

HCIA TRAINING

APRIL 2020

EXERCISE 1

Question 1

(Single Choice) Coaxial cables can be classified into different types by diameter. One of these types of the coaxial cables is suitable for relatively large LAN because it supports long distance and provides high reliability. Which of the following coaxial cables belongs to this type?

- A.Coaxial cable with a large diameter
- B.Coaxial cable with a small diameter
- C.10-core coaxial cable
- D.16-core coaxial cable

Correct Answer: A

Question 2

(Single Choice) A transmission medium consists of glass fibers and a shield layer. It is free from interference of magnetic signals and provides high-speed and long-distance transmission. But such a matter is very expensive. What is this matter?

- A.Coaxial cable
- B.Twisted pair cable
- C.Optical fiber
- D.Waveguide fiber

Correct Answer: C

Question 3

(Multiple Choice) Which device operates at physical layer?

- A.Switch
- B.Hub
- C.Router
- D.Firewall

Correct Answer: B

Question 4

(Multiple Choice) What are transmission media of physical layer?

- A.Fiber
- B.Twisted pair cable
- C.Radio wave
- D.Ethernet

Correct Answer: ABC

Question 5

(Multiple Choice) What are wiring standards for physical layer related to LAN?

- A.100Base-T
- B. HDLC
- C.100Base-FX
- D.1000Base-SX/LX

Correct Answer: ACD

Question 6

(Multiple Choice) Which of the following are physical interfaces?

- A.Dialer interface
- B.Voice interface
- C.Serial interface
- D.Sub interface
- E.CE1/PRI interface
- F. Virtual interface template
- G.. ISDN BRI interface

Correct Answer: BCEG

Question 7

(Single Choice) Which of the following fibers allows for multiangular incidence of "multiple" beams of light for transmission?

- A.4-core fiber
- B."Single"-mode fiber
- C.Multimode fiber
- D.Active fiber

Correct Answer: C

Question 8

(Single Choice) To improve a twisted pair cable's capability to withstand magnetic interference, which of the following layers can be added as a shield layer of the twisted pair cable?

- A.STP
- B.UTP
- C.BTP
- D.RPR

Correct Answer: A

Question 9

(Single Choice) Both analog transmission and digital transmission can use twisted pair cables. Which of the following statement is true?

- A.The communication distance increases with the diameter of the conductor.
- B.The communication distance decreases with the diameter of the conductor.
- C.The communication distance is independent of the diameter of the conductor.
- D.The communication distance increases with the diameter of the conductor when the communication distance exceeds 50 km.

Correct Answer: A

Question 10

(Multiple Choice) Which transmission rates does an Ethernet allow for?

- A.10Mbps
- B.100Mbps
- C.1000Mbps
- D.155M bps

Question 11

(Single Choice) After receiving a data frame from any port, a hub forwards it to any other port.

- T.True
- F.False

Correct Answer: T

Question 12

(Single Choice) Which communication mode does a hub work in?

- A.Simplex
- B.Half-duplex
- C.Full-duplex mode
- D.Auto-negotiation

Correct Answer: B

Question 13

(Single Choice) multiple PCs are connected to the same hub through twisted pair cables. What's its logical topology structure?

- A.Star
- B.Tree
- C.Mesh
- D.Ring
- E.Bus

Correct Answer: E

Question 14

(Single Choice) Under Which of the following circumstances, "multiple" work stations belong to the same collision domain?

- A."multiple" workstations are connected to a hub through twisted pair cables
- B."multiple" workstations are connected to a LAN switch through twisted pair cables
- C."multiple" workstations are connected to a router through twisted pair cables
- D."multiple" workstations are connected to a bridge through twisted pair cables

Correct Answer: A

Question 15

(Single Choice) How to eliminate the collision in Ethernet?

- A.Increase the length of cable
- B.Decrease the number of transmitted packets
- C.Decrease the number of users on each network segment
- D.Replace the hub and repeater with switch or bridge

Correct Answer: D

Question 16

(Single Choice) Which of the following statements regarding collision is incorrect?

