HCNA

HCCNA 1

1-Basic Network Architecture exam

(Multiple Choice) The metropolitan area network which is located between backbone network and access network consists of ( ). (Select 3 Answers)

A. **Access layer**

B. **Convergence layer**

C. Carrier layer

D. **Core layer**

(Single Choice) In a complete IP network, which of the following networks does a Layer 2 network under the service access control point belong to?

A. **Access network**

B. Metropolitan area network (MAN)

C. Core network

D. Backbone network

(Multiple Choice) When a backbone network uses dual planes, which of the following statements are true? (Select 2 Answers)

A. **In normal situations, the services on the two planes do not affect each other.**

B. **When a fault occurs on one plane, the other plane cannot function as the backup of the faulty plane.**

C. Compared with a dual-plane structure, a hierarchical plane is more reliable

D. The two planes generally carry different services.

(Multiple Choice) Which of the following network topologies are the widely used backbone network topologies? (Select 2 Answers)

A. **Plane and Space Hierarchical structure**

B. Multi-homing structure

C. Full Mesh

D. **Plane Hierarchical structure**

1 Enterprise Network Constructs

2-Ethernet Framing

(Multiple Choice) Which layers in OSI reference model belong to upper layer, also called as host layer and are responsible for data transmission and providing interface for user? (Select 3 Answers)

Data link layer 1 2 3

Network layer 2 3

Transport layer 3

Session layer 1

Presentation layer 1

Application layer 2

(Single Choice) According to OSI reference model, which of the following statements about the function of network layer is correct?

Ensure the correctness of data transmission

Control the forwarding and routing of data packet

Control transmission of bit flow

Error correction and flow control

(Single Choice) MAC address consists of two parts: provider number and serial number. The first 24 bits of MAC address represents provider number, which of the following is the provider number of Huawei?

00e0fc

0010fe

1

0003cf

(Single Choice) In the OSI reference model, one layer transmits bit streams between devices. Which of the following layers stands for this layer?

Data Link Layer —

Physical Layer —

Network Layer — —

Application Layer —

(Single Choice) An L2 switch checks the MAC address forwarding table before it forwards a packet. How does the L2 switch forward a packet that contains an address not listed in the MAC address forwarding table?

Multicast

Broadcast

Unicast —

Searching for routes —

(Multiple Choice) According to OSI reference model, which of the following presents the correct layer sequence if packet goes from the bottom of the protocol stack to the top?

Physical, Data link, Network, Transport, Session, Presentation, Application

Physical, Data link, Network, Transport, Presentation, Session, Application

Physical, Transport, Data link, Network, Presentation, Session, Application

Physical, Data link, Transport, Presentation, Network, Session, Application

(Single Choice) The data forwarding of the switch is based on ( ).

Source MAC address

Destination MAC address

Source IP address

Destination IP address

(Single Choice) IEEE 802.3 frame contains ( ) bits of DSAP field. It is used to indicate the upper layer protocols that are used.

8

4

16 —

24

(Single Choice) Which of the following commands can be used to set Ethernet port so that buffer will not overflow when congestion occurs?

Flow on

Flow-control

Flow control

Enable flow-control —

(Multiple Choice) Which of the following are advantages of layer 2 switch compared with hub? (Select 3 Answers)

Increase the collision

Higher throughput

Higher port density —

Isolate collision domains —

(Multiple Choice) According to OSI reference model, which layer defines mechanical, electrical, functional and procedural functions to realize data transmission?

Transport layer

Data link layer

Network layer

Physical layer

(Multiple Choice) Which of the following devices operate at data link layer? (Select 2 Answers)

Hub

Bridge

Switch 1 2

Router 2

Firewall 1

(Multiple Choice) The OSI reference model defines a simple hierarchical network model for a computer network. Which of the following standardization organizations develops the OSI reference model?

ISO

IEEE

ITU

IETF

(Single Choice) Which organizations drafts RFC (Request for Comments)?

IEEE —

ITU-T

IETF

ISO

(Single Choice) The upper layer of the OSI reference model ensures that data is transmitted properly. Which of the following at the upper layer is used to ensure this?

Hardware

Software

Both hardware and software

Either software or hardware

(Single Choice) Hub work at ( ) layer.

Physical

Data link

Network

Application

(Single Choice) Regardless of multicast or unicast, an L2 switch establishes its MAC address table entries by means of MAC address learning.

True

False

(Multiple Choice) Port mirroring means to get a copy of the data and then send it to the monitoring device for data analysis and diagnosis. Port mirroring can be divided into ( ). (Select 2 Answers)

Port based mirroring

Application based mirroring

Flow based mirroring

Upper layer protocol based mirroring

(Multiple Choice) When congestion occurs on port working in full duplex mode, switch will send «PAUSE» frame to the source to notify the source temporarily stop sending message for a short while. Which of the following circumstances can use the «PAUSE» method for flow control? (Select 3 Answers)

A pair of terminals 3

A switch and a terminal 1

Congestion that occurs on a stable network 2

The link between two switches 1 2 3

End to end flow control 1 2 3

Multiple Choice) Which of the following are advantages of layer 2 switch compared with hub? (Select 3 Answers)

Increase the collision

Higher throughput

Higher port density

Isolate collision domains —

(Single Choice) According to OSI reference model, when a packet is transmitted from upper layer to lower layer, the header will be ( )

Added

Removed

Rearranged

Modified

(Multiple Choice) What describe the working principles of Ethernet Switches? (Select 3 Answers)

Receive all the data frames in the network segment

Generate MAC address table according to the source MAC address of the received frame

Layer 3 packet forwarding

Maintain MAC address table with aging mechanism

(Single Choice) Which of the following standard organizations has defined the protocol for LAN such as 802 series protocols?

IEEE

ITU-T

IETF

ETSI

(Single Choice) The bus and star topologies, which are frequently used in a LAN, refer to the physical connection types rather than the logical structure of the network.

True

False

(Single Choice) ( ) combines ¡°multiple¡± ports to form an aggregation group. It can be used to balance the traffic among member ports and improve the connection reliability.

Port Aggregation

Port binding —

Port load balance

Port group —

(Multiple Choice) The most significant feature of a local area network (LAN) is that the LAN is intended for only one organization and is geographically limited, allowing interconnections of a limited number of stations. Which of the following transmission media are most common to a LAN? (Select 3 Answers)

Fiber

Coaxial cable

Twisted pair cable

ADSL

(Multiple Choice) Network topology type includes: (Select 4 Answers)

Bus

Star

Tree

Peer-to-peer

Mesh

(Single Choice) A MAC address has ( ) bits.

6

12

24

48

(Single Choice) A topological structure has a central control point to enable easy network design and equipment installation. The network media connect to the area where workstations reside through the hub or switch at the central control point. The disadvantage of such a structure is that a fault on the hub or switch results in a "single"-point fault. Which topology does this type of LAN usually use?

Star

Bus

Tree

Ring

(Single Choice) In the OSI reference model, one layer is used to establish end-to-end connections between hosts and checks for bit errors before data is transmitted or retransmitted. Which of the following layers stands for this layer?

Data Link Layer

Physical Layer

Network Layer

Transport Layer

(Single Choice) In OSI reference model, Transport Layer is located at layer ( ).

3

4

6

7

(Single Choice) A switch receives entire data frame and then perform CRC checking,the frame is forwarded unless CRC checking fails. The switch mode for this switch is ?

Cut-Through

Store-and-Forward

Fragment-free

Store-free

(Single Choice) In OSI reference model, OSI stands for ( ).

Organization Standard Institute

Organization Standard Interconnection

Open System Internet

Open System Interconnection

(Multiple Choice) Which of the following devices have functions of all seven layers of OSI reference model? (Select 2 Answers)

Router

Email Server

Layer three switch

Network management server

(Single Choice) In the OSI reference model, one layer defines the format of data to be sent to the Application Layer in addition to providing data encryption, data encoding, and data conversion. Which of the following layers stands for this layer?

Presentation Layer

Session Layer

Network Layer

Application Layer

(Multiple Choice) Which of the following statements about switching modes of LAN switch are true? (Select 2 Answers)

Store-and-forward switching mode does not check for error frames. 2

Cut-through switching mode forwards a frame after it received the first 64 octets of the frame. 1 2

Fragment-free switching mode can check for error frames in the first 64 octets of the frame. 1

Store-and-forward switching mode discards the frame with length less than 64 octets.

(Single Choice) A MAC address consists of 48 bits and is generally expressed in 12-bit dotted decimal notation. What kind of address does a MAC address consisting of all 1s stand for?

Multicast address —

Broadcast address

Unicast address

Virtual address

(Single Choice) In OSI reference model, which layer resides at the bottom?

Data link layer

Application layer

Physical layer

Network layer

(Multiple Choice) Which of the following protocols are related to WAN? (Select 2 Answers)

Ethernet 1 2 3

PPP 1

HDLC 2

UDP 3

(Single Choice) The last field of Ethernet frame is FCS (Frame Check Sequence). Its length is ( ) bytes.

2

4

8

32

(Single Choice) In a destination MAC address, which bit of the address determines whether a frame is sent to a ¡°single¡± station or a group of stations?

7

8

9

10

(Multiple Choice) A complete data communication system includes ( )

Sender **—**

Receiver **—**

Harddisk —

Message

Protocol

(Single Choice) The OSI reference model contains seven layers in two groups, namely, upper layer and lower layer. The upper layer starts from ( ) to Layer 7 and is also called host layer.

Layer 2

Layer 3 —

Layer 4

Layer 5

(Multiple Choice) Which of the protocols are commonly used at the Data Link Layer of a WAN? (Select 2 Answers)

802.2 1

802.4 1

HDLC

PPP

(Multiple Choice) Which of the following are functions of data link layer? (Select 4 Answers)

Physical address definition

Network topology discovery

Routing

Physical medium access

Error checking

(Single Choice) Which of the following together with the MAC address of a general L2 switch determines the MAC address table of the L2 switch?

RARP table

Transmission medium

Port

ARP table

(Single Choice) The data field of standard Ethernet frame is ( ) bytes.

40-1500

46-1500

64-1500

64-1518 —

(Single Choice) The PDU (Protocol Data Unit) that resides at data link layer is called ( ).

Binary bit flow

Frame

Packet

Segment

(Multiple Choice) Which of the following network topologies consist of redundant links between any two nodes? (Select 2 Answers)

Mesh 1 3

Star 2 3

Tree

Bus 1 2

Ring

(Multiple Choice) Which of the following protocols reside at data link layer? (Select 3 Answers)

PPP

HDLC

IP

IEEE 802.3

(Single Choice) The ( ) is the physical path along which a message passes.

Sender —

Receiver

Harddisk

Message —

Protocol —

(Single Choice) Which network topology has risk of whole network failure when a link is broken?

Mesh

Bus

Star

Tree —

(Single Choice) The PDU (Protocol Data Unit) that resides at physical layer is called ( )

Frame —

Packet —

Segment

Binary bit flow

(Single Choice) According to OSI reference model, router operates at ( )

Physical layer —

Data link layer —

Network layer

Application layer

(Multiple Choice) Data link layer has two sub-layers, they are ( ) (Select 2 Answers)

PVC sub-layer 1 2

MAC sub-layer 1

LLC sub-layer 2

VC sub-layer

(Single Choice) Which of the following is the broadcast MAC address?

FF-FF-FF-FF

FF-FF-FF-FF-FF-FF

00-00-00-00-00-00

00-00-00-FF-FF-FF

(Single Choice) The protocol data unit that resides at network layer is called ( ).

Segment —

Packet

Bit

Frame

3-IP Addressing exam

(Single Choice) IP addresses are layer-specific. A Layer 3 network device does not necessarily store the IP address of every host; instead, it stores the IP address of each network segment. This reduces the entries in a routing table to a great extent while improving routing flexibility.

True

False

(Single Choice) A class C network is divided into 9 subnets in which 16 hosts at most are available for each subnet. Which of the following is an appropriate subnet mask?

255.255.224.0

255.255.255.224

255.255.255.240

No appropriate subnet mask is available

(Single Choice) How many hosts are available for a class B IP address?

254

16K

64K

2M

(Single Choice) For a traditional class C network without sub-netting, how many hosts are available at most?

1024

65025

254

48

(Single Choice) For an IP address 192.168.12.43, its mask is 255.255.255.128, its network address is ( ), and its broadcast address is ( )

192.168.12.32 192.168.12.127

192.168.0.0 255.255.255.255

192.168.12.43 255.255.255.128

192.169.12.128 255.255.255.128

192.168.12.0 192.168.12.127

(Single Choice) Which of the following aggregation by CIDR technology is correct?

192.168.1.0-192.168.15.0 can be aggregated to 192.168.0.0/19

192.168.1.0-192.168.15.0 can be aggregated to 192.168.0.0/20

192.168.1.0-192.168.15.0 can be aggregated to 192.168.0.0/21

192.168.1.0-192.168.15.0 can be aggregated to 192.168.0.0/22

(Single Choice) The mask of a class C subnet is 255.255.255.224. How many bits are available for sub-netting? How many subnets are available? How many hosts are available for each subnet?

2, 2, 62

3, 8, 30

4, 14, 14

5, 30, 6

(Single Choice) Which of the following is valid host IP address?

192.168.2.15/28

10.0.2.128/26

122.245.264.13/26

12.3.4.6/24

224.0.4.5

(Multiple Choice) For an IP address 10.110.53.233, if its mask length is the same with that of the following items, which items are in the same network segment with 10.110.53.233? (Select 2 Answers)

10.110.48.10 mask 255.255.248.0

10.110.43.10 mask 255.255.0.0

10.110.43.10 mask 255.255.248.0

10.110.48.10 mask 255.255.252.0

(Single Choice) Which of the following is the correct host IP address?

224.0.0.5/24

127.32.5.62/8

202.112.5.0/24

162.111.111.111/16

(Single Choice) How many hosts are available for the network segment 192.168.2.16/28?

16 —

8 —

15 —

correct —

(Multiple Choice) A typical IP Telecommunication Network include ( )(Select 3 Answers)

Backbone Network

Convergence Network

Metropolitan Area Network

Access Network

(Single Choice) What are the network address and the broadcast address for the network segment that the IP address 190.5.4.2/22 belongs to?

190.5.4.0, 190.5.7.255

190.5.4.0, 255.255.255.255

190.5.0.0, 190.5.4.255

190.5.4.0, 190.5.4.255

(Single Choice) Which of the following multicast address represents all routers and hosts of the subnet?

224.0.0.1

224.0.0.2

224.0.0.3

224.0.0.9

(Single Choice) How many hosts are available in the network 154.27.0.0 without sub-netting?

254

1024

65,534

16,777,206

(Single Choice) What is the decimal value for binary 11001011?

171

193

203

207

(Multiple Choice) Which of the following statements regarding the IP address 192.168.16.255/20 are correct? (Select 2 Answers)

It’s a broadcast address

It’s a network address

It’s a private address

It belongs to the network segment 192.168.19.0

It belongs to the network segment 192.168.16.0

It’s a public address

(Single Choice) According to the OSI reference model, network layer address consistes of ?

