as an acknowledgment   T / F

 b) DNS maps IP addresses to hardware addresses   T / F

 c) Two protocols used in email transfer are IMAP and SNMP   T / F

Answers

True - A segment carrying data can also have the ACK flag set to indicate an acknowledgement

False - DNS maps domain names to hardware addresses

False – SNMP is Simple Network Management Protocol, not for email.

Question 3 [2 marks]

List the four addresses that identify a unique TCP connection:

1. _____

2. _____

3. _____

4. _____

Answer

Source port number

Destination port number

Source IP address

Destination IP address

Question 4 [3 marks]

Complete the missing parts in the figure below which shows TCP connection setup between A and B, as well as data transferred from A to B (500 bytes) and from B to A (1000 bytes). The format of messages is as follows: Type(Number), and of course some segments may have multiple types.

Answer
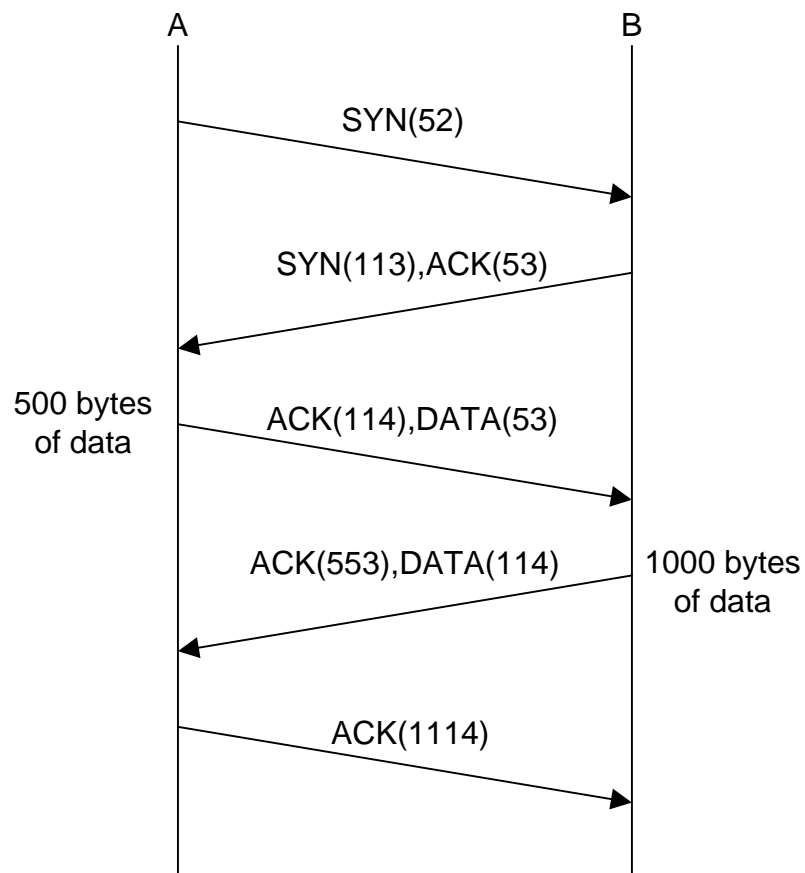
Bonus Questions (marks from these questions are added to your overall quiz score from the five best quizzes; each part is worth 1 mark)

   a) What is the broadcast address for the classless IP address 160.14.16.3/17?

                              Broadcast address: _____

   b) What subnet mask should be used to create a network with a maximum of 254 hosts?

                              Subnet mask: _____

   c) Name the LAN MAC protocol that is similar in concept to Synchronous TDM

                              MAC protocol: _____

   d) Name the routing strategy where a router randomly selects a link to transmit a packet on.

                              Strategy: _____

   e) What is the network address for the classful IP address 120.3.254.16?

                              Network address: _____

Answers

a. 160.14.127.255

b. 8 bits gives 2^8 possible values, minus two special addresses gives 254 hosts. Hence the network portion of the address must be 24 bits and the host portion 8 bits. The subnet mask is /24.

c. Round Robin MAC: users take in turns transmitting

d. Random Routing.

e. Class A address, hence network address is 120.0.0.0