- A.Each ports of switch is an independent collision domain.
- B.The collision that happens in the network connected with one port of a switch will affect another network connected with another port of the switch.
- C.The number of the collision domains will be increased if the hub in the network is replaced with the bridge.
- D.Reduce the number of hosts in a network can decrease probability of collision.

Correct Answer: B

Question 17

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

- A.Sender
- B.Receiver
- C.Harddisk
- D.Message
- E.Protocol

Correct Answer: ABDE

Question 18

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

- A.IEEE
- B.ITU-T
- C.IETF
- D.ETSI

Correct Answer: A

Question 19

(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.

- T. True
- F. False

Correct Answer: T

Question 20

(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?

- A.ISO
- B.IEEE
- C.ITU
- D.IETF

Correct Answer: A

Question 21

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

- A.Organization Standard Institute
- B.Organization Standard Interconnection
- C.Open System Internet
- D.Open System Interconnection

Correct Answer: D

Question 22

(Single Choice) How many layers are included in OSI reference model?

- A.3
- B.5
- C.6
- D.7

Correct Answer: D

Question 23

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

- A.Added
- B.Removed
- C.Rearranged
- D.Modified

Correct Answer: A

Question 24

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

- A.3
- B.4
- C.6
- D.7

Correct Answer: B

Question 25

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

- A.Data link layer
- B.Application layer
- C.Physical layer
- D.Network layer

Correct Answer: C

Question 26

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

- A.Transport layer
- B.Data link layer
- C.Network layer
- D.Physical layer

Correct Answer: D

Question 27

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

- A.Frame
- B.Packet
- C.Segment
- D.Binary bit flow

Correct Answer: D

Question 28

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

- A.Binary bit flow
- B.Frame
- C.Packet
- D.Segment

Correct Answer: B

Question 29

(Multiple Choice) Data link layer has two sub-layers, they are ().

- A.PVC sub-layer
- B.MAC sub-layer
- C.LLC sub-layer
- D.VC sub-layer

Correct Answer: BC

Question 30

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

- A.Segment
- B.Packet
- C.Bit
- D.Frame

Correct Answer: B

Question 31

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

- A.Ensure the correctness of data transmission
- B.Control the forwarding and routing of data packet
- C.Control transmission of bit flow
- D.Error correction and flow control

Correct Answer: B

Question 32

(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.

- A.Layer 2
- B.Layer 3
- C.Layer 4
- D.Layer 5

Correct Answer: D

Question 33

(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?

- A.Hardware
- B.Software
- C.Both hardware and software
- D.Either software or hardware

Correct Answer: B

Question 34

(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?

- A.Data Link Layer
- B.Physical Layer
- C.Network Layer
- D.Transport Layer

Correct Answer: D

Question 35

(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?

- A.Presentation Layer
- B.Session Layer
- C.Network Layer
- D.Application Layer

Correct Answer: A

Question 36

(Single Choice) In the OSI reference model, one layer converts bits into bytes and then into frames in addition to providing medium access. Which of the following layers stands for this layer?

- A.Data Link Layer
- B.Session Layer
- C.Network Layer
- D.Application Layer

Correct Answer: A

Question 37

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

- A.Data Link Layer
- B.Physical Layer
- C.Network Layer
- D.Application Layer

Correct Answer: B

Question 38

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

- A.802.2
- B.802.4
- C.HDLC
- D.PPP

Correct Answer: CD

Question 39

(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?

- A.Data link layer
- B.Network layer
- C.Transport layer
- D.Session layer
- E.Presentation layer
- F. Application layer

Correct Answer: DEF

Question 40

(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?

- A.Physical, Data link, Network, Transport, Session, Presentation, Application
- B.Physical, Data link, Network, Transport, Presentation, Session, Application
- C.Physical, Transport, Data link, Network, Presentation, Session, Application
- D.Physical, Data link, Transport, Presentation, Network, Session, Application

Correct Answer: A

Question 41

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

- A.Physical address definition
- B.Network topology discovery
- C.Routing
- D.Physical medium access
- E.Error checking

Correct Answer: ABDE

Question 42

(Multiple Choice) Which of the following are the advantages of OSI reference model?

