6/25/2019   Quiz #1 (Topics 1 & 2) - Open on Monday of Week 4 (25 March 2019); close at 11PM on Sunday of Week 4 (31 March 2019)

HOME ⊗ MY COURSES ⊗ INFT 1012 ⊗ WEEK 4 (25-31 MARCH) ⊗

QUIZ #1 (TOPICS 1 & 2) - OPEN ON MONDAY OF WEEK 4 (25 MARCH 2019); CLOSE AT 11PM ON SUNDAY OF WEEK 4 (31 MARCH 2019)

Started on	Friday, 29 March 2019, 2:00 PM
State	Finished
Completed on	Friday, 29 March 2019, 2:41 PM
Time taken	40 mins 30 secs
Marks	20.00/20.00
Grade	**100.00** out of 100.00
Feedback	Well done!
	You may want to take the test again before it is closed to improve your marks (if you haven't got full marks) if this is your first attempt.

Question 1

Correct

Mark 1.00 out of 1.00

Which command below can be used to see the IP and MAC addresses of a PC with Windows operating system?

Select one:

○ a. ipconfig /all ✓

○ b. show ip interface brief

○ c. show interfaces

○ d. ping

Question 2

Correct

Mark 1.00 out of 1.00

An employee of a university is creating a fee statement for a student. In order to do this, the employee needs to retrieve the student's address information from an internal server of the University. Which of the following type of network would the university employee access to get the information?

Select one:

○ a. an extranet

○ b. an intranet ✓

○ c. a wireless network

○ d. the Internet

⌃
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Question 3

Correct

Mark 1.00 out of 1.00

Which of the following statements correctly describe the reason for network administrators to configure hostnames on switches and routers?

Select one:

- ○ a. Other parameters of a router or switch cannot be configured only after hostname is configured
- ○ b. a router or switch will not operate without a hostname
- ○ c. to allow local access to the device through the console port
- ● d. to identify the device during remote access ✓

Question 4

Correct

Mark 1.00 out of 1.00

Which of the following access methods should be used to remotely manage a switch while keeping user credentials and the contents safe?

Select one:

- ● a. SSH ✓
- ○ b. AUX
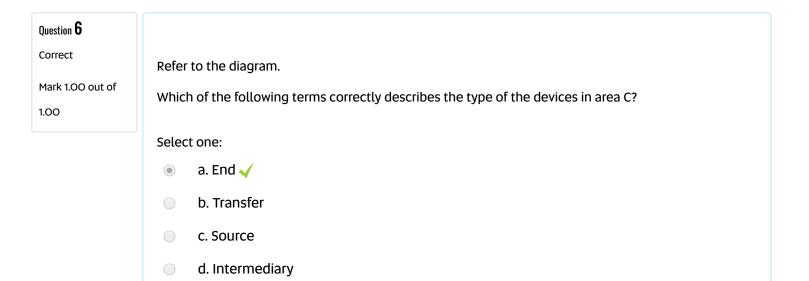- ○ c. Console
- ○ d. Telnet

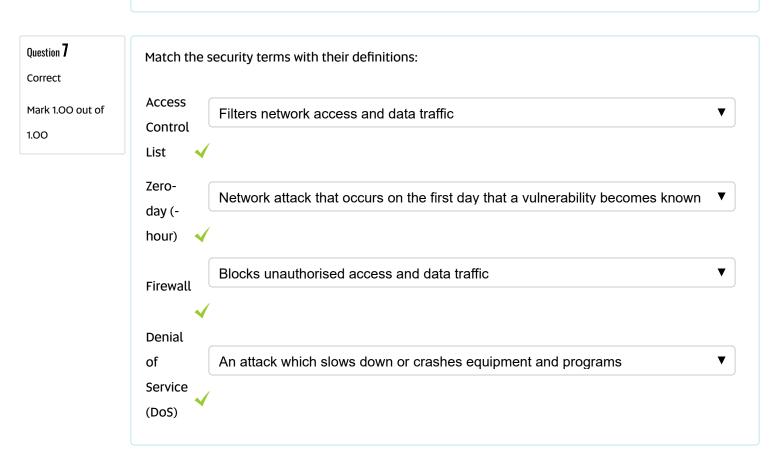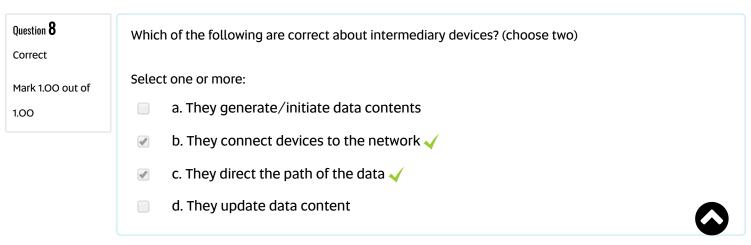**Question 5**

Correct

Mark 1.00 out of 1.00

Refer to the diagram.

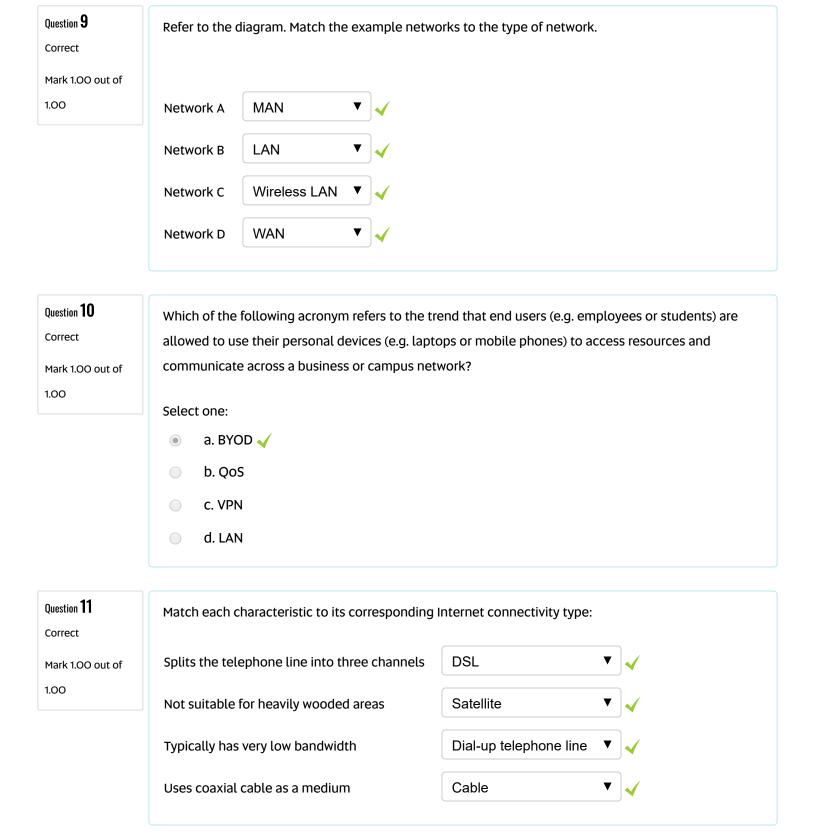Which of the following lists include only intermediary devices?

Select one:

- ○ a. C, D, G, I
- ○ b. G, H, I, J
- ○ c. A, B, E, F
- ● d. A, B, D, G ✓

Question 6

Correct

Mark 1.OO out of 1.OO

Refer to the diagram.

Which of the following terms correctly describes the type of the devices in area C?

Select one:

○ a. End ✓

○ b. Transfer

○ c. Source

○ d. Intermediary

Question 7

Correct

Mark 1.OO out of 1.OO

Match the security terms with their definitions:

Access Control List ✓

Filters network access and data traffic ▼

Zero-day (-hour) ✓

Network attack that occurs on the first day that a vulnerability becomes known ▼

Firewall ✓

Blocks unauthorised access and data traffic ▼

Denial of Service (DoS) ✓

An attack which slows down or crashes equipment and programs ▼

Question 8

Correct

Mark 1.OO out of 1.OO

Which of the following are correct about intermediary devices? (choose two)

Select one or more:

☐ a. They generate/initiate data contents

☑ b. They connect devices to the network ✓

☑ c. They direct the path of the data ✓

☐ d. They update data content

Refer to the diagram. Match the example networks to the type of network.

Network A | MAN ▾ | ✓

Network B | LAN ▾ | ✓

Network C | Wireless LAN ▾ | ✓

Network D | WAN ▾ | ✓

Which of the following acronym refers to the trend that end users (e.g. employees or students) are allowed to use their personal devices (e.g. laptops or mobile phones) to access resources and communicate across a business or campus network?

Select one:

- ⦿ a. BYOD ✓
- ○ b. QoS
- ○ c. VPN
- ○ d. LAN

Match each characteristic to its corresponding Internet connectivity type:

Splits the telephone line into three channels | DSL ▾ | ✓

Not suitable for heavily wooded areas | Satellite ▾ | ✓

Typically has very low bandwidth | Dial-up telephone line ▾ | ✓

Uses coaxial cable as a medium | Cable ▾ | ✓

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Question 12

Correct

Mark 1.00 out of 1.00

Which of the following devices determines the path that messages should take through different networks?

