Computer Networks

Started on	Monday, 28 March 2022, 11:17 AM
State	Finished
Completed on	Monday, 28 March 2022, 11:47 AM
Time taken	29 mins 31 secs
Grade	**8.50** out of 10.00 (**85**%)

Question 1

Correct

Mark 1.00 out of 1.00

Flag question

Which of the following are false in the context of IP header fields (choose all that apply)?

Select one or more:

- [ ] a. Type of service field can be used to identify applications that require low delay
- [ ] b. Protocol field gives the protocol whose data is carried in the IP packet
- [x] c. The checksum is computed over header and data ✓
- [x] d. Identification field will be unique for each IP packet given by IP layer to Ethernet layer ✓

Your answer is correct.

The correct answer is: The checksum is computed over header and data, Identification field will be unique for each IP packet given by IP layer to Ethernet layer

Question 2

Incorrect

Mark 0.00 out of 1.00

Flag question

Which of the following is true in the context of IP packet forwarding?

Select one:

- ( ) a. Packet forwarding will ignore any entry in the routing table with subnet mask 0.0.0.0
- ( ) b. Packet forwarding will ignore any entry in the routing table with subnet mask 255.255.255.255
- ( ) c. When an IP datagram is fragmented at a router, all fragments of the datagram may not always be forwarded to the same next hop
- (•) d. If the destination IP is not on the same network, one way to send the IP packet to the gateway is to encapsulate it in an Ethernet frame with destination MAC as the broadcast MAC ✗

Your answer is incorrect.

The correct answer is: When an IP datagram is fragmented at a router, all fragments of the datagram may not always be forwarded to the same next hop

Question 3

Correct

Mark 1.00 out of 1.00

Flag question

Suppose that the network 203.127.210.100/25 is broken into 8 equal sized subnets. What is the maximum number of machines that can exist in the 4 subnets?

Answer: 56 ✓

The correct answer is: 112

Question 4

Correct

Mark 1.00 out of 1.00

Flag question

Consider the network defined by an IP address 203.182.128.0 and the subnet mask 255.255.240.0. Which of the following addresses belong to the network (choose all that apply)?

Select one or more:

- [x] a. 203.182.134.210 ✓
- [ ] b. 203.182.145.210
- [x] c. 203.182.139.3 ✓
- [ ] d. 203.182.154.203

Your answer is correct.

The correct answer is: 203.182.134.210, 203.182.139.3

Question 5

Correct

Mark 1.00 out of 1.00

Flag question

An IP datagram with 20 byte header and 3000 bytes of data is to be transferred over a network with MTU 700 bytes. What would be the fragmentation offset field value in the 3rd fragment?

Answer: 170 ✓

The correct answer is: 170

Which of the following are true about TCP connection establishment and termination (choose all that apply)?

Select one or more:

- [x] a. Initial sequence number is chosen randomly during connection establishment ✓

Question 6

Correct

Mark 1.00 out of 1.00

Flag question

- [x] b. It is possible to transfer data in one direction in a TCP connection even when the connection is closed in the other direction. ✓
- [ ] c. TCP connection termination must be initiated by the node that initiated the connection establishment earlier
- [ ] d. TCP 3-way handshake establishes a path from the source and the destination though which all subsequent segments of the connection are transferred

Your answer is correct.

The correct answer is: It is possible to transfer data in one direction in a TCP connection even when the connection is closed in the other direction., Initial sequence number is chosen randomly during connection establishment

Question 7

Correct

Mark 1.00 out of 1.00

Flag question

Which of the following is false about the TCP header?

Select one:

- (•) a. The checksum field is computed over the TCP header fields and data only ✓
- ( ) b. The sequence number field contains the position of the first byte in the segment in the byte stream
- ( ) c. The ACK flag is set only if the acknowledgement number field has a valid value
- ( ) d. The SYN flag is used only during connection establishment

Your answer is correct.

The correct answer is: The checksum field is computed over the TCP header fields and data only

Question 8

Correct

Mark 1.00 out of 1.00

Flag question

Which of the following are true about network address translation (NAT) (choose all that apply)?

Select one or more:

- [ ] a. It can be used to translate an IP address to a MAC address
- [x] b. It can be used to conserve public IPv4 address space ✓
- [x] c. It can be used to hide the IP addresses of machines inside an organization from the external world ✓
- [x] d. It can be used to translate an IPv4 address to an IPv6 address ✗

Your answer is correct.

The correct answer is: It can be used to conserve public IPv4 address space , It can be used to hide the IP addresses of machines inside an organization from the external world

Question 9

Partially correct

Mark 0.50 out of 1.00

Flag question

Which of the following are false about an ICMP packet (choose all that apply)?

Select one or more:

- [ ] a. ICMP packets can be of variable length
- [ ] b. ICMP packets are generated when any IP packet is dropped
- [ ] c. ICMP packets are carried in IP packets
- [x] d. ICMP packets are generated only when an IP packet is dropped ✓

Your answer is partially correct.

You have correctly selected 1.
The correct answer is: ICMP packets are generated only when an IP packet is dropped, ICMP packets are generated when any IP packet is dropped

Question 10

Correct

Mark 1.00 out of 1.00

Flag question

Which of the following is true about TCP?

Select one or more:

- [ ] a. Receive of a FIN segment from a sender A to a receiver B implies that all segments sent by B (that are not lost) have already been acknowledged by A
- [x] b. Receive of a FIN segment from a sender A to a receiver B implies that all segments sent by A (that are not lost) have already been received by B ✗
- [x] c. In 3-way handshake, the last message will have exactly one flag set in the TCP header ✓
- [ ] d. The initial sequence numbers sent from the two sides during connection establishment cannot be the same

Your answer is correct.

The correct answer is: In 3-way handshake, the last message will have exactly one flag set in the TCP header

Finish review

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