- A.Divide the complex network into simple components
- B.Make it impossible for network engineers to concentrate on design and development of module functions
- C.Define standard interface to realize compatibility for different manufacturers
- D.Divide complicated network problem into simple problems to make it easier for learning and operation

Correct Answer: ACD

Question 43

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

- A.Router
- B.Email Server
- C.Layer three switch
- D.Network management server

Correct Answer: BD

Question 44

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

- A.Increase the collision
- B.Higher throughput
- C.Higher port density
- D.Isolate collision domains

Correct Answer: BCD

Question 45

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

- A.Source MAC address
- B.Destination MAC address
- C.Source IP address

D.Destination IP address

Correct Answer: B

Question 46

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

A.Receive all the data frames in the network segment

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

C.Layer 3 packet forwarding

D.Maintain MAC address table with aging mechanism

Correct Answer: ABD

Question 47

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

A.8

B.4

C.16

D.24

Correct Answer: A

Question 48

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

A.2

B.4

C.8

D.32

Correct Answer: B

Question 49

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

A.40-1500

B.46-1500

C.64-1500

D.64-1518

Correct Answer: B

Question 50

67. (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?

A.7

B.8

C.9

D.10

Correct Answer: B

Question 51

(Multiple Choice) In general, IP address consists of ()

A.Logic address

B.Link address

C.Network address

D.Host address

Correct Answer: CD

Question 52

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

A.Layer 2

B.Layer 3

C.Layer 4

D.Layer 5

Correct Answer: B

Question 53

(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?

A.From upper to lower

B.From lower to upper

- C.From Transport Layer to the lower layers
- D.From Network Layer to the upper layers

Correct Answer: B

Question 54

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

- A.Host address
- B.Private address
- C.Network address
- D.Subnet address

Correct Answer: B

Question 55

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

- A.255.0.0.0
- B.255.255.0.0
- C.255.255.255.0
- D.255.225.255.255

Correct Answer: B

Question 56

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

- A.254
- B.16K
- C.64K
- D.2M

Correct Answer: C

Question 57

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

- A.125.0.0.0
- B.125.3.0.0
- C.125.3.54.0
- D.125.3.54.32

Correct Answer: A

Question 58

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

- A.Class A
- B.Class B
- C.Class C
- D.Class D

Correct Answer: D

Question 59

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

- A.127.0.0.0
- B.130.0.0.0
- C.164.0.0.0
- D.200.0.0.0

Correct Answer: A

Question 60

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

- A.0---126
- B.0---127
- C.1---126
- D.1---127

Correct Answer: C

Question 61

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

- A.1024
- B.65025
- C.254
- D.48

Correct Answer: C

Question 62

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

- A.Specify the network to which hosts belong
- B.Identify the host in the network
- C.Specify the network by which devices can communicate with each other
- D.Specify the network node which belongs to subnet address

Correct Answer: A

Question 63

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

- A.Network address
- B.Broadcast address of the specified network segment
- C.All networks
- D.Broadcast address of all the network nodes

Correct Answer: C

Question 64

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

- A.A
- B.B
- C.C
- D.D

Correct Answer: B

Question 65

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

- A.190.0.0.0
- B.190.233.0.0
- C.190.233.27.0
- D.190.233.27.1

Correct Answer: B

Question 66

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

- A.Class A
- B.Class B
- C.Class D
- D.Class E

Correct Answer: C

Question 67

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

- A.8
- B.16
- C.24
- D.32

Correct Answer: C

Question 68

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

- A.Network address
- B.Host address
- C.Subnet network segment
- D.Default subnet mask

Correct Answer: B

Question 69

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

- A.8
- B.14
- C.16
- D.22

Correct Answer: B

Question 70

(Single Choice) The subnet mask of a class A address is 255.255.240.0. How many bits are used for sub-netting?