Select one:

- ○ a. a router ✓
- ○ b. a firewall
- ○ c. a web server
- ○ d. a DSL modem

Question 13

Correct

Mark 1.00 out of 1.00

A router has a valid operating system and a configuration stored in NVRAM. When the router boots up, which mode will display?

Select one:

- ○ a. setup mode
- ○ b. ROM monitor mode
- ○ c. global configuration mode
- ○ d. user EXEC mode ✓

Question 14

Correct

Mark 1.00 out of 1.00

Which of the following correctly describe the use of powerline networking technology?

Select one:

- ○ a. It enables the creation of a home LAN without using any physical cabling.
- ○ b. It is a wireless technology for which a wireless access point uses powerline to distribute data in a house.
- ○ c. It is a new type of "intelligent" electrical cabling technology used to extend an existing home network
- ○ d. It allows a device to connect to an existing home LAN using an adapter and the home's existing electrical outlet. ✓

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Question 15

Correct

Mark 1.OO out of 1.OO

Which of the following statements correctly describes a network that supports quality of services (QoS)?

Select one:

○ a. A very small number of devices are affected by a failure.

○ b. The network should be scalable keep up with user demand.

◉ c. The network provides predictable levels of service to different types of traffic. ✓

○ d. Data sent over the network is not altered in transmission.

Question 16

Correct

Mark 1.OO out of 1.OO

To conduct an initial configuration of a switch, which of the following procedures should be followed?

Select one:

○ a. Use the AUX port to locally access the switch.

○ b. Use SSH to remotely access the switch through the network.

○ c. Use Telnet to remotely access the switch through the network.

◉ d. Use the console port to locally access the switch ✓

Question 17

Correct

Mark 1.OO out of 1.OO

To remotely manage a switch, which interface do we need to configure?

Select one:

○ a. the AUX interface

○ b. the first Ethernet port interface

◉ c. the switch virtual interface ✓

○ d. the console port interface

Question 18

Correct

Mark 1.OO out of 1.OO

Which of the following are NOT characteristics of a peer-to-peer network? (Choose three.)

Select one or more:

- ☐ a. low cost to implement
- ☐ b. easy to create
- ☑ c. more secure ✓
- ☑ d. scalable ✓
- ☑ e. devices perform better when acting as both client and server ✓
- ☐ f. lacks centralized administration

Question 19

Correct

Mark 1.OO out of 1.OO

What is the purpose for a user to issue a ping 131.2.1.11 command on a PC?

Select one:

- ○ a. To find out the path from the PC to the destination
- ⦿ b. To test the connectivity between the PC and the device with the IP address 131.2.1.11 ✓
- ○ c. To identify the type of device at the destination
- ○ d. To check if the PC's TCP/IP stack is functioning

Question 20

Correct

Mark 1.OO out of 1.OO

After you have changed the IP address of an interface on an IOS device, what do you have to do for the change to take effect?

Select one:

- ⦿ a. Nothing has to be done. Changes to the configuration on an IOS device is applied immediately after the command is issued. ✓
- ○ b. Copy the information in the startup configuration file to the running configuration.
- ○ c. Copy the running configuration to the startup configuration file.
- ○ d. Reload the device and type yes when prompted to save the configuration.

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QUIZ #2 (TOPICS 3, 4 & 5) - TO BE OPENED ON MONDAY 29 APRIL 2019, CLOSED AT 11PM ON SUNDAY 5 MAY 2019

Started on	Saturday, 4 May 2019, 4:33 PM
State	Finished
Completed on	Saturday, 4 May 2019, 5:41 PM
Time taken	1 hour 8 mins
Marks	35.17/38.00
Grade	**92.54** out of 100.00
Feedback	Well done!

Question 1

Correct

Mark 1.00 out of 1.00

Which of the following statements are correct about MAC addresses? (choose two)

Select one or more:

☐ a. The ISO is responsible for MAC addresses regulations.

☑ b. MAC addresses are also known as physical addresses. ✓

☑ c. The first three bytes of a MAC address are used by the vendor assigned OUI. ✓

☐ d. A NIC only needs a MAC address if connected to a WAN.

Question 2

Correct

Mark 1.00 out of 1.00

Which of the following statements are true about media access control methods for shared media? (choose two)

Select one or more:

☐ a. Contention based access is often used with a logical ring topology

☑ b. CSMA is a contention based access method ✓

☐ c. Controlled access methods often have less overhead than contention based access methods

☑ d. Wi-Fi networks use contention based access method ✓

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Match the TCP/IP layer to the description of its function:

Transport	Exchanges frames between devices ▼	✗
Internet	Determines the best path through a network ▼	✓
Network Access	Determines the best path through a network ▼	✗
Application	Represents data to the user and controls dialogs ▼	✓

What is wrong with the displayed termination in the following diagram?

Select one:

- ○ a. The cable is not shielded.

- ○ b. The connector used is an RJ-11 connector instead of an RJ-45 connector.

- ○ c. The wires are too thick for the connector that is used.

- ◉ d. The untwisted wires are too long so that they are left outside the connector. ✓

Which of the following statements is true about UTP media?

Select one:

- ○ a. Terminates with BNC, N type adn F type connectors

- ○ b. The new Ethernet 1OGB standard uses this form of copper media

- ○ c. Attaches antennas to wiresless devices - can be bundled with fibre optic cabling for two-way data transmission

- ○ d. Counters EMI and RFI by using shielding techniques and special connections

- ◉ e. Most common network media ✓

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Question 6

Correct

Mark 1.00 out of 1.00

A user is getting the HTML file for a web page. Which protocol listed below segments the messages exchanged between the web server and the user's web client and encapsulates the segmented messages with port numbers?

Select one:

○ a. TCP ✓

○ b. DHCP

○ c. HTTP

○ d. ARP

Question 7

Incorrect

Mark 0.00 out of 1.00

The following diagram shows a small switched network and the MAC address table of the switch. A frame has been sent from PC1 and the destination of the frame is PC3. What will happen to the frame?

Select one:

○ a. The switch will discard the frame.

○ b. The switch will forward the frame to all ports.

○ c. The switch will forward the frame only to port 2. ✗

○ d. The switch will forward the frame only to ports 1 and 3.

○ e. The switch will forward the frame to all ports except port 4.

Question 8

Correct

Mark 1.00 out of 1.00

Which statement below is correct?

Select one:

- ○ a. unicast refers to the communication type that a computer communicates with a specific group of computers
- ◉ b. multicast refers to the communication type that a computer communicates with a specific group of computers ✓
- ○ c. broadcast refers to the communication type that a computer communicates with a specific group of computers.
- ○ d. ARP refers to the communication type that a computer communicates with a specific group of computers
- ○ e. HTTP refers to the communication type that a computer communicates with a specific group of computers

Question 9

Correct

Mark 1.00 out of 1.00

What is an advantage of network devices using open standard protocols?

Select one:

- ○ a. Internet access can be controlled by a single ISP in each market.
- ○ b. Competition and innovation are limited to specific types of products.
- ○ c. Network communications is confined to data transfers between devices from the same vendor.
- ◉ d. A client host and a server running different operating systems can successfully exchange data. ✓

Question 10

Partially correct

Mark 0.17 out of 1.00

Which of the following statements are true about multimode fiber-optic media? (choose three)

Select one or more:

- ☐ a. Uses lasers in a single stream as a data light source transmitter
- ☑ b. Can travel approximately 62.5 miles or 100km ✗
- ☑ c. Uses light emitting diodes (LEDs) as a data light source transmitter ✓
- ☑ d. Used within a campus network ✓
- ☐ e. Can help data travel 200 meters
- ☐ f. Used to connect long-distance telephony and cable TV applications

Question 11

Correct

Mark 1.00 out of 1.00

Refer to the diagram below. Suppose that Host1, a web client PC, were to get a web page from the Server, a web server machine, which of the following statements is correct in terms of the TCP/IP layers that would be involved in sending the web page request message from Host1 to Server?

Select one:

○ a. Application, transport, Internet and network access layers ✓

○ b. Only network access layer

○ c. Only application layer

○ d. Only application, session and presentation layers

○ e. Application, transport, Internet, network access and physical layers

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Question 12

Correct

Mark 1.00 out of 1.00

Which statement below is correct?

Select one:

○ a. domain name provides a unique host address for communications at the internet layer

● b. IP address provides a unique host address for communications at the internet layer ✓

○ c. MAC address provides a unique host address for communications at the internet layer

○ d. port number provides a unique host address for communications at the internet layer

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Question 13

Correct

Mark 1.00 out of 1.00

Which of the following statements are true about the standards for wireless communications? (choose two)

Select one or more:

☐ a. The IEEE 802.11 standard is also known as Bluetooth

☑ b. Wi-Fi uses CSMA/CA for media access control ✓

☑ c. IEEE 802.11 is a wireless LAN standard ✓

☐ d. WiMAX is a standard for Wireless Personal Area Networks

Question 14

Correct

Mark 1.00 out of 1.00

How does a receiving node know the start and end of a frame?

Select one:

○ a. By receiving an out-of-band signal at the beginning of the frame.

○ b. By receving a beacon that notifies the arrival of the data frame.

○ c. By seeing the source MAC address.