Network address and host address

Host address and network mask

Network address and network mask

Host address and host number

(Single Choice) The subnet mask of the network segment 175.25.8.0/19 is ( )

255.255.0.0

255.255.224.0

255.255.24.0

The subnet mask varies according to the class of IP address

(Single Choice) In a TCP/IP protocol stack, the headers of packets at each layer are removed in the decapsulation process in a specified manner. Which of the following is the right manner?

From upper to lower

From lower to upper

From Transport Layer to the lower layers —

From Network Layer to the upper layers —

(Single Choice) The common address in an IP address is globally unique. Which of the following addresses can be used repeated in a LAN?

Host address

Private address

Network address

Subnet address

(Multiple Choice) Which of the following are routed protocols? (Select 2 Answers)

IP

OSPF

BGP

IPX

(Single Choice) In a Class C network, after you add three digits in the default subnet mask to divide the network into

different subnets, how many hosts does each subnet allow for?

62

30

14

6

(Multiple Choice) An IPv4 address consists of 32 bits and is generally expressed in dotted decimal notation, for example, 11.110.96.132. Such an IP address can also be expressed in other notations. Which are they? (Select 2 Answers)

00001011.01101110.01100000.10000100

0b.6e.60.84

0.b.6.e.6.0.8.4

0.1011.0110.1110.0110.0.1000.0100

(Single Choice) In TCP/IP protocol, what is the decimal range of the first octet of class A address?

0—126

0—127 —

1—126

1—127

(Single Choice) Which of the following is reserved for loopback address?

127.0.0.0

130.0.0.0

164.0.0.0

200.0.0.0

(Single Choice) Which of the following class address are multicast address ?

Class A

Class B

Class D

Class E

(Multiple Choice) Which of the following statements about the key features of a Layer 3 switch are true? (Select 3 Answers)

A Layer 3 switch provides Layer 3 functions while providing Layer 2 functions.

Many Layer 3 switches provide exact search and perform Layer 3 forwarding based on Layer 3 functions.

All Layer 3 switches provide only ATM port.

Some high-end Layer 3 switches provide high-speed POS ports to improve the upstream link efficiency.

(Multiple Choice) Which address categories does the 220.32.59.31/27 IP address belong to? (Select 2 Answers)

Class C address

Broadcast address in a specific network segment

Invalid address

Private address

(Multiple Choice) Which of the following statements regarding the address space of IP sub-network are true? (Select 2 Answers)

Address space of sub-network must meet the practical requirements. At the same time, redundancy is needed to ensure the extensibility

Since IP address borrowing method can be used to preserve IP address, the size of the sub-network required may be smaller than actual requirement.

The size of the sub-network should be integral power of two make it easier for the implementation of various policies.

All of the statements above are correct but none of them can be used in actual network implementation.

(Single Choice) When an IP address is 220.32.59.128/25, which of the following represents the network address?

220.32.59.192

220.32.59.128

220.32.59.254

220.32.59.0

(Single Choice) Routers are a type of computer equipment for network interconnections. Which layer of the OSI reference model does a router work at?

Session Layer

Data Link Layer

Network Layer

Application Layer

(Multiple Choice) In general, IP address consists of ( ) (Select 2 Answers)

Logic address

Link address

Network address

Host address

(Single Choice) Which layer is used to implement internal communication of a same IP network segment in an IP network?

Physical Layer

Layer 2

Layer 3

Application Layer

(Single Choice) The IP address of a network is 129.32.59.17. After the network is divided into different subnets, the

subnet mask is 255.255.254.0. In this case, how many subnets are available?

256

128

64

32

(Single Choice) 172.16.10.32/24 is ( )

Network address

Host address

Multicast address

Broadcast address

(Single Choice) Which of the following multicast address represents all routers of the subnet?

224.0.0.1

224.0.0.2

224.0.0.3

224.0.0.9

(Single Choice) The network address of the IP 190.233.27.13/16 is ( )

190.0.0.0

190.233.0.0

190.233.27.0

190.233.27.1

(Single Choice) Which of the following statements about IP host address is true?

Host portion can be either all one or all zero —

Network portion can be either all one or all zero —

Network portion can be neither all one nor all zero

IP host address can be either all one or all zero —

(Single Choice) When the host field of an IP address contains n bits, how many host addresses are available in this network?

2n-1

2n-2

2n-1

2n

(Single Choice) What's the network address and broadcast address for IP 190.5.6.1/22?

190.5.4.0, 190.5.7.255

190.5.4.0, 190.5.4.255

190.5.4.0, 190.5.4.254

190.5.1.0, 190.5.1.255

(Single Choice) An IP address whose network portion and host portion are all zero represents ( )

Network address

Broadcast address of the specified network segment

All networks

Broadcast address of all the network nodes

(Single Choice) For a class B network, if 5 bits are used for sub-netting, how many hosts are available in a "single" subnet?

510

512

1022

2046

(Single Choice) In one IP address, the network part is constant and the host part consists of all 1s. What does this IP address stand for?

Network address

Broadcast address of a specific network segment

All the networks

Broadcast addresses of all the nodes in the specified network

(Single Choice) For a class B address, how many bits at most can be used for sub-netting?

8

14

16

22

(Multiple Choice) Which part of the IP address is used for sub-netting?

Network address

Host address

Subnet network segment —

Default subnet mask

(Single Choice) When the subnet mask of a network is 255.240.0.0, which of the following is a valid Class A host address?

12.32.59.160

129.32.59.17

158.32.59.64

220.32.59.128

(Single Choice) Which class does IP address 190.233.27.13 belong to?

A

B

C

D

(Single Choice) Which of the following represents the subnet mask of the 192.168.1.7/28 IP address?

255.255.255.240

255.255.255.248

255.255.255.224

255.255.255.252

(Single Choice) Which of the following is the most appropriate aggregation for network segments 172.168.16.0, 172.168.17.0, 172.168.18.0, and 172.168.19.0?

172.168.16.0/21

172.168.17.0/21

172.168.16.0/22

172.168.20.0/20

(Single Choice) Which of the following is the most appropriate aggregation for network segments 172.128.12.0, 172.128.17.0, 172.128.18.0, and 172.128.19.0?

172.128.0.0/21

172.128.0.0/19

172.128.12.0/22

172.128.20.0/20

(Multiple Choice) Which of the following is the feature of IP protocol?

Reliable and connectionless oriented

Unreliable and connectionless oriented

Reliable and connection oriented

Unreliable and connection oriented

(Single Choice) What's the broadcast address for host address 101.11.100.100/22?

101.11.100.255

101.11.101.255

101.11.103.255

101.255.255.255

(Single Choice) The default mask length of the IP address 219.25.23.56 is ( )

8

16

24

32

(Single Choice) Which of the following is a valid IP host address?

127.2.3.5

1.255.255.2/24

225.23.200.9

192.240.150.255/24

(Single Choice) What is the numerically nearest subnet for the network 172.168.16.0 with mask 255.255.252.0?

172.168.20.0

172.168.24.0

172.168.32.0

172.168.48.0

(Single Choice) The default mask of class B address is ( ).

255.0.0.0

255.255.0.0

255.255.255.0

255.225.255.255

(Single Choice) For a class B IP network 172.16.0.0, its mask is 255.255.255.192. How many subnets are available and how many hosts are available for each subnet?

512, 126

1022, 62

1024, 62

256, 254

192, 254

(Single Choice) Which of the following situations would employ dedicated host address as the source IP and destination IP for the data packets?

Broadcast

Multicast

Unicast

Directcast

(Single Choice) What is the binary format for subnet mask 255.255.192.0?

11111111 11110000 00000000 00000000

11111111 11111111 00001111 00000000

11111111 11111111 11000000 00000000

11111111 11111111 11111111 00000000

(Single Choice) What is the abbreviation of VLSM?

Variable Length Subnet Masking

Variable Length Shortest Masking

Very Long/Shortest Masking

Variable Long Subnet Masking

(Single Choice) The default subnet mask of the class D IP address is ( ) bits.

8

16

24

Class D address does not have the subnet mask

(Single Choice) What's the broadcast address for host address 101.11.100.100/22?

10.1.128.255

10.1.63.255

10.1.127.255

10.1.126.255

(Single Choice) What's the broadcast address for network segment 201.1.0.0/21?

201.1.7.255

201.1.0.255

201.1.1.255

201.0.0.255

(Single Choice) When the IP address is 199.32.59.64 and the subnet mask is 255.255.255.224, which of the following

represents the IP address of the network segment?

199.32.59.64
199.32.59.65
199.32.59.192
199.32.59.224

(Single Choice) Which of the following represents the network IP address corresponding to the 192.168.1.7/28 IP address?

192.168.1.0
192.168.1.4
192.168.1.6
192.168.1.7

(Single Choice) The first three octets of a Class C IP address represent a network. Which of the following binary numbers does the first byte of the three octets start with?

101
100

110

10

(Single Choice) The IP address of a network is 12.28.75.160. After the network is divided into different subnets, the subnet mask is 255.255.252.0. In this case, which of the following represents the subnet broadcast address?

12.28.255.255

12.28.69.255

12.28.75.255

12.255.255.255

(Single Choice) When a Class C subnet mask is 255.255.255.192, how many subnets does this network consist of and how many hosts does each subnet consist of?

4, 62

8, 62

16, 14

32, 14

(Multiple Choice) Which of the following networks are parts of a complete IP network? (Select 3 Answers)

Backbone network

Metropolitan area network (MAN)

Access network

Mobile network

(Single Choice) Which of the following class has the first octet beginning with 1110?

Class A

Class B

Class C

Class D

(Single Choice) The function of network number in IP address is ( )

Specify the network to which hosts belong

Identify the host in the network

Specify the network by which devices can communicate with each other

Specify the network node which belongs to subnet address

(Multiple Choice) The network address of 125.3.54.56 with default subnet mask is ( )

125.0.0.0

125.3.0.0

125.3.54.0

125.3.54.32

(Multiple Choice) Interconnected devices of a network are a combination of hardware and software. Which layer are these devices generally located at?

Layer 2

Layer 3

Layer 4

Layer 5

(Multiple Choice) Which of the following route entries can be aggregate into 10.0.0.24/29? (Select 2 Answers)

10.0.0.25/30

10.0.0.23/30

10.0.0.26/30

10.0.0.22/30

4-Internet Control Message Protocol exam

(Multiple Choice) Which of the following protocols are not used in a Tracert process? (Select 2 Answers)

TCP

UDP

ICMP

ARP

(Single Choice) Which of the following protocols provides error report and send information about the IP datagram processing status back to the source?

TCP

UDP

ICMP

IGMP

(Single Choice) In which type of packet is an ICMP packet generally advertised during IP packet processing?

Delay

Error

Jitter

Source IP address

(Single Choice) The IP protocol is a kind of unreliable protocol and offers no error detection. To provide error detection, which of the following must the IP protocol work with?

ARP

ICMP

TCP

UDP

(Single Choice) When a router or host discards data because of data congestion, which type of ICMP packet does the router or host send to the source?

Destination Unreachable packet

Source Quench packet

Parameter Problem packet

Redirect packet

(Single Choice) The Tracert application is usually used in data network commissioning. In this case, how many types of ICMP packets are involved in a Tracert application?

2

3

4

6

(Single Choice) Which bytes in an ICMP packet use a unified format and consist of the Type, Code, and Checksum fields?

First 3 bytes

First 4 bytes

First 5 bytes

First 8 bytes

(Single Choice) Which type of packet does a Ping application send?

TCP Request packet

TCP Reply packet

ICMP Request packet

ICMP Reply packet

(Single Choice) Which of the following applications can be used to detect the path along which the data packets are transmitted from the source to the destination?

Route

Nestat

Tracert

Send

(Single Choice) Which of the following is the abbreviation for ICMP?

Internal Control Mail Protocol

Intranet Control Message Protocol

internet connection Message Protocol

Internet Control Message Protocol

(Single Choice) A series of packets are used in a Ping test to determine whether delay and packet loss occur in communication. Which of the following represents the packet used in a Ping test?

FTP

Tracert f

ICMP

Telnet

(Multiple Choice) Which of the following statements about Ping and Tracert are true? (Select 3 Answers)

Both Ping and Tracert can be used to test network connectivity.

Ping can be used to specify the source IP address of a packet.

Ping is often used to obtain the path for forwarding a datagram.

Tracert can be used to determine a faulty point.

(Single Choice) Which of the following is the most common method used to check the connectivity between an IP network and a host, for example, the connectivity between routers and the connectivity between a router and a host?

DNS

FTP

PING

TFTP

(Multiple Choice) Which of the following applications use ICMP protocol? (Select 3 Answers)

Ping

Tracert

Igmp

Arp

(Single Choice) When certain fields in the header of a received datagram have incorrect values, this datagram is discarded and a certain ICMP packet is sent to the source. Which type of ICMP packet is sent to the source?

Destination Unreachable packet

Source Quench packet

Parameter Problem packet

Redirect packet

(Single Choice) The ICMP protocol (RFC792) is not applied to Application Layer but Network Layer.

True

False

(Multiple Choice) The protocol number of ICMP is ( )

1

6

17

22

(Single Choice) Which of the following protocols is a management protocol used at Network Layer to provide IP information service by embedding the protocol information in IP packets?

ARP

IP

ICMP

802.2

(Single Choice) Which of the following operations can be used to verify the failure of installation or running of TCP/IP protocol?

Ping 10.1.1.1

Ping 127.0.0.1

Ping 169.254.1.1

Ping 192.168.1.1

(Single Choice) Which of the following statements about the ICMP protocol is true?

The ICMP protocol searches for IP addresses based on MAC addresses.

The ICMP protocol translates the IP address of a public network into the IP address of a private network.

The ICMP protocol monitors errors generated in datagram transmission.

The ICMP protocol allocates and manages IP addresses in a network in a uniform manner.

(Single Choice) Which of the following fields is used to check an ICMP packet?

Checksum field in the ICMP packet

Header checksum field in an IP datagram —

Code field in the ICMP packet —

Type field in the ICMP packet —

5-Address Resolution Protocol exam

(Single Choice) What is the function of ARP?

Map port number to IP address

Map MAC address to IP address

Broadcast IP address

Map IP address to Mac address

(Single Choice) The Advanced Research Projects Agency Network (ARPANET) network is created by United States Department of Defense and is the predecessor of the contemporary global. Which of the following is the basis of an ARPANET network?

Low-speed serial connection

Circuit switching

Packet switching

MPLS forwarding

(Single Choice) Which category does the ARP protocol belong to?

Unicast

Multicast

Anycast

Broadcast

(Single Choice) What is the function of RARP?

Map source IP address to MAC address

Map destination IP address to MAC address

Map destination MAC address to IP address

Map source MAC address to IP address

(Single Choice) An RARP request packet is sent by means of broadcast. How is an RARP Reply packet sent to save network resources?

Unicast

Multicast

Anycast

Broadcast

6-Transport Layer Protocols exam

(Single Choice) Which of the following is the function of session layer?

Provide encryption and decryption

Provide data transformation and data format

Establish connection between hosts

Establish maintain and terminate session

(Single Choice) A TCP packet consists of a maximum of 60 bytes. How many bytes does a TCP packet header consist of after the Option field is deducted?

8

20

30

40

(Single Choice) Which of the following is the default TCP port number used by HTTP?