- A.4
- B.5
- C.9
- D.12

Correct Answer: D

Question 71

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

- A.6
- B.8
- C.12
- D.14

Correct Answer: A

Question 72

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

- A.254
- B.1024
- C.65,534
- D.16,777,206

Correct Answer: C

Question 73

(Single Choice) What is the abbreviation of VLSM?

- A.Variable Length Subnet Masking
- B.Variable Length Shortest Masking
- C.Very Long/Shortest Masking
- D.Variable Long Subnet Masking

Correct Answer: A

Question 74

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

- A.16
- B.8
- C.15
- D.14
- E.7

Correct Answer: D

Question 75

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

- A.11111111 11110000 00000000 00000000
- B.11111111 11111111 00001111 00000000
- C.11111111 11111111 11000000 00000000
- D.11111111 11111111 11111111 00000000

Correct Answer: C

Question 76

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

- A.171
- B.193
- C.203
- D.207

Correct Answer: C

Question 77

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

- A.10.0.0.25/30
- B.10.0.0.23/30
- C.10.0.0.26/30
- D.10.0.0.22/30

Correct Answer: C

Question 78

(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.

T.True

F.Flase

Correct Answer: T

Question 79

(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?

A.00001011.01101110.01100000.10000100

B.0b.6e.60.84

C.0.b.6.e.6.0.8.4

D.0.1011.0110.1110.0110.0.1000.0100

Correct Answer: B

Question 80

(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?

A.Network address

B.Broadcast address of a specific network segment

C.All the networks

D.Broadcast addresses of all the nodes in the specified network

Correct Answer: B

Question 81

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

A. 2^{n-1}

B. 2^{n-2}

C. $2^n - 1$

D. 2^n

Correct Answer: B

Question 82

(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?

A.101

B.100

C.110

D.10

Correct Answer: C

Question 83

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

A.255.255.255.240

B.255.255.255.248

C.255.255.255.224

D.255.255.255.252

Correct Answer: A

Question 84

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

A.192.168.1.0

B.192.168.1.4

C.192.168.1.6

D.192.168.1.7

Correct Answer: A

Question 85

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

- A.Address space of sub-network must meet the practical requirements. At the same time, redundancy is needed to ensure the extensibility
- B.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.
- C.The size of the sub-network should be integral power of two make it easier for the implementation of various policies.
- D.All of the statements above are correct but none of them can be used in actual network implementation.

Correct Answer: AC

Question 86

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

- A.127.2.3.5
- B.1.255.255.2/24
- C.225.23.200.9
- D.192.240.150.255/24

Correct Answer: B

Question 87

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

- A.Network address and host address
- B.Host address and network mask
- C.Network address and network mask
- D.Host address and host number

Correct Answer: A

Question 88

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

- A.Host portion can be either all one or all zero
- B.Network portion can be either all one or all zero
- C.Network portion can be neither all one nor all zero
- D.IP host address can be either all one or all zero

Correct Answer: C

Question 89

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

- A.224.0.0.5/24
- B.127.32.5.62/8
- C.202.112.5.0/24
- D.162.111.111.111/16

Correct Answer: D

Question 90

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

- A.Broadcast
- B.Multicast
- C.Unicast
- D.Directcast

Correct Answer: C

Question 91

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

- A.255.255.0.0
- B.255.255.224.0
- C.255.255.24.0
- D.The subnet mask varies according to the class of IP address

Correct Answer: B

Question 92

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

- A.8
- B.16
- C.24
- D.Class D address does not have the subnet mask

Correct Answer: D

Question 93

(Single Choice) 172.16.10.32/24 is ()

- A. Network address
- B. Host address
- C. Multicast address
- D. Broadcast address

Correct Answer: B

Question 94

(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?

- A. 2, 2, 62
- B. 3, 8, 30
- C. 4, 14, 14
- D. 5, 30, 6

Correct Answer: B

Question 95

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

- A. 10.1.128.255
- B. 10.1.63.255
- C. 10.1.127.255
- D. 10.1.126.255

Correct Answer: C

Question 96

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

- A. 101.11.100.255
- B. 101.11.101.255
- C. 101.11.103.255
- D. 101.255.255.255

Correct Answer: C

Question 97

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

- A. 201.1.7.255
- B. 201.1.0.255
- C. 201.1.1.255
- D. 201.0.0.255

Correct Answer: A

Question 98

55. (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?

