

CCNA 1 Chapter 10 Study Guide

Question 1

Which layer is routing a function of in the OSI model?

- a) 1
- b) 2
- c) 3
- d) 4
- e) 5
- f) 6
- g) 7

Learn the functions of routing and how it is primarily done!!!

Question 2

What addressing systems are used in routing and which address is changed by the router when received on the interface?

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Learn how addressing relates to the router and how packets are addressed!!!

Question 3

Which of the following would describe the function of a protocol? (Choose 2)

- a) The format that a message must conform to
- b) The number of hops a packet may take
- c) The rules by which network administrators must cost out network components
- d) The format that a message must conform to
- e) The number of data items contained within a packet

Learn the functions of protocols!!!

Question 4

Which of the following layers of the OSI model offers reliable, connection-oriented data communication services?

- a) Session
- b) Transport
- c) Application
- d) Physical
- e) Network
- f) Data Link

Learn how the OSI model is related to routers and routing!!!!

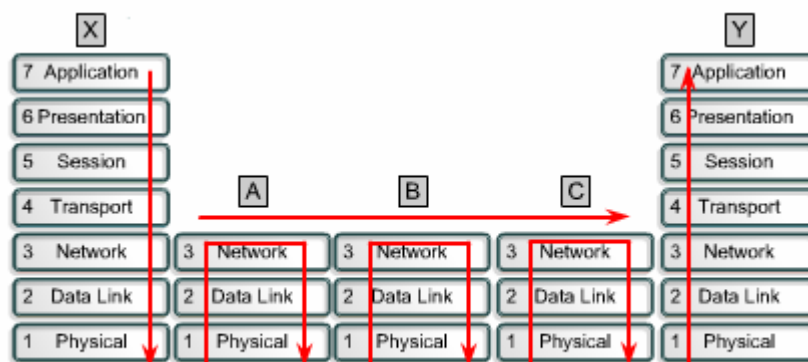
Question 5

Without some form of control a data packet could theoretically circle round a network endlessly, which of the following are technologies used to prevent this? (Choose 2)

- a) Loopback control protocol
- b) Time-to-live
- c) Packet Age Determination Protocol (PADP)
- d) Hop Counts
- e) Cyclic Redundancy Checks
- f) Anti-OPND Protocol (Old Packets Never Die)

Learn how the lifetime of data packets are controlled on a network!!!

Question 6



In the above diagram we can see a process going on as a packet travels from source to destination. Describe what is being shown on the diagram and why it is necessary.

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Question 7

‘A router compares available routing table information to select the best path’ – What is this indicative of? (Choose 1)

- a) A router is attempting to find a specific user on the network
- b) Path determination at the Network Layer
- c) IP protocol determination at the Data Link Layer
- d) Packet routing information for the next available switch
- e) IPX protocol logging

Learn the metrics used to determine packet routes!!!!

Question 8

Which of the following are functions of a routing protocol? (Choose 3)

- a) Exchange of topological information
- b) When packets arrive at an interface, the router must use the routing table to determine where to send them
- c) Provides processes for sharing route information
- d) Defines the format and use of the fields within a packet
- e) Allows routers to communicate with other routers to update and maintain the routing tables

Learn the differences between routed and routing protocols and which are which!!!

Question 9

Name three metrics used with routing protocols and what they indicate

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Learn about the purpose of metrics in a network

Question 10

Which of the following are link-state routing protocols? (Choose 2)

- a) RIPv1
- b) IGRP
- c) OSPF
- d) IS-IS
- e) EIGRP
- f) RIPv2

Learn about the functions of a link-state protocol!!!!

Question 11

Name three major benefits of subnetting a network.

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Learn why we would need to subnet in the first instance!!!

Question 12

Given a host with the IP address 28.110.32.16 and a default subnet mask, to which network does the host belong?

- a) 28.110.0.0
- b) 28.110.32.12
- c) 28.0.0.0
- d) 28.110.32.13
- e) 28.90.32.16

Learn how to work out network address fields!!!

Question 13

Which statement/s is true regarding the process of subnetting?

- a) Network bits are reassigned as host bits
- b) Subnet bits are reassigned as network bits
- c) Host bits are reassigned as network bits
- d) Network bits are reassigned as subnet bits
- e) Host bits are reassigned as subnet bits

Learn how subnetting actually divides given IP addresses!!!

Question 14

A University has been given a class C network licence and needs to create 12 useable subnets, each subnet capable of accommodating at least 12 hosts. Which of the following is the appropriate subnet mask?

- a) 255.255.255.0
- b) 255.255.240.240
- c) 255.255.255.240
- d) 255.240.255.255
- e) 255.255.255.192
- f) None of the above, it's not possible to have this many hosts on this many subnets on a class C network

Learn to subnet, and the terms used!!!

Question 15

How many bits are available for Class A host IP addresses using the default subnet mask?

- a) 16
- b) 24
- c) 22
- d) 48
- e) 128

Question 16

Given the class C IP address 192.168.64.0 / 28, what is the custom subnet mask?

- a) 255.255.255.0
- b) 255.255.255.255
- c) 255.255.225.140
- d) 255.255.240.0
- e) 255.255.255.240

Learn how subnets are commonly represented!!

Question 17

How many useable subnets does applying the subnet mask 255.255.255.0 to a Class C network create?

- a) 16
- b) 24
- c) 12
- d) 18
- e) 0