◉ d. By seeing the start and stop bits that have been inserted into the frame by the sending node. ✓

Question 15

Correct

Mark 1.00 out of 1.00

What method is used to manage contention-based access on a wireless network?

Select one:

◉ a. CSMA/CA ✓

○ b. token passing

○ c. Priority ordering

○ d. flow control

○ e. CSMA/CD

Question 16

Correct

Mark 1.00 out of 1.00

Which of the following is the generic term for a piece of data at any layer of a networking model?

Select one:

○ a. segment

◉ b. protocol data unit ✓

○ c. frame

○ d. packet

Question 17

Correct

Mark 1.OO out of 1.OO

In the following diagram, PC2 broadcasts an ARP request as it is going to send a packet to PC1. Which of the following statements correctly describes what will happen after the ARP request is sent?

Select one:

○ a. SW1 will send an ARP reply with PC1's MAC address.

◉ b. PC1 will send an ARP reply to PC2 only with its MAC address. ✓

○ c. SW1 will send an ARP reply to PC2 only with its FaO/1 MAC address.

○ d. RT1 will send an ARP reply with its FaO/O MAC address.

○ e. RT1 will send an ARP reply to PC2 only with PC1's MAC address.

Question 18

Correct

Mark 1.OO out of 1.OO

Which of the following statements are correct descriptions of the LLC sublayer in Ethernet standards? (Choose two.)

Select one or more:

☐ a. The LLC sublayer is specified in the IEEE 8O2.3 standard.

☑ b. The LLC sublayer communicates with layer 3 of the OSI model. ✓

☑ c. The LLC functions are implemented in software. ✓

☐ d. The LLC sublayer is responsible for the placement and retrieval of frames on and off the media.

☐ e. The LLC sublayer interacts directly with the NIC driver software.

Question 19

Correct

Mark 1.OO out of 1.OO

What type of cable is used to connect a PC's serial port to a Cisco router or switch's console port?

Select one:

○ a. corssover

○ b. coaxial

◉ c. rollover ✓

○ d. straight-through

Question 20

Correct

Mark 1.OO out of 1.OO

A web client is going to request the HTML file for a web page from a web server. At the client's computer, what is the correct order of the protocols used to prepare the request to be sent out?

Select one:

- ⦿ a. HTTP, TCP, IP, Ethernet ✓
- ○ b. Ethernet, TCP, IP, HTTP
- ○ c. HTTP, IP, TCP, Ethernet
- ○ d. Ethernet, IP, TCP, HTTP

Question 21

Correct

Mark 1.OO out of 1.OO

At which layer of the TCP/IP model would an IP address be encapsulated?

Select one:

- ○ a. network access layer
- ⦿ b. Internet layer ✓
- ○ c. application layer
- ○ d. transport layer

Question 22

Correct

Mark 1.OO out of 1.OO

If the default gateway is not configured correctly on a host, what will happen to the host?

Select one:

- ○ a. It cannot communicate with any other hosts on the local network.
- ○ b. It can communicate with hosts on a different network, but not with other hosts on the local network.
- ○ c. There is no impact on communications
- ⦿ d. It can communicate with other hosts on the local network, but not with hosts on a different network. ✓

Question 23

Correct

Mark 1.00 out of 1.00

What is the function provided by the Address Resolution Protocol?

Select one:

○ a. discovering the IP address of any host on a different network.

○ b. discovering the IP address of any host on the local network.

⊙ c. discovering the MAC address of any host on the local network. ✓

○ d. discovering the MAC address of any host on a different network.

Question 24

Correct

Mark 1.00 out of 1.00

Which statement is true about MAC addresses?

Select one:

○ a. On a Windows host, you can view the MAC address of a NIC using the ipconfig /all command only when the NIC is connected to a network

○ b. The ITU is responsible for MAC addresses regulations.

⊙ c. Any two MAC addresses must be different, but their first three bytes may be the same. ✓

○ d. A NIC only needs a MAC address if connected to a WAN.

Question 25

Partially correct

Mark 0.50 out of 1.00

Which of the following statements are true about data link layer frame header? (choose two)

Select one or more:

☐ a. Data link layer frame headers contain information of user application

☑ b. PPP frame header does not contain source and destination MAC addresses ✓

☐ c. The frame headers of all data link layer protocols must include flow control and logical connectin fields.

☑ d. Ethernet frame header fields contain source and destination IP addresses. ✗

☑ e. The frame header contains the control information specified by the data link layer protocol for the specific logical topology and media used ✓

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Question 26

Correct

Mark 1.00 out of 1.00

Match the layers with its PDU names

Network Layer	datagram or packet ▼	✓
Data Link Layer	frame ▼	✓
Transport Layer	segment ▼	✓
Application Layer	message or data ▼	✓

Question 27

Correct

Mark 1.00 out of 1.00

Which statement below is correct?

Select one:

○ a. The OSI Application layer and the TCP/IP application layer provide same functions.

○ b. The TCP/IP network access layer has similar functions to the OSI network layer.

○ c. Layes 1 to 3 of the OSI model provide similar services as the TCP/IP internet layer does.

◉ d. The TCP/IP transport layer and OSI Layer 4 provide similar services and functions. ✓

Question 28

Correct

Mark 1.00 out of 1.00

What does a switch do when a frame is received on a port and the destination MAC address is not in the switch MAC address table?

Select one:

○ a. Drops the frame

◉ b. Floods the network with the frame in order to look for the destination node ✓

○ c. Sends back a message to the originating station asking for a name resolution

○ d. Forwards the frame to the first available link

What is the preamble field in an Ethernet frame used for?

Select one:

○ a. It is used to identify the destination address

◉ b. It is used for timing synchronization ✓

○ c. It is used as a padding for data

○ d. It is used to identify the source address

Refer to the following digram. H1 has sent a broadcast message to all of the hosts. If H5 wants to reply to the broadcast message, which of the following statements is true?

Select one:

○ a. H5 sends a broadcast message to H1, but the switch forwards the message to H1 only

○ b. H5 sends a broadcast message to H1, and the switch forwards the message to all hosts except for H5

◉ c. H5 sends a unicast message to H1, and the switch forwards the message to H1 only ✓

○ d. H5 sends a unicast message to H1, but the switch forwards it all the hosts except for H5 because the switch does not know to which port to forward the message.

Refer to the following diagram. The web server sends a message to PC1. What is the destination MAC address of the Ethernet frame created for the message by the web server?

Select one:

◉ a. OO-6O-2F-3A-O7-CC ✓

○ b. OO-6O-2F-3A-O7-DD

○ c. OO-6O-2F-3A-O7-BB

○ d. OO-6O-2F-3A-O7-AA

Which layer of the OSI model specifies the encapsulation of packets into frames for the transmission over specific types of media?

Select one:

○ a. data link ✓

○ b. application

○ c. transport

○ d. physical

Which of the following statements is correct?

Select one:

○ a. A store-and-forward switch does not always store the entire frame before forwarding

○ b. A cut-through switch can forward frames after receiving the destination address field ✓

○ c. A store-and forward switch presents less latency than a cut-through switch.

○ d. None of the above

Which statement below is NOT correct with respect to fiber-optic and UTP cabling?

Select one:

○ a. Fiber-optic has much higher immunity to EMI and RFI than UTP.

○ b. Fiber-optic is easier to terminate and install than UTP. ✓

○ c. Fiber-optic can support higher bandwidth than UTP.

○ d. Fiber-optic is able to carry signals for much longer distance than UTP.

Which of the following statements is true?

Select one:

- ○ a. FF-FF-FF-FF-FF-FF is a multicast MAC address

- ○ b. 01-00-5E-FF-FF-FF is a broadcast MAC address

- ○ c. FF-FF-FF-0B-22-38 is a broadcast MAC address

- ● d. 01-00-5E-0B-22-38 is a multicast MAC address ✓

When a host needs to send a packet to a destination device in a remote network, but it cannot find the mapping in its ARP cache, what will the host do?

Select one:

- ○ a. It will broadcast an ARP request for the MAC address of the destination device.

- ● b. It will broadcast an ARP request for the MAC address of its default gateway. ✓

- ○ c. It will contact the DNS server to request for the destination's MAC address.

- ○ d. It will send the frame with its own MAC address as the destination.

- ○ e. It will broadcast the frame to all local hosts.

Refer to the diagram below. What is the maximum possible throughput between the PC and the Server?

Select one:

- ○ a. 1000Mb/s

- ○ b. 10Mb/s

- ● c. 128 kb/s ✓

- ○ d. 100Mb/s

Which of the following could be the results of ARP operation? (Choose two.)

Select one or more:

☑ a. Network attackers get to know the MAC address and IP address mappings in ARP messages and thus can manipulate the mappings with the intent of intercepting network traffic. ✓

☐ b. Duplicated entries in switch MAC address table.

☐ c. Overflow of host MAC address tables due to large numbers of ARP request broadcasts.