- A. 172.128.0.0/21
- B. 172.128.0.0/19
- C. 172.128.12.0/22
- D. 172.128.20.0/20

Correct Answer: B

Question 99

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

- A. 192.168.1.0-192.168.15.0 can be aggregated to 192.168.0.0/19
- B. 192.168.1.0-192.168.15.0 can be aggregated to 192.168.0.0/20
- C. 192.168.1.0-192.168.15.0 can be aggregated to 192.168.0.0/21
- D. 192.168.1.0-192.168.15.0 can be aggregated to 192.168.0.0/22

Correct Answer: B

Question 100

(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?

- A. 172.168.16.0/21
- B. 172.168.17.0/21
- C. 172.168.16.0/22
- D. 172.168.20.0/20

Correct Answer: C

Question 101

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

- A. Class C address
- B. Broadcast address in a specific network segment
- C. Invalid address
- D. Private address

Correct Answer: AB

Question 102

(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?

- A. 12.32.59.160
- B. 129.32.59.17
- C. 158.32.59.64
- D. 220.32.59.128

Correct Answer: A

Question 103

(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?

- A. 4, 62
- B. 8, 62
- C. 16, 14
- D. 32, 14

Correct Answer: A

Question 104

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

- A. 510
- B. 512
- C. 1022
- D. 2046

Correct Answer: D

Question 105

(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?

- A. 255.255.224.0
- B. 255.255.255.224
- C. 255.255.255.240
- D. No appropriate subnet mask is available

Correct Answer: D

Question 106

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

- A. 172.168.20.0
- B. 172.168.24.0
- C. 172.168.32.0
- D. 172.168.48.0

Correct Answer: A

Question 107

(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 ()

- A. 192.168.12.32 192.168.12.127
- B. 192.168.0.0 255.255.255.255
- C. 192.168.12.43 255.255.255.128
- D. 192.169.12.128 255.255.255.128
- E. 192.168.12.0 192.168.12.127

Correct Answer: E

Question 108

(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?

- A. 512, 126
- B. 1022, 62
- C. 1024, 62
- D. 256, 254
- E. 192, 254

Correct Answer: C

Question 109

(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?

- A. 190.5.4.0, 190.5.7.255
- B. 190.5.4.0, 255.255.255.255
- C. 190.5.0.0, 190.5.4.255
- D. 190.5.4.0, 190.5.4.255

Correct Answer: A

Question 110

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

- A. 192.168.2.15/28
- B. 10.0.2.128/26
- C. 122.245.264.13/26
- D. 12.3.4.6/24
- E. 224.0.4.5

Correct Answer: D

Question 111

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

- A. 190.5.4.0, 190.5.7.255
- B. 190.5.4.0, 190.5.4.255
- C. 190.5.4.0, 190.5.4.254
- D. 190.5.1.0, 190.5.1.255

Correct Answer: A

Question 112

(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?

- A. 10.110.48.10 mask 255.255.248.0
- B. 10.110.43.10 mask 255.255.0.0
- C. 10.110.43.10 mask 255.255.248.0
- D. 10.110.48.10 mask 255.255.252.0

Correct Answer: AB

Question 113

(Single Choice) Which of the following host IP address is within the same network segment with 10.110.12.29 /27?

- A. 10.110.12.0
- B. 10.110.12.30
- C. 10.110.12.31
- D. 10.110.12.32

Correct Answer: B

Question 114

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

- A. It's a broadcast address
- B. It's a network address
- C. It's a private address
- D. It belongs to the network segment 192.168.19.0
- E. It belongs to the network segment 192.168.16.0
- F. It's a public address

Correct Answer: CE

Question 115

(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?

- A.62
- B.30
- C.14
- D.6

Correct Answer: B

Question 116

(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?

- A.199.32.59.64
- B.199.32.59.65
- C.199.32.59.192
- D.199.32.59.224

Correct Answer: A

Question 117

(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?