80

8080

110

(Single Choice) Compared with OSI reference model, which of the following is not defined in TCP/IP protocol stack?

Data link layer and network layer

Network layer and transport layer

Session layer and presentation layer

Transport layer and session layer

(Single Choice) What is the main function of DNS?

Domain Name Resolution

Remote Access

File Transfer

Mail Transfer

(Single Choice) Which of the following protocols is used to send email on the internet?

SMTP

MSTP

FTP

TFTP

(Single Choice) Which of the following ranges represents the size of a maximum transfer unit (MTU) packet?

64–1518

60–1518 —

64–1480 —

60–1480 —

(Single Choice) Which TCP port number is used by SMTP by default to send e-mail message?

21

23

25

53

(Single Choice)The TTL field in an IP header specifies the number of routers that a datagram is allowed to traverse. After the datagram traverses a router, the TTL value is deducted by 1. When the TTL reaches a certain value, the datagram is discarded. Which of the following represents this value?

Sender

Receiver

Harddisk

Message

Protocol

(Single Choice) Similar to the OSI reference model, the TCP/IP model also contains several layers. How many layers does the TCP/IP model contain?

Four

Five

Six

Seven

(Single Choice) In the OSI reference model, one layer processes requests and responses initiated by applications of different devices. Which of the following layers stands for this layer?

Data Link Layer

Session Layer

Network Layer

Application Layer

(Single Choice) Which protocol does an application (such as SNMP or RADIUS) that focuses on transmission efficiency use at Transport Layer?

TCP

UDP

ICMP

HDLC

(Single Choice) What is the port number of DNS?

21

23

53

80

(Single Choice) According to OSI reference model, when receiver can not process more data, which layer is responsible for sending stop message to the transmitter?

Physical layer

Transport layer

Session layer

Presentation layer

(Single Choice) Which of the following protocols is used to transfer Web pages in the Internet?

TCP

UDP

DNS

HTTP

(Single Choice) In the OSI reference model, one layer provides network services through applications in addition to communications between different applications. Which of the following layers

Data Link Layer —

Session Layer —

Network Layer —

Application Layer

(Single Choice) Defragmentation can occur at either the original transmitter or an intermediate router. Where is an IP datagram is reassembled after it is defragmented?

In the process in which the packet is looped back

On the next router

On an intermediate router

At the destination of the packet

(Single Choice) RPC, NFS and SQL protocols reside at the ( ) of the OSI reference model.

Network layer —

Transport layer

Session layer

Presentation layer —

(Single Choice) Which of the following protocols is a transport-level protocol based on TCP, translates a domain name into an IP address, and manages domain names in a distributed manner?

TCP

UDP

DNS

HTTP

(Single Choice) Which of the following is the correct sequence about the data encapsulation process?

Segment->Packet->Frame->Bit->Data

Bit ->Segment ->Packet->Frame->Data

Data->Packet->Segment ->Frame->Bit

Data->Segment->Packet->Frame->Bit

(Multiple Choice) Which of the following are the functions of transport layer? (Select 4 Answers)

Segment upper layer data

Establish end to end connection

Transmit data from one host to another host

Ensure ordered, reliable, and correct transmission

addressing

(Multiple Choice) Which of the following fields are contained in a TCP packet header? (Select 3 Answers)

Source Port

Destination Port

Sequence Number

CRC32

(Single Choice) Which of the following protocols authenticates a user remotely, authorizes the user access, and performs charging?

SMTP f

RADIUS

DNS

HTTP

(Single Choice) POP (Post Office Protocol) is used for receiving E-mail. Which TCP port numbers does it use by default?

110

53

21

23

(Multiple Choice) Which protocols are defined by the TCP/IP model to transmit and receive mails? (Select 2 Answers)

SMTP

POP3

DNS

HTTP

(Single Choice) Which of the following protocols provides connection oriented transmission service?

IP

IPv6

TCP

UDP

(Multiple Choice) Which of the following protocols reside at transport layer? (Select 2 Answers)

IP

TCP

UDP

SNMP

(Multiple Choice) According to OSI reference model, which of the following functions belong to presentation layer? (Select 3 Answers)

Data encryption

Data compression

Session control

Data format transformation

(Single Choice) Which of the following protocols provides a reliability mechanism and can be used as a transport-level protocol?

TCP

UDP

ICMP

HDLC

(Single Choice) The TCP protocol assigns a source port No. to each application. How many bytes does the source port No. in the TCP packet header consist of?

1

2

4

8

(Multiple Choice) Which of the following statements about TCP connection establishment are true? (Select 2 Answers)

A TCP connection is established after three-way handshake is done.

Three-way handshake can resolve the delay problem with packet data transmission.

The three-way handshake helps guarantee the reliability of data switching.

The three-way handshake cannot guarantee the security of data switching.

(Multiple Choice) TCP is a connection oriented and reliable transport layer protocol. Which of the following are used to ensure the transmission reliability? (Select 2 Answers)

Acknowledgement

Buffering

Source quench messages

Retransmit

(Single Choice) Which protocol does FTP use to provide reliable data transmission?

RTP —

SIP —

UDP

TCP

(Single Choice) Tracert is an application based on application layer, which transport layer protocol is used by Tracert?

ICMP
ARP
TCP
UDP

7-Data Forwarding Scenario exam

(Single Choice) In data communications, the data format must be determined and agreed by the information creator and the information receiver before the data is transmitted.

True

False

2 — Huawei Device Navigation and Configuration

1-Expanding the Huawei Enterprise Network exam

(Single Choice) VRP uses a component-based system architecture. It provides various functions and features in addition to application-based scalability and customization.

True

False

(Single Choice) Which component of the VRP platform provides user authentication charging and user policy management?

Service control plane

Versatile control plane —

System management plane —

None of the above —

(Multiple Choice) Which of the following is abbreviation of VRP?

Versatile Routine Platform

Virtual Routing Platform

Virtual Routing Plane

Versatile Routing Platform

(Multiple Choice) Which of the following protocols can be used to upgrade VRP? (Select 3 Answers)

FTP

TFTP

TELNET

XMODEM

(Single Choice) When VRP platform is configured as TFTP client, it can transmit files in binary mode and ASCII mode.

True

False

(Multiple Choice) Which of the following products use the VRP platform as the core engine of their software? (Select 3 Answers)

Router

Ethernet switch

Service gateway

LTE

(Multiple Choice) Which of the following methods can be used to upgrade the VRP software? (Select 3 Answers)

WEB

FTP

TFTP

X-modem

(Multiple Choice) What functions does VRP provide? (Select 3 Answers)

Provides a unified user interface and a unified management window.

Provides the functions of a control plane.

Defines interfaces of a forwarding plane.

Blocks communication between a forwarding plane and the VRP control plane.

2-Navigating The CLI exam

(Multiple Choice) On Huawei VRP platform, which of the following can be used to invoke the history command saved by the command line interface?

Up cursor key —

Left cursor key —

Ctrl+P —

Ctrl+U —

(Single Choice) Which of the following statements about the command view of VRP are true?

The System-view command can switch a view from the user view to the system view.

A service command can switch a view from the system view to the corresponding service view.

The Quit command can switch a view from the system view to the user view.

Different views may have different commands.

(Single Choice) Which of the following must be used to establish the configuration environment when a router is powered on for the first time?

SSL

SSH

Console port

Telnet

(Single Choice) Which of the following parameter settings for terminal emulation are correct when configuring a Huawei router through the Console port?

4800bps, 8 data bits,1 stop bits, odd parity check, and no flow control

9600bps, 8 data bits, 1 stop bits, no parity check, and no flow control

9600bps, 8 data bits, 1 stop bits, even parity check, and hardware flow control

19200bps, 8 data bits, 1 stop bits, no parity check, and no flow control

(Single Choice) Which of the following commands is used to enter the system-view from the user view on a Huawei router?

system-view

enable

configure terminal

interface system

3-File System Navigation and Management exam

(Single Choice) Which of the following commands can be used to view the current configurations on a Quidway router?

display current-configuration

display saved-configuration

view saved-configuration

show startup- configuration

(Single Choice) On VRP platform, the command lines are classified into four levels in increasing priority: Visit level, Monitoring level, Configuration level, and Management level. At which level, the operator is permitted to configure service but is not permitted to operate the file system?

Visit level

Monitoring level

Configuration level

Management level

(Single Choice) The operation deleting the configuration files saved in the storage devices will become effective after rebooting the router.

True

False

(Multiple Choice) Which of the following storage devices are supported by Huawei Quidway router?

SDRAM —

NVRAM —

Flash —

Hard Disk

CF Card —

(Single Choice) Which of the following storage devices is used to store the startup configuration files in a router?

SDRAM

NVRAM

Flash —

BootROM —

(Single Choice) An adminstrator has been requested to replace the configuration file of a router in the network. The administrator has been instructed that after logging into the router, he must first permenantly erase the current configuration file config.zip from the system. Which command should he use to achieve this?

delete /force config.zip

delete /unreserved config.zip

reset config.zip

clear config.zip

4-VRP Operating System Image Management exam

(Single Choice)

display startup

MainBoard:

Startup system software: sd1:/ar2220-v200r003c00spc200.cc

Next startup system software: sd1:/ar2220-v200r003c00spc200.cc

Backup system software for next startup: null

Startup saved-configuration file: null

Next startup saved-configuration file: null

Startup license file: null

Next startup license file: null

Startup patch package: null

Next startup patch package: null

Startup voice-files: null

Next startup voice-files: null

Refer to the display output. Which statement is false?

The current configuration file has not been saved. —

The current startup system software is ar2220-v200r003c00spc200.cc —

The next startup system software cannot be changed.

The next startup system software can be changed by using the “startup system software <startup-software-name>.cc —

(Multiple Choice) Which component of the VRP platform provides user authentication charging and user policy management?

Service control plane

Versatile control plane

System management plane

None of the above

MC

Visit level

Monitoring level

Configuration level

Management level

(Single Choice) On VRP platform, the command lines are classified into four levels in increasing priority: Visit level, Monitoring level, Configuration level, and Management level. At which level, the operator is permitted to configure service but is not permitted to operate the file system?

Visit level

Monitoring level

Configuration level

Management level

(Single Choice) VRP uses a component-based system architecture. It provides various functions and features in addition to application-based scalability and customization.

True

False

(Multiple Choice) Which of the following products use the VRP platform as the core engine of their software?

Router

Ethernet switch —

Service gateway —

LTE —

(Multiple Choice) What functions does VRP provide?

Provides a unified user interface and a unified management window. 1 2

Provides the functions of a control plane.

Defines interfaces of a forwarding plane. 2

Blocks communication between a forwarding plane and the VRP control plane 1

3 — Supporting and Maintaining Networks

1-Establishing a Single Switched Network exam

(Single Choice) Workstation A and workstation B are respectively connected to two ports of a switch. Assume the MAC table of the switch is empty now. Which of the following statements is true as soon as the switch receives the first packet sent by Workstation A to Workstation B?

The switch will learn address of A

The switch will learn address of B

The switch will not learn any address

The switch will learn addresses of both A and B

(Single Choice) Which of the following must be used to establish the configuration environment when a router is powered on for the first time?

SSL

SSH

Console port

Telnet

(Single Choice) An administrator connects two switches together in a local enterprise network. The ports of one switch support Fast Ethernet, while the ports of the other switch support Gigabit Ethernet. Hosts connected to one switch are able to communicate, however communication between the two switches fails. What is the possible reason for this?

The ports have disabled auto-negoatition.

One port is supporting auto-negotiation, while auto-negotiation is disabled on the port of the other switch.

The port of one switch is operating using half duplex mode, while the port of the other switch is using full duplex mode.

A Fast Ethernet port cannot communicate directly with a Gigabit Ethernet port.

(Single Choice)

display mac-address

————————————————————————-

MAC Address VLAN/VSI Learned-From Type

————————————————————————-

5489-98ec-f018 1/- GE0/0/13 dynamic

Total items displayed = 1

Refer to the graphic. A switch attempts to forward a frame to the MAC destination 5489-98ec-f01. What operation will occur on the switch?

The switch will report that the destination is unreachable and report this to the source.

The switch will flood the frame via all ports, with exception of the port on which the frame was received.

The switch will send a request to obtain the MAC address of 5489-98ec-f011.

The switch will drop the frame because it does not have an entry in its MAC address table.

(Single Choice) A server is linked to port interface G0/0/1 of a switch. The administrator wishes to allow only this server to be linked to this interface on the switch. Which method can be used to achieve this?

Configure a static ARP entry using the server's IP address and MAC address in the switch. —

Configure a static MAC address binding entry of the server's MAC address and the interface in the switch.

Configure the default gateway of the switch to be the same as the server's IP address.

It is not possible to enable a single device to be associated with an interface.

2-Spanning Tree Protocol exam

(Single Choice) Which of the following descriptions about STP is incorrect?

STP can manage the redundant links —

STP can block redundant links to eliminate loops —

STP can prevent from temporary loss of connectivity

STP can make LAN switch operates normally in a switched network environment with loops —

(Single Choice) Which attribute is selection of a root bridge based on when the spanning tree is calculated by the STP?

Bridge ID

Path Cost

Port Cost

Port ID

(Single Choice) The main idea of STP is to generate a loop-free tree by exchanging a special kind of message between

bridges. This message is called ( ).

Configuration BPDU

TCN BPDU

Hello BPDU

Update BPDU

(Single Choice) There may be "multiple" paths between a non-root bridge and a root bridge. Each of the paths has its own total cost, which is the sum of the port costs of all egress ports on the path.

True

False

(Single Choice) Which of the following statements regarding layer-2 switch is incorrect?

Learn MAC address automatically

Layer-3 header is modified before the received packet is transmitted

Layer-2 header is modified before the received packet is transmitted.

Layer-2 LAN switch operates at data link layer

(Single Choice) On Huawei switches running STP,the default value of forward delay is ( ) seconds.

10

15

20

30

(Multiple Choice) In STP, the role of switch port includes ( ) (Select 3 Answers)

Root port

Backup root 2port

Optional port

Alternate port

Designated port

(Single Choice) Which of the following descriptions about blocking state in STP is incorrect?

The port in blocking state can receive BPDU

The port in blocking state does not learn source MAC address of data packet

The port in blocking state does not forward data packets

The port in blocking state does not receive any data packets

(Multiple Choice) Which of the following descriptions about STP are correct? (Select 3 Answers)

A network can have only one root switch —

All the ports of the root switch are root port —

All the ports of the root switch are designated port

The switch with the smallest priority value is elected as the root switch —

(Multiple Choice) Which of the following are the functions of STP in switched network?

Improve bridge network availability by providing physical path redundancy 1 5

Improve bridge network availability by providing logical path redundancy 4 5

Eliminate the possible loops by blocking the redundant paths 3

Activate the redundant backup path when the active path becomes faulty. 2

(Single Choice) During STP calculation, when a port is in a certain state, it neither forwards any data frame nor learns MAC address tables. Instead, it only receives and processes STP protocol packets. Which state does the abovementioned state refer to?

Listening

Blocking

Learning

Forwarding

(Single Choice) STP calculates the overall cost of each path between a non-root bridge and a root bridge. What is a port on the non-root bridge called on the path that has the minimum overall cost?