☑ d. Data communication delays on large networks with low bandwidth. ✓

QUIZ #2 (TOPICS 3, 4 & 5) - TO BE OPENED ON MONDAY 29 APRIL 2019, CLOSED AT 11PM ON SUNDAY 5 MAY 2019

Started on	Saturday, 4 May 2019, 5:44 PM
State	Finished
Completed on	Saturday, 4 May 2019, 7:49 PM
Time taken	2 hours 4 mins
Overdue	4 mins 20 secs
Marks	1.00/38.00
Grade	**2.63** out of 100.00
Feedback	Good effort.
	If this is your first attempt on the test, please take the test again before it is closed to improve your marks; if this is your second attempt, you will be given the opportunity to re-sit the test in Week 7.

Question 1

Correct

Mark 1.00 out of 1.00

Which statement below is correct?

Select one:

- ⊙ a. A network protocol defines how messages are exchanged between the source and the destination. ✔

- ○ b. A transport layer protocol must provide all the functions of the OSI or TCP/IP transport layer.

- ○ c. Network protocols are only needed for governing the message exchanges with devices on remote networks.

- ○ d. A physical layer protocol defines how intermediary devices are mounted on racks.

Refer to the diagram below. Suppose that Host1 wants to contact ServerB. Which of the following statements are correct descriptions of the PDUs that HostA will generate for the communication? (choose two)

Select one or more:

- ☐ a. A frame with destination MAC address of Switch1
- ☐ b. An IP packet with destination IP address of Router1
- ☐ c. A frame with destination MAC address of Router1
- ☐ d. A frame with destination MAC address of ServerB
- ☐ e. An IP packet with destination IP address of Router2
- ☐ f. An IP packet with destination IP address of ServerB

In which case there could be multiple entries for a single switch port in the switch's MAC address table?

Select one:

- ○ a. when the switch is configured for Layer 3 switching
- ○ b. when another switch is connected to the switch port
- ○ c. when a router is connected to the switch port
- ○ d. when the switch has forwarded multiple ARP requests

Which of the following is the name of the process used to put one PDU inside another PDU for transferring information from source to the destination?

Select one:

- ○ a. flow control
- ○ b. decoding
- ○ c. access control
- ○ d. encapsulation
- ○ e. congestion control

Question 5

Not answered

Marked out of 1.00

Which of the following statements are true? (choose two)

Select one or more:

☐ a. The maximum Ethernet frame size is 64 bytes.

☐ b. A runt frame contains at least 64 bytes.

☐ c. The minimum Ethernet frame size is 64 bytes.

☐ d. A runt frame contains less than 64 bytes.

Question 6

Not answered

Marked out of 1.00

Which of the following statements are true about media access control methods for shared media? (choose two)

Select one or more:

☐ a. Contention based access is often used with a logical ring topology

☐ b. Controlled access methods often have less overhead than contention based access methods

☐ c. Wi-Fi networks use contention based access method

☐ d. CSMA is a contention based access method

Question 7

Not answered

Marked out of 1.00

Which statement is true about MAC addresses?

Select one:

○ a. Any two MAC addresses must be different, but their first three bytes may be the same.

○ b. A NIC only needs a MAC address if connected to a WAN.

○ c. The ITU is responsible for MAC addresses regulations.

○ d. On a Windows host, you can view the MAC address of a NIC using the ipconfig /all command only when the NIC is connected to a network

Question 8

Not answered

Marked out of 1.00

Which of the following are characteristics of Wi-Fi networks? (Choose two.)

Select one or more:

- ☐ a. They are collision-free networks.
- ☐ b. They use CSMA/CA technology.
- ☐ c. Collisions can exist in the networks.
- ☐ d. They use CSMA/CD technology.
- ☐ e. Stations can transmit at any time.

Question 9

Not answered

Marked out of 1.00

Which of the following correctly describes proprietary protocols?

Select one:

- ○ a. TCP is an example of proprietary protocols
- ○ b. The specification and operation of proprietary protocols are governed by one company.
- ○ c. proprietary protocols are developed by private companies but specifications of the protocols are available to public
- ○ d. Some proprietary protocols are also open standard protocols.

Question 10

Not answered

Marked out of 1.00

Which of the following statements is correct about data link layer?

Select one:

- ○ a. Data link layer is in charge of local and remote delivery
- ○ b. Data link layer is only in charge of local delivery
- ○ c. Data link layer is only in charge of remote delivery
- ○ d. Data link layer is in charge of remote delivery using routers

Question 11

Not answered

Marked out of 1.00

What is wrong with the displayed termination in the following diagram?

Select one:

- ○ a. The untwisted wires are too long so that they are left outside the connector.

- ○ b. The wires are not ordered correctly.

- ○ c. The connector used is an RJ-11 connector instead of an RJ-45 connector.

- ○ d. The connector is placed upside down .

Question 12

Not answered

Marked out of 1.00

In the following diagram, PC2 broadcasts an ARP request as it needs to send a packet to PC3. Which of the following statements correctly describes what will happen after the ARP request is sent?

Select one:

- ○ a. RT1 will send an ARP reply with its FaO/O MAC address.

- ○ b. SW1 will send an ARP reply with PC3's MAC address.

- ○ c. PC3 will send an ARP reply with its MAC address.

- ○ d. SW1 will send an ARP reply with its FaO/2 MAC address.

- ○ e. RT1 will send an ARP reply with PC3's MAC address.

Question 13

Not answered

Marked out of 1.00

Which statement below states an advantage of fiber-optic cabling over copper cabling?

Select one:

- ○ a. Fiber-optic is easier to terminate and install than copper cabling.

- ○ b. Fiber-optic is able to be installed around sharp bends.

- ○ c. Fiber-optic is able to carry signals for much longer distance than copper cabling.

- ○ d. Fiber-optic is usually cheaper than copper cabling.

Question 14

Not answered

Marked out of 1.OO

Which of the following statements are true about bandwidth? (choose two)

Select one or more:

- ☐ a. It is the same as the throughput of the medium
- ☐ b. it is typically measured in kilobits per second (kb/s) or megabits per second (Mb/s)
- ☐ c. It indicates the capacity of a medium to carry data
- ☐ d. For the same medium, it is always less than the throughput

Question 15

Not answered

Marked out of 1.OO

Which of the following statement is correct about ARP?

Select one:

- ○ a. An ARP broadcast is generated by a host when the host wants to send a packet to a local destination device and the host knows the destination's IP address but not the MAC address of the destination.
- ○ b. When a host is creating a frame for a packet, it refers to its MAC address table to determine the mapping of IP addresses to MAC addresses.
- ○ c. An ARP request is broadcast to all devices on the Ethernet LAN and contains the MAC address of the destination host.
- ○ d. If no device responds to the ARP request, then the originating node will broadcast the data packet to all devices on the network segment.
- ○ e. If a device receiving an ARP request has the destination IPv4 address, it broadcast an ARP reply with its MAC address.

Question 16

Not answered

Marked out of 1.OO

What method is used to manage contention-based access on a wireless network?

Select one:

- ○ a. token passing
- ○ b. flow control
- ○ c. Priority ordering
- ○ d. CSMA/CD
- ○ e. CSMA/CA

Which of the following could be the results of ARP operation? (Choose two.)

Select one or more:

- ☐ a. Duplicated entries in switch MAC address table.

- ☐ b. Overflow of host MAC address tables due to large numbers of ARP request broadcasts.

- ☐ c. Network attackers get to know the MAC address and IP address mappings in ARP messages and thus can manipulate the mappings with the intent of intercepting network traffic.

- ☐ d. Data communication delays on large networks with low bandwidth.

Which of the following statements is true?

Select one:

- ○ a. FF-FF-FF-FF-FF-FF is a multicast MAC address

- ○ b. O1-OO-5E-FF-FF-FF is a broadcast MAC address

- ○ c. FF-FF-FF-OB-22-38 is a broadcast MAC address

- ○ d. O1-OO-5E-OB-22-38 is a multicast MAC address

Choose the correct cable types for the connections to be made, assuming that the devices do NOT have the autosensing feature.

PC to switch Ethernet port   Choose...   ▼

switch to switch   Choose...   ▼

PC to PC   Choose...   ▼

Switch to router Ethernet port   Choose...   ▼

PC to router Ethernet port   Choose...   ▼

PC to switch console port   Choose...   ▼

PC to router console port   Choose...   ▼

Which statement below is correct about the encapsulation process followed to send out data from a PC to the network?

Select one:

- ○ a. Packets are sent from the network access layer to the transport layer.
- ○ b. Segments are sent from the transport layer to the Internet layer.
- ○ c. Data is sent from the Internet layer to the network access layer.
- ○ d. Frames are sent from the network access layer to the Internet layer.

Which method below is used to prevent packets from being dropped because too much data is being sent too quickly?

Select one:

- ○ a. response timeout
- ○ b. encapsulation
- ○ c. flow control
- ○ d. access method

Match the layer and the information added at the layer as a result of encapsulation.

Data link layer	Choose... ▼
Network layer	Choose... ▼
Transport layer	Choose... ▼
Application layer	Choose... ▼
Physical layer	Choose... ▼

Question 23

Not answered

Marked out of 1.00

Which of the following statements about message delivery options is correct?

Select one:

○ a. broadcast should be used when all devices need to receive the same message simultaneously

○ b. multicast should be used when all devices need to receive the same message simultaneously

○ c. full-duplex should be used when all devices need to receive the same message simultaneously

○ d. unicast should be used when all devices need to receive the same message

---

Question 24

Not answered

Marked out of 1.00

Which of the following methods is for improving the cancellation effect in UTP cables?

