

ITS 323 – QUIZ 7 (ITB 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

_____ Physical addresses specific to a LAN or WAN technology
 _____ Identify the transport protocol
 _____ User-friendly identifiers for IP interfaces
 _____ 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

Question 2 [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 3 [3 marks]

True or false:

- a) UDP provides a full duplex connection. T / F
- b) DNS maps domain names to IP addresses T / F
- c) Two protocols used in email transfer are POP and SMTP T / F

Answers

False – UDP does not have connections

True – Give a domain name, DNS finds the corresponding IP address

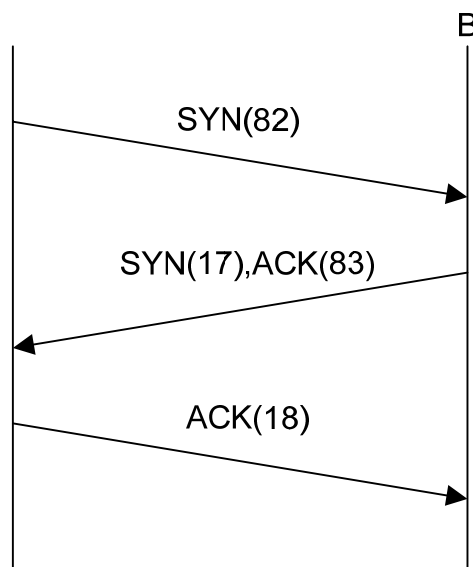
True – SMTP to transfer email from sender to server, and POP for a receiver to download from a server.

Question 4 [3 marks]

- a) Draw a diagram to illustrate the TCP connection setup process between A and B. You must include the segment types as well as any other important information carried in the segments. Assume A chooses an initial sequence number of 82, and B chooses 17.
- b) After the connection is setup, if the first data sent from B to A is a segment containing 2000 bytes of data, then what is the acknowledgement number sent from A to B in response?

Answers

a.



b. 2018

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 126 hosts?

Subnet mask: _____

- c) Datagram packet switching requires a header to be added to each packet; virtual circuit packet switching *does not* add a header to each packet. T / F

- d) An IP router will change the destination IP address in an IP datagram before forwarding to the next router.

T / F

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

Network address: _____

Answers

a. 160.14.127.255

b. 7 bits gives 2^7 possible values, minus two special addresses gives 126 hosts. Hence the network portion of the address must be 25 bits and the host portion 7 bits. The subnet mask is /25.

c. False – both forms of packet switching add headers

d. False –the destination IP address in the datagram is always the final host destination – it remains the same as routers forward the datagram.

e. Class A address, hence network address is 120.0.0.0