Designated port

Root port

Common port

Queue port

(Single Choice) STP is short for ?

Rapid spanning tree protocol

Shortest path tree protocol

Spanning tree protocol

Sharing tree protocol

(Multiple Choice) Which of the following descriptions about STP are incorrect?

A layer-2 switching network can have only one designated switch —

All the ports of the root switch are root port —

All the ports of the root switch are designated port —

The switch with the smallest priority value is elected as non-root switch —

(Multiple Choice) In STP, the bridge ID consists of two parts. They are ( ) and ( ).

Switch priority

Switch Port ID

Switch MAC address

Switch IP address

(Single Choice) Workstation A and workstation B are connected to two different switch ports respectively. Assume that workstation B hasn't sent any packet yet. Which of the following statements is true when workstation A starts sending the first packet to workstation B?

The destination port of workstation B is not found in switch's MAC table an the packet is discarded

The switch learns the address of workstation B and sends the packet to the port that is connected with B

The switch learns address of workstation A and broadcasts the packet out of all the ports

The switch learns address of workstation A and broadcasts the packet out of all the ports except for the port that received the packet

(Single Choice) Devices need to exchange information and parameters in order to calculate a spanning tree. Such information and parameters are encapsulated into a certain unit when they are exchanged between devices. Which type of unit are the information and parameters encapsulated into?

TCP BPDU

Configured BPDU

Configured STP

Configured RSTP

(Single Choice) In OSI reference model, Layer 2 LAN switch operates at ( ).

Physical layer

Data link layer

Network layer

Application layer

(Multiple Choice) Which of the following are the interface states of STP? (Select 4 Answers)

Disabled

Blocking

Shut down

Learning

Forwarding

(Single Choice) The standard for STP defined by IEEE is ( ).

802.3 —

802.11b —

802.1D

802.1Q —

Multiple Choice) The existence of loop in switched network can lead to ( ).

Unstable MAC address table 1

Destination unreachable 2 —

Broadcast storm 3- 5

Route self-loop 4- 5

(Single Choice) How many root bridges does the STP protocol select from all the network bridges when calculating a spanning tree?

1
2
3
4

(Single Choice) In STP calculation, a port identifier consists of two parts: one-byte ( ) and one-byte port number.

Port priority
Link priority
Bridge MAC address
Port MAC address

(Single Choice) Which of the following descriptions about port state transition of STP are incorrect?

Forwarding state can transit to Blocking state directly
Learning state can transit to Blocking state directly
Learning state can transit to Forwarding state directly

Blocking state can transit to Forwarding state directly

(Multiple Choice) Which of the following ports are defined by STP and indicate that Physical Layer and Data Link Layer are working normally and STP is enabled at ports on a device? (Select 3 Answers)

Root Port

Designated Port

Alternate Port

Disable Port

(Single Choice) STP uses ( ) timer to prevent from temporary loop when the link is fault?

Hello Time

Forward Delay

Max Age

Message Age

(Single Choice) Which of the following descriptions about learning state in STP is incorrect?

The port in learning state can receive and send BPDU

The port in learning state can learn the source MAC address of data packet

The port in learning state can only learn the source MAC address but cannot transmit the data packet.

The port in learning state can forward part of the data packet

(Single Choice) Root bridges provide root ports and designated ports.

True

False

(Single Choice) During STP calculation, when a port is in a certain state, it neither forwards any data frame nor learns MAC address tables. It takes part in only spanning tree calculation in addition to receiving and sending STP protocol packets. Which state does the abovementioned state refer to?

Listening

Blocking

Learning

Forwarding

(Single Choice) In STP, what is the length of bridge ID?

8 bits

32 bits

48 bits

64 bits

(Single Choice) During STP calculation, STP selects a designated port and bridge for each network segment. In this selection process, STP first compares ( ) of the port connected to the network segment and selects the one with the lowest number.

Link priority

Root path cost

Port identifier

Port MAC address

3-Rapid Spanning Tree Protocol exam

(Multiple Choice) Which of the following are disadvantages of “single” spanning tree? (Select 3 Answers)

Hosts belong to the same VLAN connected to different switches may not be able to communicate each other

Load balancing can not be implemented

Convergence is slow

Sub-optimal path may exist

(Multiple Choice) Which of the following are the advantages of RSTP compared with STP? (Select 3 Answers)

A new root port is elected on the non-root switch and the previous old root port is no longer in forwarding state. Moreover the designated port of the segment which connects with the new root port already starts to forward the data. In this case, the new root port can enter forwarding state immediately.

Once a port of the switch which is configured as edge port has been enabled, it will become designated port immediately and transit to forwarding state.

If the designated port is connected with P2MP link, it can make a handshake with the connected bridge and enter the forwarding state immediately after it receives the response.

If the designated port is connected with P2P link, it can make a handshake with the connected bridge and enter the forwarding state immediately after it receives the response.

(Single Choice) As specified by the RSTP protocol, when a root port fails, which type of port will function as a new root port and enters the forwarding state without any delay?

Forwarding Port

Alternate Port

Backup Port

Edge Port

(Single Choice) In the RSTP standard, a port is able to connect to a terminal directly and enter the forwarding state without delay. Which of the following ports represents such a port?

Fast port —

Backup port —

Root port —

Edge port

(Single Choice) As specified by the RSTP protocol, when a designated port fails, which type of port will function as a

new designated port and enters the forwarding state without any delay?

Forwarding Port

Alternate Port

Backup Port

Edge Port

4 — Establishing Internetwork Communication

1-Segmenting The IP Network exam

(Multiple Choice) Which of the following statements are true? (Select 2 Answers)

A route discovered by a protocol at the link layer need not be maintained.

A protocol at the link layer can discover only a route to a loopback address.

A protocol at the link layer can discover only a route in a network segment connected directly to a port.

A protocol at the link layer can discover only a route across different network segments.

(Multiple Choice) Which of the following statements regarding the routing table are correct?(Select 2 Answers)

The next hop in the routing table is redundant because the outgoing interface can be used for packet forwarding.

The routes from generated by different protocols have different preferences.

The costs of different routing protocols are comparable.

The costs of different routing protocols are not comparable

(Multiple Choice) Which of the following protocols are routing protocols? (Select 2 Answers)

RIP

OSPF

PPP

IPX

(Single Choice) What does the distance vector routing protocol focus on according to the discovered routes and calculated routes?

The number of hops on between the router and the destination

The address of the next hop specified manually

Whether the egress port on the route belongs to a port aggregation group

Link bandwidth resource information

(Multiple Choice) Which of the following factors may result in routing loops? (Select 3 Answers)

Temporary routing loops that occur during route convergence —

Link-state routing protocol algorithms

Loop avoidance information is lost when the routes are imported between two different routing domains —

Configuration errors —

(Multiple Choice) What functions does a router mainly provide? (Select 3 Answers)

Check the destination address in a datagram. —

Determine the information source.

Discover possible routes. —

Verify and maintain route information. —

(Single Choice) What do we call the routes in the routing table that have the same cost to the same destination?

Equivalent routes

Sub-optimal routes —

Multipath routes —

Default routes —

(Multiple Choice) Which of the following items are the contents of the routing table? (Select 2 Answers)

Destination

Cost, Interface, and Next hop

Node

Router

(Single Choice) Which of the following statements regarding routing convergence is correct?

Convergence is a process that occurs due to network topology changes.

Convergence is a process of establishing neighbor relationships between any two routers by sending hello packets.

Convergence is a process of combining the routing tables of two routers.

Convergence is a process of synchronizing all routing tables for all the routers in the network. It is the process for a router to reach the stable and consistence state after the network changes.

(Multiple Choice) A routing table can be formed by using different methods. Which of the following protocols are used to form a routing table? (Select 2 Answers)

Static routing protocol

Dynamic routing protocol

Application-level protocol

Transport-level protocol

(Single Choice) The data link layer in a router receives a packet from upper layer and the length of the packet is greater than the MTU of the interface that will transmit this packet. What will the router do?

Discard the packet

Fragment the packet

requests the source router to reduce the length of the packet

Forward the packet directly

(Single Choice) If the optimal path to the destination IP address is unavailable after a change occurs in a network topology, the dynamic routing protocol can make adaptation to this change and determine another optimal path to the destination IP address.

True

False

(Multiple Choice) When the value of the proto field of a route in a routing table is direct, it indicates that this route is a ( ). (Select 3 Answers)

Route discovered by the protocol at the link layer

Port route

Direct route

Default route

(Multiple Choice) Which of the following statements are incorrect? (Select 2 Answers)

The preferences for each static routes entry can be different.

By default, OSPF is more preferred to RIP.

The greater the cost, the better the route is.

For those routes to the same destination on VRP platform, the one with higher preference value is more preferred over the one with lower preference value.

(Single Choice) Each router forwards only the packets received by the local station through the optimal path. The packet is forwarded by different routers on the path in a relay mode.

True

False

(Single Choice) Assume an internal network has only one route to the external networks, which of the following configurations is better?

Default route

Host route

Dynamic route

Direct route

(Multiple Choice) Which of the following statements regarding default route are correct? (Select 2 Answers)

Default route is more preferred over the specific route

Default route is used only when the destination route is not in the routing table

Default route can be configured manually. 1

Default route is a special type of dynamic route.

(Multiple Choice) Which of the following statements regarding the function of a router are correct? (Select 3 Answers)

Connecting same networks.

Segmenting the packet so that the forwarding is easier

Forwarding the packet from one network to another

Addressing

(Multiple Choice) Which of the following statements regarding the route preference are correct? (Select 3 Answers)

It is used by RIP and OSPF only

It is used by all routing protocols

It is an important factor for route selection

The default preference value of direct route is 0

(Multiple Choice) Which of the following indicators are used to measure the performance of a dynamic routing protocol? (Select 2 Answers)

Zero routing loop

Low protocol cost

Number of subnets

Route priority

(Multiple Choice) Which of the following items are used to select the best route when a router has “multiple” routes to the same destination? (Select 2 Answers)

Preference of the route 3

Advertiser of the route 2

Cost of the route 1

TTL of the route 1 2 3

(Single Choice) Which of the following statements regarding routing protocol is correct?

A protocol that allows the data packets transmitted between hosts.

A method that defines the format and function of the fields for data packet

A protocol that achieves route selection through an algorithm

A protocol that defines the mode and time of the binding of MAC address and IP address

(Single Choice) Each router only knows how to forward the packet to the next hop IP address. It doesn’t know the end to end forwarding path. This type of forwarding is called ( )

Hop by hop forwarding

Host by host forwarding —

Router by router forwarding —

Network by network forwarding —

(Multiple Choice) Routing metric is a value that measures the cost of the route to the designated destination and it is used to calculate the best path. Which of the following factors can affect the metric of a route? (Select 3 Answers)

Delay/bandwidth

Line occupation ratio

CPU of the router

Hop count

(Single Choice) IGP is the protocol which is used in ( )

An area

A LAN

An Autonomous System

Within the range of classful addressl

(Single Choice) Characterized by simple configuration and poor scalability, which of the following protocols is based on the Bellman-Ford algorithm and sends a complete routing table to an adjacent router at a certain interval?

Distance vector routing protocol

Link-state routing protocol

Interior gateway protocol

Exterior gateway protocol

(Multiple Choice) Which of the following are the sources of the routes in the routing table? (Select 3 Answers)

Some routes are generated during the startup of the router.

Some routes are generated according to the data link layer protocol

Some routes are configured manually by the administrator

Some routes are generated by dynamic routing protocols

(Single Choice) Which of the following is used by routers to forward the packets on the network?

DNS lookups

ARP tables

Routing tables

MAC address tables

(Multiple Choice) Which of the following statements regarding routing loops are correct? (Select 2 Answers)

Routing loops cause the packets not able to reach the destination and this will result in network congestion.

Route loops are generated by dynamic routing protocols only.

Packets are routed circularly between two or more routers and will be discarded when the TTL becomes 0.

Link state routing protocols will not cause the routing loops.

(Single Choice) Suppose a gateway is configured in a host running Windows system, which of the following is similar to the configuration on a router?

Direct route

Default route

Dynamic route

Host route

(Single Choice) Equal-cost routes are the routes that have the same ( ).

Cost

Priority

Egress port

Next hop

(Multiple Choice) According to the algorithms, routing protocols fall into two categories. They are ( ) (Select 2 Answers)

IGP

EGP

Distance Vector

Link-state

(Multiple Choice) Which of the following statements are correct? (Select 2 Answers)

The calculation method of the preference and cost in the routing table are same.

The calculation of cost may be based on “single” link attribute or several link attributes such as delay, hop count, bandwidth and etc.

When several dynamic routing protocols have the best routes to the same destination, all these routes will be added to the routing table.

Some of the dynamic routing protocols calculate the best path base on the cost value. However, Different routing protocol calculates the metric in different ways

2-IP Static Routes exam

(Multiple Choice) A command for configuring a static route contains the destination IP address and mask. In which notations can the mask be expressed? (Select 2 Answers)

- **Dotted decimal notation**
- **Mask size (namely, the number of binary 1s in the mask)**
- Dotted binary notation
- Dotted hexadecimal notation

(Single Choice) After a fault occurs in a network, a static route can be rectified automatically and the network administrator does not need to reconfigure it.

True

False

(Multiple Choice) Which of the following are the advantages of static routing protocol? (Select 2 Answers)

- **Simple configuration**
- **Automatic routing updates**
- Enhanced network security

Save the bandwidth

(Multiple Choice) Which of the following are the disadvantages of using static routing protocol in the network? (Select 2 Answers)

The configurations are complicated in a large network.

Re-configurations are required after the topology changes

External routers can not learn the static route configuration which will result in network unreachability.

On the VRP platform, load balancing can not be implemented using static route

(Multiple Choice) Which of the following statements about default routes are true? (Select 2 Answers)

A route that can be configured manually.

A default route can be only configured manually by a network administrator.

A default route is a kind of special static route.

A default route can be generated by using a dynamic routing protocol.

(Single Choice) What does a router do after it receives a datagram containing a destination address that is not listed in the routing table?

The router matches an OSPF route with the destination address.

The router matches an RIP route with the destination address.

The router matches a BGP route with the destination address.

The router uses the default route.

(Single Choice) A static route can be either configured manually by a network administrator or generated automatically.

True

False

(Multiple Choice) Two static routes to the 10.1.1.1/32 network are configured on a router. One of the static routes is not assigned with a value for the preference_value parameter; the other static route is assigned with 100 for the preference_value parameter. In this case, which of the following statements are true? (Select 2 Answers)

The route not signed with a value for the preference_value parameter functions as the working route. 1

The route signed with 100 for the preference_value parameter functions as the working route.

A static route supports route backup.

The two static routes work in load sharing mode. 1

(Multiple Choice) Which of the following statements regarding static route are correct? (Select 3 Answers)

Default route is a special type of dynamic route

Some of the dynamic routing protocol such as OSPF can generate default routes.

Default route is used when the destination network is not in the routing table.

The network IP and mask of the default route is 0.0.0.0 and 0.0.0.0 respectively.

(Single Choice) After a change occurs in a network topology, which of the following routes does not change automatically but changes only after the network administrator updates the change?