Select one:

○ a. Increase and vary the number of twists in each wire pair

○ b. Reduce the number of wires that are used to carry data

○ c. Increase the thickness of the outer jacket and the plastic sheath of all the wires

○ d. Use thicker copper wires

Question 25

Not answered

Marked out of 1.00

Refer to the following digram. H1 has sent a broadcast message to all of the hosts. If H5 wants to reply to the broadcast message, which of the following statements is true?

Select one:

○ a. H5 sends a broadcast message to H1, but the switch forwards the message to H1 only

○ b. H5 sends a broadcast message to H1, and the switch forwards the message to all hosts except for H5

○ c. H5 sends a unicast message to H1, and the switch forwards the message to H1 only

○ d. H5 sends a unicast message to H1, but the switch forwards it all the hosts except for H5 because the switch does not know to which port to forward the message.

Question 26

Not answered

Marked out of 1.00

Which of the follow correctly describes the default gateway of a host computer?

Select one:

○ a. The default gateway's IP address is the IP address of the router interface on the same network as the host computer.

○ b. The default gateway's IP address is the host computer's IP address

○ c. The default gateway's IP address is the IP address of the switch that the host computer is connected to.

○ d. The default gateway's IP address is the IP address of the wireless access point that the host computer is using to access the Internet.

Question 27

Not answered

Marked out of 1.00

When a switch is building its MAC address table, what address information does the switch record in the table when it receives a frame from a port?

Select one:

○ a. Destination MAC address of the received frame.

○ b. Destination IP address of the received frame.

○ c. Source MAC address of the received frame.

○ d. Source IP address of the received frame

Question 28

Not answered

Marked out of 1.00

When a host needs to send a packet to a destination device in a remote network, but it cannot find the mapping in its ARP cache, what will the host do?

Select one:

○ a. It will contact the DNS server to request for the destination's MAC address.

○ b. It will broadcast an ARP request for the MAC address of the destination device.

○ c. It will broadcast an ARP request for the MAC address of its default gateway.

○ d. It will send the frame with its own MAC address as the destination.

○ e. It will broadcast the frame to all local hosts.

Question 29

Not answered

Marked out of 1.OO

Which of the following statements is correct?

Select one:

- ○ a. A store-and-forward switch does not always store the entire frame before forwarding

- ○ b. A cut-through switch can forward frames after receiving the destination address field

- ○ c. A store-and forward switch presents less latency than a cut-through switch.

- ○ d. None of the above

Question 30

Not answered

Marked out of 1.OO

Which statement below is correct?

Select one:

- ○ a. A NIC decides the acceptance of a frame based on the frame's destination MAC address

- ○ b. A NIC decides the acceptance of a frame based on the frame's source Ethernet address

- ○ c. A NIC decides the acceptance of a frame based on the frame's source MAC address

- ○ d. A NIC decides the acceptance of a frame based on the frame's destination IP address

- ○ e. A NIC decides the acceptance of a frame based on the frame's source IP address.

Question 31

Not answered

Marked out of 1.OO

Which of the following statements are correct about MAC addresses? (choose two)

Select one or more:

- ☐ a. The first three bytes of a MAC address are used by the vendor assigned OUI.

- ☐ b. A NIC only needs a MAC address if connected to a WAN.

- ☐ c. MAC addresses are also known as physical addresses.

- ☐ d. The ISO is responsible for MAC addresses regulations.

Question 32

Not answered

Marked out of 1.00

Which of the following statements is true about multimode fiber-optic cables?

Select one:

- a. Multimode fiber-optic cables has a thinner core than single-mode fiber.

- b. Multimode fiber-optic cables are often used with LANs or distances of a couple of hundred meters within a campus network

- c. Multimode fiber-optic cables often use a laser as a light source.

- d. Multimode fiber-optic cables carry signals from multiple connected sending devices.

Question 33

Not answered

Marked out of 1.00

Which PDU format is used at the data link layer?

Select one:

- a. frame

- b. segment

- c. packet

- d. file

Question 34

Not answered

Marked out of 1.00

Which of the following statements is true about data link layer frame header?

Select one:

- a. The frame headers of all data link layer protocols must include flow control and logical connectin fields.

- b. Ethernet frame header fields contain source and destination IP addresses.

- c. PPP frame header contains source and destination MAC addresses

- d. Data link layer frame headers contain information of user application

- e. The format and contents of the headers may be different for different data link layer protocols

Question 35

Not answered

Marked out of 1.00

Which of the following statements is true about the function of the data link layer of the OSI model?

Select one:

○ a. The data link layer is responsible for interfacing with applications

○ b. Data link layer protocols specify the signalling methods for data transmission

○ c. The data link layer is responsible for encapsulating segments into packets

○ d. The data link layer specifies the encapsulation of packets into frames for the transmission over specific types of media

---

Question 36

Not answered

Marked out of 1.00

Which of the following statements is correct about the FCS field in a frame?

Select one:

○ a. It is used to compute the CRC header for the data field

○ b. It is used to verify the MAC address of the source node

○ c. It is used to detect errors that have occurred during the transmission of frames.

○ d. It is used to obtain the MAC address of the source node

Question 37

Not answered

Marked out of 1.00

Which of the following statements provides a correct justification of using a layered model for network communications?

Select one:

○ a. products by different vendors are compatible and thus fosters competition among the vendors.

○ b. network performance is improved because the target of each layer is defined.

○ c. a common set of developing tools have to be used by different vendors and thus incompatibility of produces is avoided.

○ d. protocol development is simplified because every layer is limited to only one function.

Question **38**

Not answered

Marked out of 1.OO

Which of the following statements are correct descriptions of the MAC sublayer in Ethernet standards? (Choose two.)

Select one or more:

- a. The MAC sublayer interacts directly with the NIC driver software.

- b. The MAC sublayer functions are implemented in software.

- c. The MAC sublayer is specified in the IEEE 8O2.2 standard.

- d. The MAC sublayer is responsible for the placement and retrieval of frames on and off the media.

- e. The MAC sublayer communicates directly with layer 3 of the OSI model.

QUIZ #3 (TOPICS 6 AND 7) - TO BE OPENED ON MONDAY OF WEEK 9 (13 MAY 2019); CLOSED AT 11PM ON SUNDAY OF WEEK 9 (19 MAY 2019)

Started on	Thursday, 16 May 2019, 3:26 PM
State	Finished
Completed on	Thursday, 16 May 2019, 4:35 PM
Time taken	1 hour 8 mins
Marks	17.00/20.00
Grade	**85.00** out of 100.00
Feedback	Well done!

Question 1

Correct

Mark 1.00 out of 1.00

What subnet mask would a network administrator assign to a network address of 172.30.1.0 if the network was supposed to have up to 126 hosts (and waste the fewest IP addresses)?

Select one:

- ○ a. 255.255.128.0
- ◉ b. 255.255.255.128 ✔
- ○ c. 255.255.255.0
- ○ d. 255.255.0.0

Question 2

Incorrect

Mark 0.00 out of 1.00

Which of the following is correct about router interfaces?

Select one:

- ○ a. A configured and activated router interface must be connected to another device in order to operate.
- ◉ b. Immediately after the no shutdown command is issued, a router interface becomes active and starts to operate. ✘
- ○ c. Router Ethernet interfaces are not activated by default, but router WAN interfaces are.
- ○ d. Commands that apply an IP address and subnet mask to an interface are entered in global configuration mode.

Question 3

Incorrect

Mark 0.00 out of 1.00

How does a host make sure that a packet to be sent is directed to the right network destination?

Select one:

○ a. It maintains its local routing table that records the information of a route to the loopback interface, a local network route, and a remote default route.

○ b. It asks the default gateway for the best route.

◉ c. It directs all packets to its default gateway and the default gateway will deliver the packets. ✗

○ d. It finds a route to the network destination in its local routing table and informs its default gateway of the route.

Question 4

Correct

Mark 1.00 out of 1.00

Which IP (version 4) header field value is decremented by each router that receives the packet?

Select one:

○ a. Fragment Offset

○ b. Header Length

◉ c. Time to Live ✓

○ d. Differentiated Services

Question 5

Correct

Mark 1.00 out of 1.00

Which of the following statements are correct? (choose two.)

Select one or more:

☑ a. The binary equivalent of the decimal number 234 is 11101010 ✓

☑ b. The hexadecimal equivalent of the binary number 11000001 is C1 ✓

☐ c. The decimal equivalent of the binary number 10010101 is 145

☐ d. The decimal equivalent of the binary number 10010101 is 95

Question 6

Correct

Mark 1.00 out of 1.00

Which IP address is the last usable host address of the network which 192.168.32.17/16 belongs to?

Select one:

- ◉ a. 192.168.255.254 ✓
- ○ b. 192.168.254.254
- ○ c. 192.168.0.254
- ○ d. 192.168.254.255

Question 7

Correct

Mark 1.00 out of 1.00

What is the prefix length notation (or slash or CIDR notation) for the subnet mask 255.255.255.224?

Select one:

- ○ a. /28
- ◉ b. /27 ✓
- ○ c. /26
- ○ d. /25

Question 8

Correct

Mark 1.00 out of 1.00

A packet arrives at a router interface. what will the router do immediately after it finds that the destination IP address matches a network that is directly connected?