- A.12.28.255.255
- B.12.28.69.255
- C.12.28.75.255
- D.12.255.255.255

Correct Answer: C

Question 118

(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?

- A.256
- B.128
- C.64
- D.32

Correct Answer: B

Question 119

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

- A.220.32.59.192
- B.220.32.59.128
- C.220.32.59.254
- D.220.32.59.0

Correct Answer: B

Question 120

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

- A.Physical Layer
- B.Layer 2
- C.Layer 3
- D.Application Layer

Correct Answer: B

Question 121

(Single Choice) Which address of an Ethernet frame is used by a Layer 3 switch to determine whether to perform Layer 2 forwarding or Layer 3 forwarding?

- A.Destination MAC address
- B.Source MAC address
- C.Destination IP address
- D.Source IP address

Correct Answer: A

Question 122

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

- A. A Layer 3 switch provides Layer 3 functions while providing Layer 2 functions.
- B. Many Layer 3 switches provide exact search and perform Layer 3 forwarding based on Layer 3 functions.
- C. All Layer 3 switches provide only ATM port.
- D. Some high-end Layer 3 switches provide high-speed POS ports to improve the upstream link efficiency.

Correct Answer: ABD

Question 123

(Single Choice) If the network address 172.29.100.0/16 is subnetted, which of the following valid VLSM subnets can be obtained?

- A. 172.29.100.8/28
- B. 172.29.100.32/28
- C. 172.29.100.60/28
- D. 172.29.100.104/28

Correct Answer: B

Question 124

(Single Choice) For a network like 175.25.128.0/19, the mask value is?

- A. 255.255.0.0
- B. 255.255.224.0
- C. 255.255.24.0
- D. Different based on the address type

Correct Answer: B

Question 125

(Multiple Choice) A company has four departments. Department A has 80 PCs, Departments B and C both have 20 PCs, and Department D has 30 PCs. Assuming the IP address

192.168.1.0/x is used, which of the following statements are true if the VLSM technology is used to divide subnets?

- A. Plan subnet 192.168.1.0/25 for Department A. The range of host addresses is 1 to 126.
- B. Plan subnet 192.168.1.128/27 for Department B. The range of host addresses is 129 to 159.
- C. Plan subnet 192.168.1.160/27 for Department C. The range of host addresses is 161 to 190.
- D. Plan subnet 192.168.1.192/27 for Department D. The range of host addresses is 192 to 222.

Correct Answer: AC

Question 126

(Single Choice) In Ethernet standard, which of the following mechanisms is used to avoid collision when different nodes transmit packets simultaneously?

- A. CSMA/CA
- B. CSMA/DA
- C. CSMA/CD
- D. CSMA/AC

Correct Answer: C

Question 127

(Single Choice) The distance limit of category 5 UTP wiring is ().

- A. 100 meters
- B. 200 meters
- C. 50 meters
- D. 185 meters

Correct Answer: A

Question 128

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

- A. FF-FF-FF-FF
- B. FF-FF-FF-FF-FF-FF
- C. 00-00-00-00-00-00
- D. 00-00-00-FF-FF-FF

Correct Answer: B

Question 129

(Single Choice) Which of the following protocols are related to WAN?

- A. Ethernet
- B. PPP
- C. HDLC
- D. UDP

Correct Answer: BC

Question 130

(Single 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?

- A.Physical, Data link, Network, Transport, Session, Presentation, Application
- B.Physical, Data link, Network, Transport, Presentation, Session, Application
- C.Physical, Transport, Data link, Network, Presentation, Session, Application
- D.Physical, Data link, Transport, Presentation, Network, Session, Application

Correct Answer: A

Question 132

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

- A.6
- B.12
- C.24
- D.48

Correct Answer: D

Question 133

(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?

- A.00e0fc
- B.0010fe
- C.000001
- D.0003cf

Correct Answer: A

Question 134

(Single Choice) After receiving a data frame from any port, a hub forwards it to any other port.