RIP route

OSPF route

BGP route

Static route

(Single Choice) Which of the following values is the default preference value for static route on the VRP platform?

0

20

60

100

(Multiple Choice) Compared to static routing protocol, which of the following are the advantages of dynamic routing protocol? (Select 2 Answers)

Low bandwidth consumption

Simple

The router running dynamic routing protocol can detect the changes of the network topology automatically.

The router running dynamic routing protocol can calculate the routes automatically.

(Single Choice) How is routing information about a default route expressed?

The destination IP address is expressed in all 0s and the mask is expressed in all 1s. —

The destination IP address is expressed in all 1s and the mask is expressed in all 0s. —

Both the destination IP address and mask are expressed in all 0s.

Both the destination IP address and mask are expressed in all 1s.

(Single Choice) The information about static routes can be viewed through a router. A backup route is identified as ( ).

Bypass

Inactive

Backup

Slave

3-Distance Vector Routing with RIP exam

(Single Choice) Routing Information Protocol (RIP) uses ( ) to exchange routing information and sends out updated packets at a certain interval.

TCP

UDP

RSVP

LDP

(Multiple Choice) What features does RIPv2 provide? (Select 3 Answers)

Extension of subnet mask(VLSM) —

Large scale network

Plain text authentication —

MD5 encrypted text authentication —

(Multiple Choice) Which of the following are main functions of split horizon used by distance vector routing protocols? (Select 3 Answers)

Prevent the routing loops between two adjacent routers.

Ensure the routing updates not being sent back to the direction from which it was received.

Work together with holddown mechanism to prevent the routing loops.

Replace the poison reverse algorithm

(Single Choice) After a command for displaying RIP route information is entered on a router, peer 192.169.1.3 on ethernet1/0/1 is displayed in the returned result. What does ethernet1/0/1 stand for?

Port connected to the RIP neighbor with the IP address of 192.169.1.3

Port corresponding to the RIP transmission address

Port with the broadcast protocol enabled

Port with the multicast protocol enabled

(Single Choice) Which of the following routing protocols involves simple configuration and low-speed convergence and is generally used in medium- and small-sized networks?

BGP

OSPF

ISIS

RIP

(Multiple Choice) The RIP packet version is set in the interface view. Which of the following statements are true in the case of version RIPv1? (Select 2 Answers)

The interface receives only RIPv1 and RIPv2 broadcast packets.

The interface does not receive RIPv2 multicast packets

The interface receives only RIPv1 broadcast packets.

The interface does not receive RIPv2 broadcast packets.

(Multiple Choice) Which of the following methods are used by RIP to avoid routing loop? (Select 3 Answers)

Split-horizon

Holddown

Rebooting routers

Defining the maximum routing metric

(Single Choice) Which of the following parameters is used by RIP to calculate the value of cost?

MTU

Delay

Bandwidth

Hop count

(Single Choice) Which of the following statements regarding distance vector algorithm are incorrect? (Select 2 Answers)

Distance vector algorithm does not generate routing loops. —

Distance vector routing protocol is implemented by exchanging routing information. —

The routes are advertised as vectors of (destination, cost).

Routers running distance vector protocols obtain routing information from its own neighbors only.

(Single Choice) Routing Information Protocol (RIP) is available in the RIPv1, RIPv2, and RIPv3 versions.

True

False

(Multiple Choice) Which of the following statements about RIP protocol priorities are true? (Select 3 Answers)

With routing protocol priorities, a route obtained by a certain routing protocol can be selected as the optimal route according to the specified routing policy.

A greater value of the RIP routing protocol priority means a higher priority.

The RIP protocol priority can be set manually on a router.

By default, the RIP protocol priority of Huawei router is 100.

(Multiple Choice) Router A runs RIP routing and its interface serial 0 with IP address 10.0.0.1/24 is enabled with RIP routing protocol as well. Which of the following commands must be configured? (Select 2 Answers)

Rip

Rip 10.0.0.0

Network 10.0.0.1

Network 10.0.0.0

(Single Choice) When an RIP route is unavailable, the router deletes this RIP route from the routing table if it fails to

receive a packet updating this RIP route information after a period of ( ).

120s

180s

240s

300s

(Multiple Choice) Which of the following statements regarding RIP route aggregation are correct? (Select 3 Answers)

RIP v1 supports route aggregation by default and it can be disabled when necessary.

We can disable the route aggregation on RIP V2.

RIPv1 does not support CIDR

RIPv2 supports CIDR.

(Single Choice) What does the value 1 of cost in the RIP route information mean?

The route cost is 0.

The priority of the RIP protocol is 1.

Only one hop exists between the router and the destination network segment.

The route progress number is 1.

The route weight is 1.

(Single Choice) Which of the following commands is used to disable automatic route aggregation for RIP?

Undo rip

Summary

Undo summary

Undo network 10.0.0.0

(Multiple Choice) What are the rip metricout value and rip metricin value commands used to set in the interface view? (Select 2 Answers)

Metric increased by sending RIP route information on the interface

Metric increased by receiving RIP route information on the interface 1

Metric contained in the transmitted RIP route information on the interface 1

Metric contained in the received RIP route information on the interface

(Single Choice) Which of the following statements regarding the function of holddown mechanism used by RIP is correct?

Save the bandwidth —

Loop-avoidance

Propagate the unreachable routing information throughout the network.

Advertise the local route information to the RIP's neighbor —

(Single Choice) Which of the following cost values indicates that the route learned from RIP is unreachable?

8

10

15

16

(Multiple Choice) Which of the following messages can be processed by the interface working in RIPv2 Broadcast mode? (Select 2 Answers)

RIPv1 broadcast messages 2 3

RIPv1 multicast messages 1 3

RIPv2 broadcast messages 1

RIPv2 multicast messages 2

(Single Choice) Which of the following protocol is used by RIP to encapsulate the messages?

UDP

TCP

ICMP

Raw IP

(Single Choice) Which of the following statements regarding routing loops in RIP is correct?

Distance Vector algorithm can calculate the shortest path to the destination according to the given topology.

Split horizon can prevent the routing loop between two neighboring routers only.

Although Holddown mechanism results in slow convergence, it can completely prevent the routing loop.

Maximum hop count mechanism can solve the problem caused by routing loop.

(Single Choice) Which of the following values is the update interval for RIP?

5s

30s

60s

180s

(Multiple Choice) Which of the following statements regarding RIP are correct? (Select 2 Answers)

RIP is an IGP.

RIP is an EGP.

RIP is a distance vector routing protocol.

RIP is a link-state routing protocol.

(Multiple Choice) Which of the following statements regarding RIP v1 and RIP v2 are correct? (Select 2 Answers)

RIP v1 supports VLSM.

RIP v2 supports VLSM.

RIP v2 uses route aggregation by default.

RIP v1 supports simple password authentication only, while RIP v2 supports MD5 authentication.

(Single Choice) How many hops from a router to the directly connected network does the RIP protocol specify?

0

1

Infinite —

None of the above —

(Multiple Choice) Which of the following statements regarding Bellman-Ford algorithm are correct? (Select 2 Answers)

RIP is based on Bellman-Ford algorithm.

Bellman-Ford is essentially a Dijkstra algorithm.

When Bellman-Ford algorithm is used to calculate the routes, it does not need to know the whole topology of network.

Bellman-Ford algorithm is a link-state algorithm.

(Multiple Choice) Which of the following statements regarding RIP v1 and RIP v2 are correct? (Select 2 Answers)

RIP v1 does not support multicast. By default, it does not advertise the information about subnet.

RIPv2 supports multicast. It can choose not to advertise the information about subnet.

RIPv1 can advertise information about subnet by disabling the automatic route aggregation.

RIPv2 broadcasts message by default. The command rip version 2 multicast must be configured to make RIPv2 send message with multicast address.

(Single Choice) By default, RIPv2 sends packet by means of ( ).

Unicast

Multicast

Broadcast

Multicast and broadcast

(Multiple Choice) Which of the following statements regarding RIP network scale are correct? (Select 3 Answers)

Bellman-Ford algorithm used by RIP can accurately calculate the shortest path of a large scale network.

The maximum hop count of RIP is 16 and it can be used to prevent the packets from circulate infinitely in the network.

It is recommended to use other routing protocols such as OSPF instead of RIP when the network topology is more complicated even though the hop count is less than 16.

RIP is not suitable for large scale network because it advertises the whole routing table periodically and this consumes a lot bandwidth. So, RIP is suitable for small scale network only.

(Multiple Choice) Which of the following statements regarding split horizon used by RIP are correct? (Select 3 Answers)

Split horizon is used to avoid routing loop. The main idea of Split Horizon is that the information can not be sent back in the direction from which the data was received. —

Split horizon will not prevent the routing loop between 2 routers.

Split horizon might cause some of the routers not able to obtain the accurate routing information. —

On the VRP platform, split horizon is enabled by default. It can be disabled when necessary. —

(Multiple Choice) Which of the following statements regarding RIP routing information are correct? (Select 2 Answers)

User can specify the route preference of RIP higher than that of static routes.

If the route calculated by other routing protocol which is imported by RIP does not specify the cost value, the cost value will be set as 1 by default

User can specify the route preference value of RIP lower than that of direct routes.

The route preference of RIP can not be configured manually.

(Single Choice) After receiving a Response packet from a neighbor, the RIP protocol calculates the routing metric. The calculated routing metric must be equal to or greater than ( ).

The metric contained in the packet

The metric contained in the packet plus 1

The metric contained in the packet plus the cost of the destination network

The cost of the destination network

(Single Choice) Which of the following numbers is the maximum hop count in RIP?

12

15

16

Infinity

4-Link State Routing with OSPF exam

(Single Choice) OSPF runs over the IP protocol and the IP protocol No. used by OSPF is ( ).

89

80

512

2328

(Multiple Choice) Which of the following statements regarding the backbone area in OSPF protocol are correct? (Select 3 Answers)

The area ID of the backbone area is 0.0.0.1.

Each area must be connected to the backbone area.

Backbone area is responsible for advertising the aggregated routing information generated by ABR between non-backbone areas. -f

ABR connects to different areas and at least one of the connected area is backbone area.

(Single Choice) In an OSPF area, routers exchange information about ( ). This type of information forms an information library.

Link status

Distance vector

Route cost —

Route priority

(Single Choice) OSPF has experienced several versions. Which of the following versions is experimental and has never been deployed?

OSPFv1

OSPFv2

OSPFv3

OSPFv4

(Multiple Choice) Which of the following statements about an OSPF neighboring router are true? (Select 2 Answers)

An OSPF interface broadcasts Hello packets to discover a neighbor.

After a router receives a Hello packet from the peer router, it becomes the neighbor of the peer router.

After an OSPF router receives a Hello packet from the peer OSPF router, it checks the parameters in the packet. If the parameters in the packet from the peer OSPF router are consistent with the parameters of this OSPF router, the two OSPF routers become neighbors of each other.

Neighbor discovery is equivalent to adjacency establishment.

(Single Choice) Assume that a non-backbone area and backbone area can not be directly connected. Which of the following ways can be used to solve this problem?

Configuring ABR

Configuring ASBR

Configuring Virtual-link

Configuring Stub area

(Single Choice) Which of the following is the metric of OSPF?

Number of hops

COST

Priority

LSA

(Single Choice) In OSPF protocol, most of the packets are sent by using reserved multicast address and this can reduce the impact on non-OSPF speaking devices.

True

False

(Multiple Choice) Which of the following statements regarding the comparison between OSPF and RIP are

correct? (Select 3 Answers)

OSPF is more appropriate for large networks than RIP.

RIP is more appropriate for small networks than OSPF.

RIP is more appropriate for flat network design while OSPF is more appropriate for hierarchical network design.

In the same network, RIP will consume more bandwidth than OSPF.

(Multiple Choice) In OSPF protocol, an ABR can also function as ( ) (Select 2 Answers)

IR (Internal Router) 1 2 3

BR (Backbone Router) 2

ASBR 1

Stub Router 3

(Single Choice) presentation [A router runs OSPF and its interface Serial 0 with IP address 10.0.0.1/30 belongs to the backbone area, which of the following commands is used to enable OSPF at this interface?

[Quidway-ospf -1-area-0.0.0.0]network 10.0.0.0

[Quidway-ospf -1-area-0.0.0.0]network 10.0.0.0 0.0.0.3

[Quidway-serial0]ospf area 0 enable

[Quidway-ospf -1]network 10.0.0.0 255.255.255.252

(Multiple Choice) Which of the following statements regarding adjacencies of OSPF routers are correct? (Select 4 Answers)

After two routers have been received the Hello packets from each other, they will form the adjacency automatically.

IF two routers are fully adjacent, the network type between them may be Point-to-Point network.

IF two routers are fully adjacent, the network type between them may be Point-to-Multipoint network.

IF two routers are fully adjacent and the network type between them is broadcast network, then one of routers must be either DR or BDR.

Only two adjacent routers can exchange LSAs.

(Single Choice) Each router calculates the shortest path tree based on the LSDB with itself as a ( ) node.

Root

leaf

Specified root

Backup

(Multiple Choice) The shortest path tree calculated by a router in an OSPF area provides ( ) on the path from this router to other nodes in the network.

All link states

Routing table

MAC address table

ARP table

(Multiple Choice) Which of the following statements regarding Autonomous System Boundary Router are correct? (Select 2 Answers)

ASBR is the router that imports the routes calculated by other protocols into OSPF.

ASBR is not always on the border of AS but it can be set anywhere in the AS except Stub area.

ABR can not be ASBR at the same time.

ASBR must belong to two OSPF areas.

(Multiple Choice) Which of the following statements about the configuration of OSPF areas are true? (Select 2 Answers)

All non-backbone OSPF areas must be connected to a backbone OSPF area, either physically or logically. 3

An ABR generates LSDBs separately for backbone OSPF areas and non-backbone OSPF areas. 2

The same network segment on an ABR must be enabled in both backbone OSPF areas and non-backbone OSPF areas. 1

An ABR generates a uniform LSDB for all OSPF areas. 1 2 3

(Multiple Choice) In a ( ) network, DRs and BDRs are used to prevent the problem with route convergence at a low speed. (Select 2 Answers)

Point-to-point

Broadcast

NBMA

Point-to-multipoint

(Multiple Choice) OSPF routers are classified into four types. Which of the following statements about interior routers (IRs) are true? (Select 2 Answers)

The ports on an IR belong to a same area.

An IR is located in the center of a physical area. 1

Only one port on an IR connects to a backbone area.

If all the ports on an IR belong to area 0, this IR functions as a backbone router. 1

(Single Choice) Which of the following OSPF versions is specific to the IPv6 technology?

OSPFv1

OSPFv2

OSPFv3

OSPFv4

(Single Choice) OSPF takes the precedence to select ( ) as a router ID unless you specify a router ID manually.

the biggest IP address of all the loopback port addresses

the biggest IP address of the physical port IP addresses —

127.0.0.1 —

the IP address of a port connected to an OSPF neighbor —

(Single Choice) After OSPF divides an AS into different areas, what is communicated between these areas?

Abstract route information for each area

Link state information for each area

Topology information for each area

Link bandwidth information for each area

(Single Choice) OSPF is an application layer protocol and it runs on ( )

UDP, port number 520

TCP, port number 179

IP, Protocol Number 89

Data Link layer

(Single Choice) Which of the following routing protocols are the link state routing protocols?