Select one:

- ○ a. discard the traffic after consulting the route table
- ○ b. look up the next-hop address for the packet
- ◉ c. move the packet to the directly connected interface ✓
- ○ d. analyze the destination IP address

Question 9

Correct

Mark 1.00 out of 1.00

Given the network address 10.5.12.0/24, which of the following IP addresses is a valid (i.e. usable) host address residing within the network?

Select one:

- ○ a. 10.5.12.255
- ○ b. 10.5.13.0
- ○ c. 10.5.16.12
- ◉ d. 10.5.12.253 ✓

Question 10
Correct

Mark 1.00 out of 1.00

Which of the following is correct about the best effort delivery by IP?

Select one:

- ◉ a. Does not gurantee that all packets will be received ✓
- ○ b. No contact is made with the destination host before sending a packet
- ○ c. Will always make sure that a packet is delivered to the destination
- ○ d. Pacekts are delivered without errors.

Question 11
Correct

Mark 1.00 out of 1.00

Assume that when you are configuring a router that is currently running on the network, power goes down and you have not saved the configuration. Which of the following types of information will be lost?

Select one:

- ○ a. startup configuration
- ○ b. Cisco IOS image file
- ◉ c. routing table ✓
- ○ d. bootstrap file

Question 12
Correct

Mark 1.00 out of 1.00

Which of the following is correct in terms of the structure of an IPv4 address?

Select one:

- ○ a. An IPv4 address contains a network portion and a logical portion
- ○ b. An IPv4 address contains a subnet mask portion and a host portion
- ◉ c. An IPv4 address contains a network portion and a host portion ✓
- ○ d. An IPv4 address contains a broadcast portion and a host portion

What is the purpose of configuring a switch with a default gateway address?

Select one:

○ a. It provides a nexthop address for all traffic that flows through the switch.

○ b. Hosts that are connected to the switch can use the switch default gateway address to forward packets to a remote destination.

◉ c. A switch must have a default gateway to be accessed by devices in a remote network. ✗

○ d. The default gateway address is used to forward packets originating from the switch to remote networks.

What command would you use if you want to save a router's configuration after you have just configured the router so that the configuration will be used automatically the next time when the router is rebooted?

Select one:

○ a. copy running-config flash

○ b. copy startup-config flash

◉ c. copy running-config startup-config ✓

○ d. reload

○ e. copy startup-config running-config

Based on the following routing table of a router, which of the following statements is correct?

Select one:

◉ a. Packets with a destination of 172.17.6.15 are forwarded through Fa0/0 on the router. ✓

○ b. Packets with a destination of 172.17.6.15 are forwarded through Serial0/0/0 on the router.

○ c. Packets with a destination of 172.17.6.15 are forwarded through Fa1/0 on the router.

○ d. Packets with a destination of 172.17.6.15 are forwarded through Fa1/1 on the router.

Given the IP address 20.251.173.100 and its subnet mask 255.255.255.248, which of the following statements is correct about the network which this IP address belongs to?

Select one:

- ⦿ a. The broadcast address of the network is 20.251.173.103 ✓

- ○ b. The total number of valid host addresses of the network is 14

- ○ c. The broadcast address of the network is 20.251.173.127

- ○ d. The broadcast address of the network is 20.251.173.255

What information may be obtained when you ping a destination host? (Choose two)

Select one or more:

- ☐ a. the number of routers between the source and destination host

- ☑ b. the average time for a packet to reach the destination and for the response to come to the source ✓

- ☑ c. whether or not the destination host is reachable from the source ✓

- ☐ d. the average time spent by routers along the path from the source to the destination to respond

- ☐ e. the IP address of the default gateway of the destination host

Refer to the diagram below. What would be the default gateway address for host A in the 192.133.219.0 network?

Select one:

- ○ a. 192.135.250.1

- ○ b. 192.31.7.1

- ○ c. 192.133.219.0

- ⦿ d. 192.133.219.1 ✓

Question 19

Correct

Mark 1.00 out of 1.00

When a host sends a packet to another host in a remote network, how will the packet be sent?

Select one:

- a. The packet will be sent to the default gateway first, and then it may be sent to the destinaton host if the default gateway router has a route to the destination network in its routing table. ✓

- b. The packet will be sent directly to the destination host.

- c. The packet will first be sent to the default gateway, and then from the default gateway it will be sent directly to the destination host.

- d. The packet will be sent directly to the router of the destination network by the sending host.

Question 20

Correct

Mark 1.00 out of 1.00

What subnet mask would a network administrator assign to a network address of 172.30.1.0 if the network was supposed to have up to 62 hosts (and waste the fewest IP addresses)?

Select one:

- a. 255.255.0.0

- b. 255.255.255.192 ✓

- c. 255.255.255.0

- d. 255.255.192.0

QUIZ #4 (TOPICS 8 AND 9) - TO BE OPENED ON MONDAY OF WEEK 11 (27 MAY 2019); TO BE CLOSED AT 11PM ON SUNDAY OF WEEK 11 (2 JUNE 2019)

Started on	Saturday, 1 June 2019, 1:14 PM
State	Finished
Completed on	Saturday, 1 June 2019, 1:29 PM
Time taken	14 mins 31 secs
Marks	15.00/15.00
Grade	**100.00** out of 100.00
Feedback	Well done!

Question 1

Correct

Mark 1.00 out of 1.00

Which of the following statements are correct about the benefits of subnetting? (Choose two)

Select one or more:

- ☐ a. decreasing the number of broadcast domains
- ☑ b. reducing the size of broadcast domains ✓
- ☑ c. grouping devices to improve management and security ✓
- ☐ d. combining multiple smaller networks into larger networks
- ☐ e. increasing the size of collision domains

Question 2

Correct

Mark 1.00 out of 1.00

Refer to the diagram below. The base network 10.18.10.0/24 has been subnetted into equal-sized subnets. Two of the subnets, 10.18.10.0/27 and 10.18.10.192/27 have been assigned to the two networks respectively as shown in the diagram below. In the remaining subnets, which one could be assigned to the network containing 20 hosts? (Choose two.)

Select one or more:

- ☐ a. 10.18.10.192/28
- ☑ b. 10.18.10.32/27 ✓
- ☐ c. 10.18.10.200/28
- ☑ d. 10.18.10.224/27 ✓
- ☐ e. 10.18.10.64/26

A network administrator subnets the 192.168.10.0/24 network into subnets with /27 masks. How many equal-sized subnets are created?

Select one:

○ a. 2

○ b. 64

⦿ c. 8 ✓

○ d. 4

○ e. 16

A network engineer is subnetting the 10.0.240.0/24 network into equal sized subnets. Each subnet will contain 40 to 60 hosts. Which subnet mask will meet these requirements and waste the fewest addresses in each subnet?

Select one:

○ a. 255.255.255.128

○ b. 255.255.255.224

○ c. 255.255.255.0

⦿ d. 255.255.255.192 ✓

○ e. 255.255.255.64

An administrator wants to create **two** equal sized subnets from the network 192.168.1.0/24. What is the network address and subnet mask of the second subnet?

Select one:

○ a. network address: 192.168.1.0, subnet mask: 255.255.255.224

○ b. network address: 192.168.1.128, subnet mask: 255.255.255.192

○ c. network address: 192.168.1.64, subnet mask: 255.255.255.192

○ d. network address: 192.168.1.32, subnet mask: 255.255.255.240

⦿ e. network address: 192.168.1.128, subnet mask: 255.255.255.128 ✓

An administrator wants to create **four** equal sized subnets from the network 192.168.1.0/24. What is the network address and subnet mask of the second subnet?

Select one:

- ○ a. network address: 192.168.1.32, subnet mask: 255.255.255.240
- ◉ b. network address: 192.168.1.64, subnet mask: 255.255.255.192 ✓
- ○ c. network address: 192.168.1.128, subnet mask: 255.255.255.192
- ○ d. network address: 192.168.1.0, subnet mask: 255.255.255.224
- ○ e. network address: 192.168.1.128, subnet mask: 255.255.255.128

An administrator wants to create two equal sized subnets from the network 172.16.0.0/12. What is the network address and subnet mask of the second subnet?

Select one:

- ◉ a. network address: 172.24.0.0, subnet mask: 255.248.0.0 ✓
- ○ b. network address: 172.36.0.0, subnet mask: 255.248.0.0
- ○ c. network address: 172.24.0.0, subnet mask: 255.224.0.0
- ○ d. network address: 172.17.0.0, subnet mask: 255.248.0.0
- ○ e. network address: 172.16.0.0, subnet mask: 255.248.0.0

Which of the following types of IPv6 addresses is not routable and is used for communications on a single subnet?

Select one:

- ◉ a. link-local addresses ✓
- ○ b. global unicast addresses
- ○ c. multicast addresses
- ○ d. anycast addresses
- ○ e. loopback addresses

Which of the following are NOT parts of an IPv6 global unicast address? (choose two)

Select one or more:

☐ a. a subnet ID that is used to identify networks inside of the local enterprise site

☑ b. an interface ID that is used to identify the local network for a particular host ✓

☑ c. a global routing prefix that is used to identify the portion of the network address provided by a local administrator ✓

☐ d. an interface ID that is used to identify the local host on the network

☐ e. a global routing prefix that is used to identify the network portion of the address that has been provided by an ISP

What is the implication if ping to the IPv6 address ::1 succeeds?

Select one:

◉ a. The TCP/IPv6 stack is properly installed on the host. ✓

○ b. The link-local address is correctly configured.

○ c. The host is cabled properly.

○ d. The default gateway address is correctly configured.

○ e. All hosts on the local link are available.

Which of the following statements are correct? (choose two.)

Select one or more:

☑ a. The hexadecimal equivalent of the binary number 11000001 is C1 ✓

☐ b. The decimal equivalent of the binary number 10010101 is 145

☑ c. The binary equivalent of the decimal number 234 is 11101010 ✓

☐ d. The decimal equivalent of the binary number 10010101 is 95

Question 12

Correct

Mark 1.OO out of 1.OO

Which of the following statements are correct? (choose two.)

Select one or more:

☑ a. An IPv6 address has 128 bits ✓

☐ b. An IPv6 address has 64 bits

☐ c. An IPv4 address has 48 bits

☑ d. An IPv4 address has 32 bits ✓

Question 13

Correct

Mark 1.OO out of 1.OO

Which of the following techniques encapsulates an IPv6 packet in an IPv4 packet in order to send it over IPv4 networks?

Select one:

○ a. translation

○ b. encapsulation

○ c. dual-stack

◉ d. tunneling ✓

Question 14

Correct

Mark 1.OO out of 1.OO

Which is the most compressed representation for the IPv6 address FE8O:O:O:O:3BD:FF:FE9A:5DA4?

Select one:

◉ a. FE8O::3BD:FF:FE9A:5DA4 ✓

○ b. FE8O::O:3BD:FF:FE9A:5CA4

○ c. FE8O:::O:3BD:FF:FE9A:5DA4

○ d. FE8::3BD:FF:FE9A:5DA4

An administrator needs to create equal sized subnets from the base network 192.168.10.0/24 to accommodate the networks connected to the router as shown in the diagram below. What is the least number of host bits that have to be borrowed to create these subnets?

Select one:

○ a. 1

○ b. 3

◉ c. 2 ✓

○ d. 4

6/25/2019   Quiz #5 (Topics 10, 11 & 12) - Open on Monday of Week 13 (10 June 2019); to be closed at 11PM on Sunday of Week 13 (16 June 2019)

HOME ⊙ MY COURSES ⊙ INFT 1012 ⊙ WEEK 13 (10-16 JUNE) ⊙

QUIZ #5 (TOPICS 10, 11 & 12) - OPEN ON MONDAY OF WEEK 13 (10 JUNE 2019); TO BE CLOSED AT 11PM ON SUNDAY OF WEEK 13 (16 JUNE 2019)

Started on	Thursday, 13 June 2019, 8:27 PM
State	Finished
Completed on	Thursday, 13 June 2019, 9:07 PM
Time taken	40 mins 17 secs
Marks	15.00/20.00
Grade	**75.00** out of 100.00
Feedback	Good work.
	You may want to take the test again before it is closed to improve your marks if this is your first attempt.

Question 1

Correct

Mark 1.00 out of 1.00

Which of the follow combination correctly describes a socket?

Select one:

○ a. (source IP address, destination IP address)

◉ b. (destination IP address, destination port number) ✓

○ c. (source sequence number, destination sequence number)

○ d. (source port number, destination port number)

Question 2

Correct

Mark 1.00 out of 1.00

Which of the following statements about port numbers is correct ?

Select one:

○ a. Port numbers are included in IP headers

○ b. By default HTTP client uses port 8080

○ c. UDP does not use port numbers

◉ d. By default HTTP server is listening at port 80 ✓

Question 3

Incorrect

Mark 0.00 out of 1.00

Which of the following statements is correct?

Select one:

○ a. reconnaissance attacks involve the disabling or corruption of networks, systems, or services

○ b. access attacks involve the disabling or corruption of networks, systems, or services

○ c. denial of service attacks involve the disabling or corruption of networks, systems, or services

◉ d. malicious code attacks involve the disabling or corruption of networks, systems, or services ✗

Assume that the adminstrator of a website has changed the website's IP address while keeping the website's domain name unchanged. A user used the domain name to access the website before the change was made. After the change has been made, when the user uses the same domain name to access the website, what will happen?

Select one:

○   a. The will not be able to access the site.

○   b. The user will have to issue a ping to this new IP address to be sure that the domain name remained the same.

◉   c. The user will have to modify the DNS server address on the local PC in order to access the site. ✗

○   d. The user will access the site without problems.

The network shown in the diagram has some connectivity problem(s). At the bottom of the diagram is the output of a tracert command from PC1 to PC2. Based on the output, where should the troubleshooting start?

tracert

Select one:

○   a. PC2

○   b. R1

○   c. SW2

◉   d. R2 ✗

○   e. SW1

Which statement is correct about TCP 3-way handshake?

Select one:

○   a. A TCP connectin between two network devices can be established without using the 3-way handshake

◉   b. TCP 3-way handshake always starts with a SYN segment. ✓

○   c. TCP 3-way handshake always ends with a FIN segment

○   d. TCP 3-way handshake is used to transmit application data using the SYN or ACK segments

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Question 7

Correct

Mark 1.00 out of 1.00

Which of the following is used by both TCP and UDP ?

Select one:

○ a. Receive window (for flow control)

⦿ b. Port number ✓

○ c. Sequence number

○ d. Acknowledgement

Question 8

Correct

Mark 1.00 out of 1.00

Which of the following determines TCP window size?

Select one:

○ a. the size of the application data to be transmitted

○ b. how much data the source is able to send at one time

○ c. the network bandwidth

⦿ d. how much data the destination device is able to accept at one time ✓

Question 9

Correct

Mark 1.00 out of 1.00

Why would small companies use IMAP instead of POP for email retrieval?

Select one:

○ a. Emails are kept on a POP mail server for a shorter time than an IMAP server.

⦿ b. Emails are stored in the mail servers until the client manually deletes them. ✓

○ c. POP only retrieves emails, while IMAP sends and retrieves emails.

○ d. IMAP works better with SMTP.

Question 10

Correct

Mark 1.00 out of 1.00

Which list below contains protocols that all operate at the Application Layer of the TCP/IP model?

Select one:

⦿ a. DNS, IMAP, HTTPS, and SMTP ✓

○ b. FTP, DNS, ICMP and IMAP

○ c. ARP, DNS, and DHCP

○ d. POP3, IP, DHCP and HTTP

Question 11

Correct

Mark 1.00 out of 1.00

Which of the following describes a function of the transport layer?

Select one:

○ a. A student is using a smart phone with wireless connection to access a web server. The transport layer of the smart phone formats the web pages on the screen of the phone to ensure that web pages are displayed properly.

○ b. A student is watching a YouTube video with sound in a computer pool. The video and sound are encapsulated in the transport layer header.

◉ c. A student is having several web browser windows open on a PC to visit different websites. The transport layer on the student's PC is in charge of getting the right web page sent to the right browser window. ✓

○ d. A student is using a PC in a computer pool. The unique address burned into the PC's NIC is a transport layer address used to contact another PC in the same computer pool.
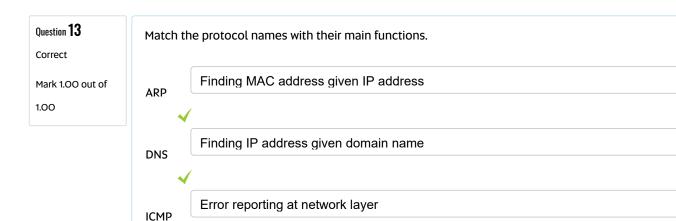
Question 12

Correct

Mark 1.00 out of 1.00

Which of the following statements is correct?

Select one:

○ a. Trojan horse is an example of reconnaissance attacks

○ b. Ping sweepts is an example of access attacks

◉ c. SYN flood is an example of denial of service attacks ✓

○ d. Port redirection is an example of malicious code attacks

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Match the protocol names with their main functions.

ARP
| Finding MAC address given IP address | ▼ |

✓

DNS
| Finding IP address given domain name | ▼ |

✓

ICMP
| Error reporting at network layer | ▼ |

✓

FTP
| File transfer | ▼ |

✓

SMTP
| Email transfer between originating user and mail transfer agent, and between mail transfer agents | ▼ |

✓

IMAP
| Mail access/retrieval between receiver and its mail transfer agent | ▼ |

✓

What is an advantage of using NAT (network address translation) in terms of securing a network?

Select one:

○ a. NAT allows external IP addresses to be concealed from internal users

◉ b. NAT allows internal IP addresses to be concealed from external users ✓

○ c. NAT denies all packets that originate from private IP addresses

○ d. NAT denies all internal hosts from communicating outside their own network

Which of the following statement is correct if one wants to best understand a network's traffic pattern?

Select one:

○ a. analyse the traffic flow captured during low utilization times

◉ b. analyse the traffic flow captured during peak utilization times ✓

○ c. analyse the traffic flow captured when it is on the main network segment only

○ d. analyse the traffic flow captured when it is from a subset of users

Question 16

Correct

Mark 1.00 out of 1.00

Which are correct about a DHCP Discover message? (Choose three.)