RIP

BGP

IP

OSPF

(Multiple Choice) What advantages does hierarchical routing defined by OSPF have? (Select 3 Answers)

Extend the interval of SPF calculation.

Decrease the size of a routing table.

Reduce the number of link state update packets.

Reduce the number of network layers.

(Single Choice) A router with OSPF enabled calculates the shortest route to the destination by using ( ) algorithm.

OSPF

SPF

SRC

OPF

(Single Choice) OSPF can generate a loop-free shortest route tree by using a routing protocol algorithm. Thus, the OSPF routing protocol has no loop problem.

True

False

(Single Choice) According to the OSPF protocol, a router floods LSAs. In this context, what does flood mean?

An action sending a link state database

An action synchronizing a link state database

An action sending and synchronizing a link state database

An action deleting a link state database from a port

(Multiple Choice) Each OSPF router floods LSAs to advertise link status information, including ( ). (Select 3 Answers)

Ports

Available neighbors

Information about adjacent network segments

Local link status information

(Multiple Choice) Which of the following network types are supported by OSPF? (Select 3 Answers)

Point-to-Point

Point-to-Multipoint

Bus Topolopy

Broadcast

(Multiple Choice) Which of the following statements regarding OSPF area are incorrect? (Select 2 Answers)

Without manual configuration, an OSPF area is a backbone area with area ID 0 by default.

OSPF supports area division.

Every OSPF area is identified by a 32-bit Area ID number.

Area ID must be assigned by IANA and we can not simply assign it.

(Multiple Choice) Which of the following areas fall into the OSPF area group? (Select 3 Answers)

Standard area

Stub area

Totally stubby area

Boundary area

(Single Choice) In broadcast network of OSPF protocol, any two DR Others will neither exchange routing information nor send Hello packet to each other due to the existence of DR.

True

False

(Single Choice) When two routers synchronize their LSDBs, they use ( ) packets to describe their own LSDBs.

Hello

DD

LSR

LSU

(Single Choice) Which of the following statements regarding the routing loop in OSPF is correct?

Routing loop is eliminated within an OSPF area.

Routing loop is not eliminated between two OSPF areas. —

Routing loop is not eliminated within an OSPF Autonomous Systems. —

No routing loop exists outside the OSPF autonomous system.

(Multiple Choice) Which of the following statements regarding OSPF are correct? (Select 3 Answers)

Support CIDR (Classless Inter-Domain Routing)

Use the distance vector algorithm

Use the triggered updates to immediately notify the neighbors about the topology changes so that the changes are synchronized in the AS.

Use the reserved multicast addresses to transmit protocol packets.

(Single Choice) Two OSPF routers become neighbors only after they successfully exchange ( ) packets and LSAs.

Hello

DD

LSR

LSU

(Multiple Choice) Which of the following statements regarding the OSPF router types are incorrect? (Select 3 Answers)

ABR can be ASBR at the same time.

ABR is the router connecting any two OSPF areas and it can be used to transmit the routing information between them.

The router inside an OSPF area can not be ASBR. —

An OSPF router can belong to two or more areas but can be the ABR for a "single" area only. —

(Multiple Choice) Which of the following statements about the features of the OSPF protocol are true? (Select 3 Answers)

The OSPF protocol supports area division. —

The OSPF protocol is quick in route convergence when routes change. —

The OSPF protocol supports ¡°multiple¡± equal-cost routes. —

The OSPF protocol supports encrypt protocol packets.

(Multiple Choice) Which of the following statements about the information contained in a DD packet are true? (Select 3 Answers)

A DD packet contains all information about each LSA.

A DD packet contains only the header of an LSA.

The header of an LSA is the unique identifier of the LSA.

The header of an LSA is only a small portion of all the data of the LSA.

(Multiple Choice) Which of the following statements about the functions of an ABR are true? (Select 3 Answers)

An ABR is a gateway in the case of communication between different areas. —

An ABR collects the topology information about an area that is connected to the ABR and sends the information to the backbone area.

An ABR maintains one LSDB for every area connected to the ABR.

An ABR provides at least two port for connecting to a backbone area. —

(Single Choice) A backbone OSPF area is responsible for releasing the information collected by each border router to non-backbone OSPF areas. Which of the following represents the ID of a backbone OSPF area?

area 0

area 1

area 0.0.0.1

area 0.0.0.2

(Single Choice) On VRP platform, which of the following is the default route preference value for OSPF routing protocol?

1

100

120

(Multiple Choice) The link state database (LSDB) on an OSPF router is formed based on ( ). (Select 2 Answers)

local LSA

LSA advertised by a neighboring router

RSVP packet advertised to a neighboring router

RSVP packet advertised by a neighboring router

5 — Implementing Network Application Services

1-DHCP Protocol Principles exam

(Single Choice) What is the underlying protocol used by DHCP to send messages?

TCP

UDP

RTP

SIP

(Single Choice) In Window XP system, which of the following commands is used to release the IP address assigned by the DHCP Server?

ipconfig /all

ipconfig /renew

ipconfig /release

ipconfig

(Single Choice) Which layer of OSI reference model does DHCP belong to?

Physical layer

Data-link layer

Network layer

Application layer

2-FTP Protocol Principles exam

(Multiple Choice) Which of the following statements about FTP are true? (Select 2 Answers)

FTP is based on the UDP protocol.

FTP is used to provide low-speed file transfer.

TFTP can control an FTP user according to the login name and password.

A router can work as either an FTP Client or an FTP Server.

(Multiple Choice) Which of the following applications are based on the TCP protocol? (Select 2 Answers)

PING

FTP

TELNET

OSPF

FTP

TFTP

Telnet

Icmp

(Single Choice) By default, which port is used by the FTP server to establish the data connection?

20

21

23

25

(Single Choice) FTP session consists of two types of connections, they are( ) (Select 2 Answers)

Output connection

Input connection

Control connection

Data connection

(Multiple Choice) Which of the following statements about TFTP are true? (Select 3 Answers)

TFTP is based on the UDP protocol.

TFTP is a simple file transfer protocol and applicable to read-only memory.

TFTP can control a TFTP user according to the login name and password.

TFTP supports only the Client mode.

(Multiple Choice) Which of the following protocols can be used for file transfer? (Select 2 Answers)

FTP

TFTP

Telnet

Icmp

(Single Choice) Which of the following is an attribute of file transferred by using FTP?

Low speed

High throughput

Simple

Read-only memory

(Single Choice) Which of the following protocols is transport layer protocol of TFTP?

SIP

UDP

TCP

RTP

(Multiple Choice) Which of the following protocols or applications are based on UDP? (Select 2 Answers)

FTP

TFTP

SNMP

Telnet

(Multiple Choice) TFTP can control a TFTP user according to the user name and password.

True

False

3-Telnet Protocol Principles exam

(Multiple Choice) Compared with telnet, which of the following advantages does SSH support? (Select 3 Answers)

Encrypt the transmitted data to guarantee its security and reliability

Prevent DNS and IP spoofing

Accelerate the data transmission speed by compressing the data —

Scalable application based on UDP connection

(Single Choice) Which port number does Telnet uses for protocol transmission?

23
24
8080
48

(Single Choice) Which of the following port numbers is used by Telnet?

23
25
27
29

(Single Choice) Which transport-level protocol does Telnet use?

TCP
UDP
ECMP
UCMP

(Single Choice) What is the underlying protocol used by Telnet to transmit data?

RTP
SIP
UDP
TCP

(Multiple Choice) Which of the following protocols or applications are based on TCP? (Select 3 Answers)

FTP

DNS —

SNMP

Telnet

(Single Choice) Which of the following commands is used to check whether an application-level protocol works normally?

PING

TRACE

Extended ping

TELNET

(Single Choice) An administrator connects two switches together in a local enterprise network. The ports of one switch support Fast Ethernet, while the ports of the other switch support Gigabit Ethernet. Hosts connected to one switch are able to communicate, however communication between the two switches fails. What is the possible reason for this?

The ports have disabled auto-negoatition.

One port is supporting auto-negotiation, while auto-negotiation is disabled on the port of the other switch.

The port of one switch is operating using half duplex mode, while the port of the other switch is using full duplex mode.

A Fast Ethernet port cannot communicate directly with a Gigabit Ethernet port.

1 Link Aggregation

(Multiple Choice) ( ) The network administrator attempts to add interface G0/0/1 on Switch A to Eth-trunk 1, however the command fails. Which of the following may cause this?

The interface is operating in half-duplex mode.

The interface has been shutdown.

The interface is already associated with another Eth-trunk.

The interface is an access port.

(Multiple Choice) What benefits does port aggregation yield? (Select 3 Answers)

Improves link bandwidth

Implements load sharing

Improves network reliability

Facilitates data copy for analysis

(Multiple Choice) ( ) The Eth-Trunk frame forwarding mechanism used to prevent changes in the data sequence forwards frames based on which of the following parameters?

The same source or destination IP address

The same source or destination MAC address.

The same protocol type.

The same source or destination port number.

(Single Choice) ( ) The network administrator wishes to forward data over an Eth-trunk, however associated member interfaces operate at different rates. In terms of the resulting behavior, which of the following is true?

The two switches will not be able to communicate.

The higher rate member interfaces may incur packet loss.

The Eth-Trunk will work normally.

The lower rate member interfaces may incur packet loss.

(Single Choice) ( ) In Layer 2 mode, the transmission rate of an Eth-Trunk interface is determined by which of the following?

Maximum number of Up member links

Minimum number of Up member links

Number of Up member interfaces

Number of interfaces.

(Single Choice) ( ) What is the maximum number of member interfaces supported by a single Eth-Trunk?

6

8

10

12

(Single Choice) ( ) combines “multiple” ports to form an aggregation group. It can be used to balance the traffic among member ports and improve the connection reliability.

Port Aggregation —

Port binding —

Port load balance

Port group

VLAN Principles

1. (Single Choice) On VRP platform, what is the function for command interface vlan-interface vlan-id?

Create a VLAN —

Create or enter VLAN interface

Configure VLAN for an interface

No such command —

(Multiple Choice) Which of the following methods can realize communication between VLANs at network layer? (Select 2 Answers)

STP

GVRP

L2 Switch+Router

L3 Switch

(Multiple Choice) A frame tag adds ( ) to each frame so that the frame can be transmitted through Trunk ports on switches.

Destination MAC address

Source MAC address of a switch

VLAN ID

Bridge ID of a switch

(Single Choice) A switch supports 802.1Q protocol, what is the maximum number of VLAN it can support?

512
1024
2048
4096

(Multiple Choice) An access port on a switch generally connects to a port on a computer. Which of the following statements are true? (Select 3 Answers)

After receiving a tag packet, the switch forwards it directly.
The default VLAN of an access port is the VLAN where the port is located. You do not need to manually configure a default VLAN for an access port.
An access port can belong to only one VLAN.
After receiving an untag packet, the access port attaches its PVID information to the packet.

(Single Choice) A Trunk port always sends tagged frames to the peer equipment.

1. True

- **False**

(Multiple Choice) A trunk port is configured to permit vlan 3, vlan4 and vlan 5 to pass. The frames of vlan 3 and vlan 4 are tagged but the frames of VLAN 5 are untagged. Which of the following may cause the problem?

Port PVID is 5

Port PVID is 3 and 4

Only the command port trunk permit vlan 3 4 was configured for the trunk port.

GVRP is enabled on this port

(Single Choice) Switch-A and Switch-B are configured with ports in VLANs for R&D Department, Sales Department, Product Department, Financial Department, and HR Department. Each VLAN contains 20 users. In this case, how many subnets at least are required to provide routes between all VLANs?

5

20

50

100

(Multiple Choice) Which of the following steps are necessary to configure a port to the specified vlan in SYSTEM view? (Select 2 Answers)

Enter the VLAN view

Specify proportion of broadcast storm for VLAN

Specify description for VLAN or VLAN interface

Assign VLAN for the Ethernet port

(Multiple Choice) To make sure all hosts belonging to the same VLAN can receive the broadcast packets sent to this VLAN, which of the following operations are needed on the switch? (Select 2 Answers)

Send the packets out of all ports of the switch.

Send the packets out of other ports that belong to the same VLAN.

Send the packets to all trunk links that allow this VLAN to pass.

Send the packets to all trunk links.

A VLAN can be considered as a ( ).

Collision domain —

Broadcast domain

Management domain —

Blocking domain

For VLAN link type,the link between a switch and a PC is ( ).

Access link

Trunk link

Hybrid link

ISL link

(Multiple Choice) Which of the following statements about the advantages of the VLAN function are true? (Select 2 Answers)

The VLAN function reduces network costs by reducing the number of physical ports on switches.

The VLAN function improves network security by identifying users that are allowed to access sensitive data and applications.

The VLAN function improves network performance by implementing flow control and using the window advertisement mechanism.

The VLAN function divides a network into several small logical networks, reducing the impact of a broadcast storm on a network.

(Single Choice) All Ethernet frames in a switch flow in the form of ( ).

BPDU

PVID —

Untagged frame —

Tagged frame

Which of the following technologies can reduce the scope of broadcast domain?

VLAN

Trunk

RARP

STP

Of all the VLAN grouping methods, the grouping method by IP address is called ( ) VLAN.

Port-based

Route-based

MAC address-based

Policy-based

Which of the following statements about VLAN are true? (Select 2 Answers)

In the switch configuration, if the default VLAN is VLAN 1, it cannot be deleted or renamed.

A switch supports a maximum number of 255 VLANs.

A “single” access port can pass through “multiple” VLANs.

“Multiple” VLANs can pass through a “single” trunk.

(Single Choice) VLAN is short for?

Virtual local area network

Virtual long area network

Virtual local area networking —

Virtual long area networking —

(Multiple Choice) Which of the following statements about the process of creating a VLAN are true? (Select 2 Answers)

The member port of this VLAN enters the active state immediately.

A routing-based interface (Vlanif) can be created for a VLAN only after the VLAN is created.

A network administrator can create a VLAN either in the global view or in the VLAN view.

A VLAN can be created only after its member port is allocated to another VLAN

(Single Choice) During frame forwarding, a switch checks the VLAN tag carried in an Ethernet frame and then determines whether to forward the Ethernet frame through a port if the VLAN tag is a ( ) of this port.

Permitted tag

Default PVID

MAC address equivalence

STP disable state

(Single Choice) Which of the following ports can be configured to permit VLAN to pass? (Select 2 Answers)

Trunk

Access

Hybrid

Normal

(Multiple Choice) After an Ethernet frame uses a VLAN tag, the Ethernet frame can be expressed in two formats, namely, ( ) and ( ) in a switched network. (Select 2 Answers)

Untagged frame

Tagged frame

Row frame

Column frame

(Multiple Choice) Which of the following descriptions about access-link are correct? (Select 2 Answers)

When access port receives a frame without 802.1Q tag header, the default PVID will be added to the frame.

When access port receives a frame with VLAN ID in 802.1Q tag header different from the default PVID, VLAN ID in 802.1Q tag header is changed to the default PVID.

When access port sends a frame, 802.1Q tag header is removed and standard Ethernet frame is sent.

When access port sends a frame, 802.1Q tag header is kept and a tagged frame is sent

(Multiple Choice) Which of the following descriptions are correct about VLAN interface? (Select 2 Answers)

A virtual interface is required to be created for the VLAN if we want to assign an IP address for that VLAN,

Two VLAN interfaces on the same switch can be assigned with the same IP address

The VLAN interface number must be the same with VLAN ID

The VLAN interface can be configured for the non-existed VLAN

(Multiple Choice) Which of the following are the advantages of VLAN compared with traditional LAN technology? (Select 3 Answers)

Lower cost for relocation and changes

Isolate broadcast domain and control the broadcast packets

Improve the network security

Enhance the network high available

(Multiple Choice) Which of the following are the formats of Ethernet frame in the switching network? (Select 2 Answers)

Untagged frame

Token frame

Tagged frame

FDDI frame

(Single Choice) Which of the following standards is defined by IEEE to regulate the implementation of VLAN between switches?

802.1x

802.1d

802.1q

802.3

(Single Choice) Workstation A and workstation B are respectively connected to two ports of a switch. Assume the MAC table of the switch is empty now. Which of the following statements is true as soon as the switch receives the first packet sent by Workstation A to Workstation B?

The switch will learn address of A

The switch will learn address of B

The switch will not learn any address

The switch will learn addresses of both A and B

(Single Choice) How many bits are used to identify the VLAN id of the data frame?

4

32

12

(Multiple Choice) Which of the following statements are true after a Trunk port receives a tag packet? (Select 2 Answers)

Checks whether the Trunk port allows the tag packet to pass through.

Transparently transmits the tag packet.

Discards the tag packet directly if the Trunk port does not allow the tag packet to pass through.

Attaches its PVID information to the packet and then sends out the packet.

(Single Choice) A network administrator wants to divide the hosts in building A into VLAN 3 and VLAN

VLAN information is saved automatically in the starting configuration.

After VLAN 3 and VLAN 5 are created manually, the default VLAN is removed automatically.

The network administrator can create a VLAN either in the global view or in the VLAN view.

The two VLANs can be named BUILDING_A to differentiate them from the VLANs in other geographical areas.

(Single Choice) Information below shows the partial interface configuration on a Huawei switch. According to this configuration, PVID of this interface is ( ).

[Quidway]display interface Ethernet 1/0/1

—

Mdi type: auto

Port link-type: access

Tagged VLAN ID: none

Untagged VLAN ID: 5

- Not able to interpret the PVID from the information given

1

0

5

(Single Choice) Which VLAN does an access port of a switch belong to?

The only defined VLAN

The VLAN with the greatest No.

All VLANs

The VLAN with the smallest No.

(Multiple Choice) Which of the following statements are true in the process of deleting a VLAN? (Select 2 Answers)

The member port of a VLAN becomes inactive after the VLAN is deleted.

When a routing-based interface (Vlanif) is available for a VLAN, the Vlanif interface must be deleted before the VLAN is deleted.

A network administrator can delete a VLAN either in the global view or in the VLAN view.

A VLAN can be deleted only after its member port is allocated to another VLAN.

(Single Choice) What action does a Trunk port take after it receives an untag packet?

Discards the packet directly.

Attaches its trunk VLAN ID to the packet and then sends out the packet.

Sends out the packet directly without adding the tag information to the packet.

Attaches its PVID information to the packet and then sends out the packet.

(Single Choice) When the value of the two-byte TPID field in an Ethernet frame header is 0x8100, it indicates that this frame carries an ( ) tag.

802.1P

802.1Q

802.1D

802.1S

(Single Choice) The fixed value of the TPID field in VLAN tag is ( ).

0x8100

0x0800

0x0806

0x9100

(Single Choice) VLAN tagged frame has extra ( ) bytes compared with standard Ethernet frame?

4

32

12

8

(Multiple Choice) Which of the following statements about VLAN communication are true? (Select 2 Answers)

One-arm routing can be configured for a Layer 3 switch only by using a router to implement VLAN communication.

One-arm routing can be configured for a Layer 2 switch only by using a router to implement VLAN communication.

Layer 3 VLAN interfaces can be configured on a Layer 3 switch to implement VLAN communication.

Layer 3 VLAN interfaces can be configured on a Layer 2 switch to implement VLAN communication.

A port of the switch belongs to VLAN 5. If VLAN 5 is removed by using command undo vlan 5, then which VLAN does this port belong?

0

1

1023

1024

(Multiple Choice) Which of the following descriptions about trunk link are correct? (Select 3 Answers)

When trunk port receives a frame without 802.1Q tag header, the default PVID will be added to the frame.

When trunk port receives a frame with 802.1Q tag header, no changes is done on the frame.

When trunk port sends a frame whose VLAN ID is not same as default PVID, the frame is sent directly. —

When trunk port sends a frame whose VLAN ID is same as the default PVID, no modification is done on the tag.

(Single Choice) Information below shows the partial interface configuration on a Huawei switch. According to this configuration, PVID of this interface is ( ).

[Quidway]display interface Ethernet 1/0/1

—

Mdi type: auto

Port link-type: access

Tagged VLAN ID: none

Untagged VLAN ID: 5

0

Not able to interpret the PVID from the information given

1

5

(Multiple Choice) Which of the following are the features of the default VLAN setting in a switch configuration? (Select 2 Answers)

The default VLAN cannot be deleted manually.

By default, the ports on all switches are member ports of a default VLAN.

A default VLAN must be created before a port is allocated to a VLAN.

The IP address configured for a switch is applied only to a member port in the default VLAN.

(Single Choice) A switch is based on port-based VLAN IDs. When the switch receives untagged frames, the VLAN ID is determined by ( ).

BPDU

PVID

MAC mapping table

IP Address

(Single Choice) How many bytes does a VLAN tag consist of?

2

3

4

5

3-GARP and GVRP exam

(Single Choice) Which of the following protocols can dynamically register VLAN information?

GVRP

GMRP

VRRP

STP

(Single Choice) GVRP is short for ?

GARP VLAN Registration Protocol

GARP VLAN Record Protocol

GARP VLAN Remark Protocol —

GARP VLAN Rewrite Protocol

(Single Choice) GVRP protocol can operate at ( ) port.

Trunk

Access

hybrid —

Normal

(Multiple Choice) Which of the following statements about the gvrp command are true?

Before port GVRP is enabled by running this command, global GVRP must be enabled.

If global GVRP is in disable state, this command can enable port GVRP.

If global GVRP is in disable state, port GVRP is also in disable state.

Enabling or disabling global GVRP is performed in the system view by running a gvrp command.

A gvrp command is used to enable GVRP, and an undo gvrp command is used to disable GVRP. By default, GVRP is ( ).

in enable state

in disable state

subject to the last VLAN operation

in an arbitrary state

(Single Choice) GVRP represents Generic VLAN registration protocol, it is an application of ( ).

GMRP

GMTP

IGMP

GARP

(Single Choice) Which of the following descriptions about GARP is incorrect?

GARP provides a mechanism by which the members in a switched network can implement distribution, propagation and registration of certain information.

In GARP working mechanism, the attribute is spread to the whole network by the process declaration-registration-declaration

GARP is called generic attribute registration protocol

GARP has only one application: GVRP

(Single Choice) A switch is configured with VLAN 3, VLAN 4 and VLAN 5. GVRP is not enabled for the trunk port. The trunk port then receives a frame with VLAN ID 6. This frame will be ( )

Flooded to all VLANs

Flooded to VLAN 1 only

Flooded to all trunk ports

Discarded

4-VLAN Routing exam

(Multiple Choice) Which of the following descriptions are correct about VLAN interface?

A virtual interface is required to be created for the VLAN if we want to assign an IP address for that VLAN,

Two VLAN interfaces on the same switch can be assigned with the same IP address

The VLAN interface number must be the same with VLAN ID

The VLAN interface can be configured for the non-existed VLAN

(Multiple Choice) Which of the following methods can realize communication between VLANs at network layer?

STP

GVRP

L2 Switch+Router

L3 Switch

(Single Choice) On huawei router,Before you configure the IP address of an Ethernet sub-port, you need to configure ( ).

MAC address

VLAN encapsulation

Global GVRP

Port GVRP

(Multiple Choice) Which of the following statements about the process of creating a VLAN are true?

The member port of this VLAN enters the active state immediately.

A routing-based interface (Vlanif) can be created for a VLAN only after the VLAN is created.

A network administrator can create a VLAN either in the global view or in the VLAN view.

A VLAN can be created only after its member port is allocated to another VLAN.

(Single Choice) Direct interconnection of traffic with different VLANs is not allowed. Such traffic must be transmitted based on ( ).

Port isolation

MAC addresses

VLAN routing

VLAN switching —

5-Wireless LAN Overview exam

(Single Choice) which of the following standards provide a transmission rate of more than 1Gbps ?

802.11b

802.11g

802.11n

802.11ac

(Multiple Choice) Which of the following WLAN standards support operation in the 5GHz range? (Two Answers).

802.11a

802.11b

802.11g

802.11n

1-Bridging Enterprise Networks with Serial WAN Technology exam

(Single Choice) In the PPP protocol, the dynamic negotiation is the same as the static negotiation in the IPCP flow. That is, in either dynamic or static negotiation, allocation of IP addresses is completed after one Config-Request dialog.

True

False

(Single Choice) Which of the following protocols requires three-way handshake and allows only username to be transmitted through network while keeping the password secret?

PAP

CHAP

MD5

TCP

(Multiple Choice) In network switching technology, circuit switching technology is based on the PSTN switching technology. Which of the following statements about circuit switching are correct? (Select 3 Answers)

Low delay

Transparent transmission, which means no modification on user data

Fixed bandwidth, utilization rate for the network resource is high

Ensure the Quality of service

(Multiple Choice) PPP protocol consists of three types of protocols, they are ( ). (Select 3 Answers)

PPPOE

LCP(Link Control Protocol)

NCP(Network Control Protocol)

PPP extension protocol

(Multiple Choice) Which of the following PPP protocols are classified into the NCP protocol? (Select 2 Answers)

IPv6CP

ICMP

IPCP

TCP

(Single Choice) HDLC is a type of bit stream-oriented protocol used at Data Link Layer and it can transparently transmit data consisting of different collections of characters.

True

False

(Single Choice) After a PPP connection is established, the VRP platform sends Echo-Request packets at the interval of ( ) seconds by default.

1

5 —

10

60

(Single Choice) HDLC is ISO standard link layer protocol and it is used to encapsulate data transmitted on asynchronous link.

True —

False

(Single Choice) One of the significant features of the PPP protocol is the authentication function. With this function, the two ends of a link can negotiate with each other to use which authentication protocol and then perform authentication. A PPP connection is established only when the authentication is successful.

True

False

(Single Choice) RTA connects with RTB through interface Serial0. The configuration on RTA is as follow:

[RTA]aaa

[RTA-aaa]local-user huawei password cipher hello

[RTA-aaa]local-user huawei service-type ppp

[RTA]interface Serial 0

[RTA-Serial0]link-protocol ppp

[RTA-Serial0]ppp authentication-mode chap

[RTA-Serial0]ip address 10.1.1.1 30

The configuration on RTB is as follow:

[RTB]interface Serial 0

[RTB-Serial0]link-protocol ppp

[RTB-Serial0]ppp chap user huawei

[RTB-Serial0]ppp chap password cipher hello

[RTB-Serial0]ip address 10.1.1.2 30

With the configuration above, RTA and RTB are able to communicate with each other.

True

False

(Multiple Choice) Which of the following components are defined by PPP protocol? (Select 3 Answers)

Data encapsulation

Data encryption

Link Control Protocol(LCP)

Network Control Protocol(NCP)

Single Choice) The PPP protocol provides a standard method of transmitting datagrams of different protocols on a point-to-point link. It is a point-to-point communication protocol widely used at the present time.

True

False

(**Multiple Choice) Which of the following statements are true? (Select 2 Answers)**

LCP negotiates on authentication information.

CHAP performs authentication by exchanging packets twice.

IPCP can be used to negotiate on IP addresses and compress information.

PAP is used for user authentication

(Single Choice) PAP requires ( )-way hand-shake.

Two

Three

Four

One

(Single Choice) All the protocols in the standard HDLC protocol suite run on synchronous serial line.

True

False

(Single Choice) How many bytes does the Maximum Receive Unit (MRU) of PPP consist of by default?

1024

1500

1518

8096

(Multiple Choice) Which of the following functions does LCP provide? (Select 3 Answers)

Negotiates to establish links. —

Negotiates to use which Layer 3 protocols. —

Disconnects a link when the idle timer of the link expires**. —**

Tests a link to check the link quality and thus to determine whether a link can be established.

(Single Choice) Which of the following descriptions about PAP and CHAP is correct?

PAP authentication requires three-way handshake

CHAP authentication requires two-way handshake —

PAP authentication uses plain text to send authentication message

CHAP authentication uses plain text to send authentication message —

(Single Choice) According to OSI reference model, which layer does PPP reside at?

Physical layer

Data link layer

Network layer —

Transport layer

(Multiple Choice) Which of the following packets belong to CHAP authentication protocol? (Select 4 Answers)

Challenge

Request

Response

Success

Failure

(Single Choice) In the PPP protocol, CHAP authentication involves exchange of three types of packets at different times. To match the Request packet with a Reply packet, each packet contains an Identifier field. In each authentication process, all the packets use the same Identifier information.

True

False

(Multiple Choice) When you configure PPP authentication method as PAP, which of the following operations are necessary? (Select 3 Answers)

Add the user name and password of the authenticated party to local user list

Configure the encapsulation type of the interface connected to the peer as PPP.

Configure PPP authentication method as CHAP

On the authenticated party end, configure the user name and password that are sent to authenticator

(Single Choice) RTA connects with RTB through interface Serial0. The configuration on RTA is as follow:

[RTA]aaa

[RTA-aaa]local-user huawei password simple quidway

[RTA-aaa]local-user huawei service-type ppp

[RTA]interface Serial 0

[RTA-Serial0]link-protocol ppp

[RTA-Serial0]ppp authentication-mode pap

[RTA-Serial0]ip address 10.1.1.1 30

The configuration on RTB is as follow:

[RTB]interface Serial 0

[RTB-Serial0]link-protocol ppp

[RTB-Serial0]ppp pap local-user huawei password simple hello

[RTB-Serial0]ip address 10.1.1.2 30

With the configuration above, RTA and RTB are able to communicate with each other.

True

False

(Single Choice) In the PPP protocol, CHAP authentication involves exchange of three types of packets at different times, namely, Challenge, Response, and Success/Failure packets.

True

False

(Single Choice) What function does the NCP protocol can provide for a PPP connection?

Error detection

User identifier authentication

Carrying of "multiple" Layer 3 protocols

Congestion control —

2-Frame Relay Principles exam

(Multiple Choice) Frame Relay has congestion avoidance mechanism, which of the following fields are used for congestion avoidance? (Select 3 Answers)

BECN

FECN

DLCI

DE

C/R

(Single Choice) Which of the following commands is used to enable dynamic address mapping protocol in the interface encapsulated with Frame Relay?

Fr inarp

Fr reverse-arp —

Inverse-arp

Reverse-arp —

(Single Choice) What does the number 30 in the following frame relay configuration command stand for?