Select one or more:

☑ a. All hosts receive the message, but only a DHCP server replies. ✓

☑ b. The destination IP address is 255.255.255.255. ✓

☐ c. The message comes from a server offering an IP address.

☐ d. The source MAC address is 48 ones (FF-FF-FF-FF-FF-FF).

☑ e. The message comes from a client seeking an IP address. ✓

Question 17

Correct

Mark 1.00 out of 1.00

What does the acknowledgment number of TCP header represent?

Select one:

○ a. one number more than the sequence number

◉ b. the next byte that is supposed to be received by the destination ✓

○ c. the total number of bytes that have been received

○ d. the last sequence number that was sent by the source

Question 18

Correct

Mark 1.00 out of 1.00

Which statement is true?

Select one:

○ a. An email client sends an email using IMAP or POP

◉ b. A FTP client can download from or upload data to a FTP server ✓

○ c. A web client can only download data from a web server

○ d. If HTTPS is used for web applications, a web client can upload data to a web server as HTTPS is a secure protocol

---

Question 19

Incorrect

Mark 0.00 out of 1.00

Which of the following is an important factor to be considered when designing a network for a large company but less important when designing a network for a small business?

Select one:

○ a. Internet router

○ b. firewall

◉ c. low port density switch ✗

○ d. redundancy

Question 20

Incorrect

Mark 0.00 out of 1.00

A PC sends a HTTP message to a web server. How does the transport layer of the web server know the corresponding application to pass the data stream to?

Select one:

- ○ a. examining acknowledgment number
- ○ b. examining sequence number
- ○ c. examining destination port number
- ◉ d. examining source port number ✖

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QUIZ #5 (TOPICS 10, 11 & 12) - OPEN ON MONDAY OF WEEK 13 (10 JUNE 2019); TO BE CLOSED AT 11PM ON SUNDAY OF WEEK 13 (16 JUNE 2019)

Started on	Sunday, 16 June 2019, 4:37 PM
State	Finished
Completed on	Sunday, 16 June 2019, 4:58 PM
Time taken	20 mins 38 secs
Marks	17.00/20.00
Grade	**85.00** out of 100.00
Feedback	Well done!

Question 1

Correct

Mark 1.00 out of 1.00

Which list below contains protocols that all operate at the Application Layer of the TCP/IP model?

Select one:

- ○ a. ICMP, DHCP, and IMAP
- ◉ b. TELNET, FTP, DHCP and HTTP ✓
- ○ c. ARP, DNS, and DHCP
- ○ d. DNS, UDP, HTTPS and SMTP

Question 2

Correct

Mark 1.00 out of 1.00

Assume that a company's network requires the following applications: world wide web, file transfer, and e-mail. Which application layer protocols are used for these three applications?

Select one:

- ○ a. DHCP, TELNET and FTP
- ○ b. HTTP, FTP and SNMP
- ◉ c. HTTP, FTP, SMTP and IMAP ✓
- ○ d. HTTP, SSH and POP3

Question 3

Correct

Mark 1.00 out of 1.00

POP3 is used for both sending and retrieving emails while IMAP is used for sending emails only.

Select one:

- ○ True
- ◉ False ✓

Which of the following describes a function of the transport layer?

Select one:

○ a. A student is using a smart phone with wireless connection to access a web server. The transport layer of the smart phone formats the web pages on the screen of the phone to ensure that web pages are displayed properly.

○ b. A student is watching a YouTube video with sound in a computer pool. The video and sound are encapsulated in the transport layer header.

◉ c. A student is having several web browser windows open on a PC to visit different websites. The transport layer on the student's PC is in charge of getting the right web page sent to the right browser window. ✓

○ d. A student is using a PC in a computer pool. The unique address burned into the PC's NIC is a transport layer address used to contact another PC in the same computer pool.

Which of the following combination correctly describes a socket?

Select one:

○ a. (source Ethernet address, destination Ethernet address)

◉ b. (source IP address, source port number) ✓

○ c. (source sequence number, destination sequence number)

○ d. (source acknowledgement number, destination acknowledgement number)

Which of the following statements is correct?

Select one:

○ a. Trojan horse is an example of reconnaissance attacks

○ b. Ping sweepts is an example of access attacks

◉ c. SYN flood is an example of denial of service attacks ✓

○ d. Port redirection is an example of malicious code attacks

Question 7

Correct

Mark 1.00 out of 1.00

What is TCP 3-way handshake used for?

Select one:

○ a. Avoid congestion occuring on the network

○ b. Transmit application data using the SYN or ACK segments

⦿ c. Establish connectivity between the source and destination before transmission starts. ✔

○ d. Terminate a communication session

Question 8

Correct

Mark 1.00 out of 1.00

Which of the following statement is correct if one wants to best understand a network's traffic pattern?

Select one:

○ a. analyse the traffic flow captured during low utilization times

⦿ b. analyse the traffic flow captured during peak utilization times ✔

○ c. analyse the traffic flow captured when it is on the main network segment only

○ d. analyse the traffic flow captured when it is from a subset of users

---

Question 9

Incorrect

Mark 0.00 out of 1.00

The network shown in the diagram has some connectivity problem(s). At the bottom of the diagram is the output of a tracert command from PC1 to PC2. Based on the output, where should the troubleshooting start?

tracert

Select one:

○ a. PC2

○ b. R1

○ c. SW2

⦿ d. R2 ✖

○ e. SW1

Question 10

Correct

Mark 1.00 out of 1.00

What does a web client put in the source port number field of a TCP segment?

Select one:

- ○ a. a random value in the range of the dynamic ports ✓
- ○ b. a specific value in the well-known port range
- ○ c. a random value in the well-known port range
- ○ d. a specific value in the range of the registered ports

Question 11

Correct

Mark 1.00 out of 1.00

Which of the following statements about port numbers is correct ?

Select one:

- ○ a. By default HTTP server is listening at port 80 ✓
- ○ b. UDP does not use port numbers
- ○ c. By default HTTP client uses port 8080
- ○ d. Port numbers are included in IP headers

Question 12

Incorrect

Mark 0.00 out of 1.00

Which of the following is an important factor to be considered when designing a network for a large company but less important when designing a network for a small business?

Select one:

- ○ a. Internet router
- ○ b. firewall
- ○ c. low port density switch ✗
- ○ d. redundancy

Question 13

Correct

Mark 1.00 out of 1.00

Which of the following fields of a TCP segment received by a web server is used to identify the proper application to which the data encapsulaed in the segment is passed?

Select one:

- ○ a. destination port number ✓
- ○ b. sequence number
- ○ c. source port number
- ○ d. acknowledgment number

Question 14

Correct

Mark 1.OO out of 1.OO

Which two of the following DHCP messages are sent by a DHCP client? (Choose two.)

Select one or more:

- ☑ a. DHCPDISCOVER ✓
- ☐ b. DHCPACK
- ☑ c. DHCPREQUEST ✓
- ☐ d. DHCPOFFER

Question 15

Correct

Mark 1.OO out of 1.OO

What command is used to resolve a given host name by querying a DNS server?

Select one:

- ○ a. netstat
- ○ b. tracert
- ○ c. ipconfig /displaydns
- ◉ d. nslookup ✓

Question 16

Correct

Mark 1.OO out of 1.OO

Which of the following is an advantage of TCP over UDP?

Select one:

- ◉ a. same order data delivery ✓
- ○ b. shorter delay in transmission
- ○ c. smaller segment header
- ○ d. connectionless

Question 17

Correct

Mark 1.OO out of 1.OO

Which of the following statements is correct about a client sending a UDP datagram?

Select one:

- ○ a. It queries the server to see if it is ready to receive data.
- ◉ b. It just sends the datagram. ✓
- ○ c. It sends some synchronisation bits to the server.
- ○ d. It uses the three-way handshake to establish a connection with the server.

Question 18

Correct

Mark 1.OO out of 1.OO

What is an advantage of using NAT (network address translation) in terms of securing a network?

Select one:

○ a. NAT allows external IP addresses to be concealed from internal users

◉ b. NAT allows internal IP addresses to be concealed from external users ✓

○ c. NAT denies all packets that originate from private IP addresses

○ d. NAT denies all internal hosts from communicating outside their own network

---

Question 19

Incorrect

Mark O.OO out of 1.OO

Which of the following statements is correct?

Select one:

○ a. reconnaissance attacks involve the disabling or corruption of networks, systems, or services

○ b. access attacks involve the disabling or corruption of networks, systems, or services

○ c. denial of service attacks involve the disabling or corruption of networks, systems, or services

◉ d. malicious code attacks involve the disabling or corruption of networks, systems, or services ✗

Question 20

Correct

Mark 1.OO out of 1.OO

Which of the following statements are correct?(Choose two.)

Select one or more:

☑ a. Telnet provides remote access to servers and networking devices ✓

☐ b. HTTP enables devices on a network to obtain IP addresses

☐ c. FTP transfers email messages and attachments

☑ d. DNS resolves domain names to IP addresses ✓

☐ e. SMTP transfers web pages from web servers to clients