[RTB-Serial0\]fr map ip 10.1.1.2 30

Subnet mask

DLCI

Cost

Weight

(Single Choice) The 10.1.1.2 IP address in the returned result of the frame relay command represents the IP address of the local device.

[RTA\]dis fr map-info

Map Statistics for interface Serial0 (DTE)

DLCI = 100, IP INARP 10.1.1.2, Serial0

create time = 2007/06/04 17:34:59, status = ACTIVE

encapsulation = ietf, vlink = 20, broadcast

True

False

(Single Choice) The default format for encapsulating a frame relay protocol is IETF.

True

False

(Multiple Choice) Which of the following parameters must be specified when configure static mapping for Frame Relay network? (Select 2 Answers)

Local DLCI

Remote DLCI

Local network layer protocol address

Remote network layer protocol address

(Single Choice) Frame relay point-to-multipoint sub-port can connect "multiple" remote nodes together through a PVC.

True

False

(Multiple Choice) What kind of LMI protocols does VRP support? (Select 3 Answers)

Q933a

Ansi

Cisco

Nonstandard —

(Single Choice) Which port on a UNI-side host or terminal is used to connect to frame relay network?

DTE

DCE

NNI

None of the above

(Multiple Choice) Which of the following statements about Frame Relay are true? (Select 4 Answers)

Frame Relay is a kind of fast packet switching technology that uses the simplified method to transmit and switch the data unit on data link layer.

Frame Relay implements the functions of physical layer and network layer.

In Frame Relay, flow control and error correction are implemented by higher-layer protocol and application services. This simplifies the protocols operation between devices.

Frame Relay adopts virtual circuit technology thus network resources are fully utilized

High throughput, low delay, and suitable for burst data

(Multiple Choice) The standards for Frame Relay encapsulation that Huawei router supports include ( ). (Select 2 Answers)

IETF

ANSI

Q.933a

Nonstandard

(Multiple Choice) Which of the following parameters are defined in Frame Relay? (Select 3 Answers)

BC (Committed Burst Size)

BE (Excess Burst Size)

TTL (Time to Live)

CIR (Committed Information Rate)

(Multiple Choice) When configure Frame Relay sub-interface on VRP platform, which of the following sub interfaces type are available? (Select 2 Answers)

P2P

NBMA

P2MP

Broadcastb —

(Multiple Choice) Which of the following DLCI numbers are used by Frame Relay LMI ? (Select 2 Answers)

0

16

1007

1023

(Single Choice) Frame Relay implements the function of ( )only.

Data Link Layer and Network layer

Network layer and Transport Layer

Transport Layer and Session Layer

Physical Layer and Data Link layer

(Single Choice) On a port running frame relay, an MAP table corresponds to a logical port. Different logical ports have different MAP tables.

True

False

(Multiple Choice) A Frame Relay network consists of 12 routers, how many PVCs are built in a full mesh network?

6

132

66

12

(Multiple Choice) The distance vector routing protocol uses a split horizon mechanism. This makes a frame relay node connecting "multiple" peer devices together fail to transmit the route information to all peer devices. Which of the following methods can solve this problem? (Select 3 Answers)

Use "multiple" physical ports to connect "multiple" adjacent nodes together.

Use "multiple" logical sub-ports of a physical port.

Disable the split horizon function and take into account the risk resulting from a loop.

Ignore the risk resulting from a routing loop because no routing loop occurs in any case.

(Multiple Choice) Frame Relay operates at data link layer, which of the following are the functions of Frame Relay? (Select 3 Answers)

- **Statistical time division multiplexing**
- **Transparent transmission of the frame**
- **Error detection**
- Retransmission

(Single Choice) When you configure Frame Relay on Quidway routers, you can configure Inverse ARP instead of static address mapping because the function of Inverse ARP is to provide dynamic address mapping.

True

False

(Multiple Choice) What are functions of Inverse ARP? (Select 2 Answers)

- Find the hardware address of the device according to its IP address —
- Find the DLCI number of the connection
- Find the IP address of the remote device based on virtual circuit in Frame Relay network
- **Establish the mapping relationship between IP address of remote device and DLCI**

(Multiple Choice) On Frame Relay, VC (Virtual Circuit) is a logical circuit between two network devices. It can be divided into ( ) (Select 2 Answers)

- **SVC(Static Virtual Circuit)**
- TVC(temporary Virtual Circuit)
- **PVC(Permanent Virtual Circuit)**
- SVC(Switching Virtual Circuit)

3-Establishing DSL Networks with PPPoE exam

(Single Choice) In the PPP protocol, which of the following encryption algorithms is used by CHAP?

DES

MD5

AES

None

(Single Choice) In the PPP protocol, the dynamic negotiation is the same as the static negotiation in the IPCP flow. That is, in either dynamic or static negotiation, allocation of IP addresses is completed after one Config-Request dialog.

True

False

(Single Choice) What function does the NCP protocol can provide for a PPP connection?

Error detection

User identifier authentication

Carrying of "multiple" Layer 3 protocols

Congestion control

(Multiple Choice) Which of the following components are defined by PPP protocol?

Data encapsulation

Data encryption

Link Control Protocol(LCP)

Network Control Protocol(NCP)

(Multiple Choice) Which of the following packets belong to CHAP authentication protocol?

Challenge

Request

Response

Success

Failure

(Multiple Choice) PPP protocol consists of three types of protocols, they are ( ).

PPPOE

LCP(Link Control Protocol)

NCP(Network Control Protocol)

PPP extension protocol

(Single Choice) Which of the following protocol is required in negotiation to compress the TCP/IP packet header for a PPP link?

LCP

PAP

IPCP

CHAP

(Single Choice) In the Internet, two technologies are widely used to access services and support both dial-up connections and connections through private lines. One of them is ADSL. What is the other technology?

LAN

WAN

MSTP

Metro

4-Network Address Translation exam

(Single Choice) What type of network addresses can be translated by NAT?

IP

IPX

AppleTalk

DECNET

(Single Choice) Which of the following technologies can allow a host with IP address 10.0.0.1 to access the internet?

Static route

Dynamic route

Route import

NAT

(Multiple Choice) Which of the following statements are correct about NAT?

NAT is the abbreviation for Network Address Translation

NAT is used for translation between private network address and public network address.

When hosts inside a private network access the outside network, NAT is not needed at all.

NAT provides an effective way to solve the problem of insufficient IP address.

(Single Choice) Which of the following problems can be solved by NAT?

Saving Internet public address
Improving the forwarding performance of routers
Enhancing the security of data transmission
Protecting computers from viruses attacks

(Multiple Choice) What type of network addresses can be translated by NAT?

IP
IPX
AppleTalk
DECNET

5-Establishing Enterprise RAN Solutions exam

(Single Choice) Which of the following is a typical WWAN?

2G network
3G network
4G network
All of the above

3 — Securing the Enterprise Network

1-Access Control Lists exam

(Multiple Choice)

[RTA]acl 2002

[RTA-acl-basic-2002]rule permit source 20.1.1.1 0

[RTA-acl-basic-2002]rule permit source 30.1.1.1 0

Refer to the configuration output. A network administrator configured the ACL on router RTA, as shown. Which of the following statements regarding the rule order are correct? (Two Answers).

The rule-number of the second rule is 2

The rule-number of the first rule is 5

The rule-number of the first rule is 1

The rule-number of the second rule is 10

(Multiple Choice) What of the following statements is correct regarding access control list types and ranges?

A layer 2 ACL value ranges from 4000-4999

An interface ACL value ranges 1000-2000

An advanced ACL value ranges from 3000-4000

A basic ACL value ranges from 1000-2999

(Multiple Choice) Following a failure of services in the network, an administrator discovered that the configuration in one of the enterprise routers had been changed. What actions can be taken by the administrator to prevent further changes? (Three Answers)

The administrator should limit access by setting the login privilege of users to 0.

The administrator should configure AAA to manage user authorization on the router.

The administrator should configure an ACL to allow only the administrator to manage the router.

The administrator should configure port-security on the router

(Multiple Choice) Which of the following are the disadvantages of packet filtering firewall?

Complicated configuration and can result in a lot of problems due to mis-configuration

As the complexity and length of ACL increase, its performance will degrade greatly

Simple configuration

Low overhead, high processing speed

(Single Choice) Which of the following parameters is not used by Advanced ACL?

source interface

destination port number

protocol number

time-range

(Multiple Choice) Packet filtering firewall filters packet based on quintuplet. Which of the following are the components of quintuplet?

IP address

Protocol number

Port number

Application program

MAC address

(Single Choice) This type of firewall directly obtains the information such as source IP address, destination IP address, source TCP/UDP port, destination TCP/UDP port and protocol number in the packet header and filters the packets based on the defined policy. Which of the following is the firewall described above

Packet filtering firewall

Proxy firewall

Stateful firewall

Link-layer firewall

2-AAA exam

(Multiple Choice) Assume that a user is Telneting a router. In this case, which of the following statements are true?

The router authenticates the user password.

The router may perform local authentication based on AAA.

The router may perform remote authentication based on AAA.

The router does not authenticate the user.

(Multiple Choice) An administrator currently manages AR2200 devices in the network through a single password, however the company wishes to introduce another two administrators and provide unique user credentials and privilege levels for telnet access to the network devices. What action can be taken? (Three Anwsers)

Configure three users under the AAA-view, and assign each a different password.

The authentication mode must be changed to AAA.

Each administrator must be assigned a privilege level.

A public IP address must be assigned to each user for telnet access.

(Single Choice) The users who log on the router through Telnet are not permitted to configure IP address. What is the possible reason?

Communication failures occur between the user and the router.

The authentication mode of Telnet is set incorrectly.

Privilege level of Telnet is set incorrectly.

SNMP parameters are set incorrectly.

(Multiple Choice) Which of the following authentication methods are supported for Telnet users? (Select 3 Answers)

Password authentication

AAA local authentication

MD5 authentication

No authentication —

3-Securing Data with IPsec VPN exam

(Multiple Choice) IPsec VPN uses ESP to encrypt which fields ?

TCP, Data and ESP Trailer

ESP, TCP and Data

ESP, TCP, Data and ESP Trailer

ESP, TCP, Data, ESP Trailer and ESP Auth

(Multiple Choice) If AH and ESP are both required to protect data streams between IPsec peers, how many Security Associations (SA) are required in total?

2

3

4

(Multiple Choice) A virtual private network (VPN) can be divided into different parts by layer. What are these parts?

L2VPN

L3VPN

VPDN

GRE VPN

(Single Choice) Two routers establish an IPsec tunnel, which of the following does not need to be the same on both peering devices?

Encapsulation mode

Transform mode

Proposal name

authentication algorithm

(Multiple Choice) The data is transmitted using IPsec tunnel mode. The fields of which headers will be authenticated?

TCP and Data

Origin IP, TCP and Data

AH, Origin IP, TCP and Data

The fields of all headers —

4-Generic Routing Encapsulation exam

(Multiple Choice) Two hosts communicate through a GRE tunnel. When the GRE tunnel is up, the network administrator configures a static route on RTA to route packets to Host B. Which of the following commands will achieve this?

ip route-static 10.1.2.0 24 GigabitEthernet0/0/1

ip route-static 10.1.2.0 24 200.2.2.1

ip route-static 10.1.2.0 24 200.1.1.1

ip route-static 10.1.2.0 24 tunnel 0/0/1

(Multiple Choice) RTA and RTB have established a GRE tunnel, but only RTA has enabled the keepalive function. When RTB receive a keepalive message from RTA, how will RTB respond?

RTB will discard the keepalive message.

RTB willl record receipt of the keepalive message but won't reply

RTB will send a keepalive in response.

RTB will send a keepalive reply and begin to actively send keepalive messages.

Module 4 — Enterprise Network Management Solutions

1-Simple Network Management Protocol exam

(Multiple Choice) which version of SNMP supports data encryption?

SNMPv1

SNMPv2

SNMPv2c

SNMPv3

(Multiple Choice) eSight supports which of the following SNMP versions in order to manage devices? (Three Answers).

SNPMv1

SNPMv2

SNPMv2c

SNPMv3

(Single Choice) The Network Management Station uses SNMP to manage devices, which SNMP message is sent when an SNMP registered abnormal event occurs?

get-response

set-request

trap

get-request

(Single Choice) Which of the following statements regarding traps in SNMP is correct?

Traps are transmitted using UDP to destination port number 162.

Traps are transmitted using UDP to destination port number 161.

Traps are transmitted using TCP to destination port number 162.

Traps are transmitted using TCP to destination port number 161.

2-eSight Network Management Solutions exam

(Multiple Choice) Which of the following descriptions regarding eSight is not correct?

eSight is used to monitor and manage enterprise networks.

eSight supports only Huawei devices

eSight supports WLAN management and monitoring of hotspot coverage.

eSight supports the backup of configuration files and network traffic analysis.

Module 5 — Supporting IPv6 Networks

1-Introducing IPv6 Networks exam

(Multiple Choice) Which of the following IPv6 addresses can be configured on a router's interface? (Two Answers).

fe80:13dc::1/64 1 4

ff00:8a3c::9b/64 1 2 3

::1/128 3 4

2001:12e3:1b02::21/64 2

(Multiple Choice) Which of the following formats represent an accurate condensing of the IPv6 address 2031:0000:720C:0000:0000:09E0:839A:130B? (Two Answers).

2031:0:720C:0:0:9E0:839A:130B 1

2031:0:720C:0:0:9E:839A:130B 1

2031::720C::9E0:839A:130B 2

2031:0:720C::9E0:839A:130B 2

(Single Choice) The IPv6 address achitecture does not include which of the following address types?

unicast

multicast

broadcast

anycast

(Single Choice) Interface G0/0/1 on RTA contains a MAC address of 00e0-fc03-aa73 and is configured with the IPv6 address 2001::2E0:FCFF:FE03:AA73. Which method is most likely to have been used to configure the interface IPv6 address?

DHCPv6

ARP

EUI-64

Auto-link

(Multiple Choice) Which of the following descriptions regarding IPv6 addresses are correct? (Two Answers)

IPv6 addresses are 64 bits in length.

IPv6 addresses are 128 bits in length.

IPv6 extension headers are processed in order.

IPv6 extension headers are processed randomly.

2-IPv6 Routing Technologies exam

(Single Choice) In a small network suppporting IPv6, a network administrator wishes implement RIPng. Which of the following commands should be used to enable this protocol?

[RTA-GigabitEthernet0/0/0]ripng 1 enable

[RTA]ripng 1 enable

ripng 1 enable

[RTA-ripng-1]ripng 1 enable

(Multiple Choice) In a network supporting IPv6, OSPF no longer supports which feature?

multiple areas

Router-ID

authentication

multicast updates

(Single Choice) Two routers are configured with OSPFv3. OSPFv3 is enabled on all interfaces of each router. Which of the following is true in the event that the network administrator does not configure a Router-ID?

The IP address of the loopback 0 interface will be used as the router ID

The IP address of the loopback 1 interface will be used as the router ID

The IP address of interface G0/0/0 will be used as the router ID

No router ID will be assigned to the router.

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Наши контакты

Почта: info@mypets.by
Skype: thedarkneo87