- T. True
- F. False

Correct Answer: T

Question 135

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

- A.Network address
- B.Broadcast address of the specified network segment
- C.All networks
- D.Broadcast address of all the network nodes

Correct Answer: C

Question 136

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

- A.11111111 11110000 00000000 00000000
- B.11111111 11111111 00001111 00000000
- C.11111111 11111111 11000000 00000000
- D.11111111 11111111 11111111 00000000

Correct Answer: C

Question 137

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

- A.171
- B.193
- C.203
- D.207

Correct Answer: C

Question 138

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

- A.Segment->Packet->Frame->Bit->Data
- B.Bit ->Segment ->Packet->Frame->Data
- C.Data->Packet->Segment ->Frame->Bit
- D.Data->Segment->Packet->Frame->Bit

Correct Answer: D

Question 139

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

- A. Network address
- B. Host address
- C. Subnet network segment
- D. Default subnet mask

Correct Answer: B

Question 140

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

- A. 127.2.3.5
- B. 1.255.255.2/24
- C. 225.23.200.9
- D. 192.240.150.255/24

Correct Answer: B

Question 141

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

- A. 201.1.7.255
- B. 201.1.0.255
- C. 201.1.1.255
- D. 201.0.0.255

Correct Answer: A

Question 142

(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?

- A. 172.128.0.0/21
- B. 172.128.0.0/19
- C. 172.128.12.0/22
- D. 172.128.20.0/20

Correct Answer: B

Question 143

(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?

- A. 12.32.59.160
- B. 129.32.59.17
- C. 158.32.59.64
- D. 220.32.59.128

Correct Answer: A

Question 144

(Single Choice) Which of the following addresses is an example of a broadcast address for a class B network with a 16-bit subnet mask?

- A. 147.1.1.1
- B. 147.13.0.0
- C. 147.14.255.0
- D. 147.14.255.255

Correct Answer: D

Question 145

(Single Choice) Which of the following problems does VLSM help to alleviate?

- A. the shortage of IP addresses
- B. the difficulty of assigning static IP addresses to hosts in large enterprises
- C. the complexity of implementing advanced routing protocols such as OSPF
- D. the shortage of network administrators qualified in the use of RIP v1 and IGRP

Correct Answer: A

Question 146

(Multiple Choice) Which IP addresses are considered private addresses and are not routed across the Internet?

- A. 10.0.0.214
- B. 172.5.23.45
- C. 172.16.5.66
- D. 192.168.115.15

E. 192.175.23.56

Correct Answer: ACD

Question 147

(Single Choice) What is the subnetwork number of a host with an IP address of 172.16.210.0/22?

A. 172.16.42.0

B. 172.16.107.0

C. 172.16.208.0

D. 172.16.252.0

E. 172.16.254.0

Correct Answer: C

Question 148

(Multiple Choice) Which of the following host addresses are members of networks that can be routed across the public Internet?

A. 10.172.13.65

B. 172.16.223.125

C. 172.64.12.29

D. 192.168.23.252

E. 198.234.12.95

F. 212.193.48.254

Correct Answer: CEF

Question 149

(Single Choice) Which three statements are true regarding the encapsulation and de-encapsulation of packets when traveling through a router?

A. The router modifies the TTL field, decrementing it by one.

B. The router changes the source IP to the IP of the exit interface.

C. The router maintains the same source and destination IP.

D. The router changes the source physical address to the physical address of the exit interface.

E. The router changes the destination IP to the IP of the exit interface.

F. The router sends the packet out all other interfaces, besides the one it entered the router on.

Correct Answer: ACD

Question 150

(Single Choice) A Class C address has been subnetted with a /27 mask. Which of the following addresses a broadcast address for one of the resulting subnets?

A. 201.57.78.33

B. 201.57.78.64

C. 201.57.78.87

D. 201.57.78.97

E. 201.57.78.159

F. 201.57.78.254

Correct Answer: E

Question 151

(Multiple Choice) Which of the following IP addresses fall into the CIDR block of 115.64.4.0/22?

A. 115.64.8.32

B. 115.64.7.64

C. 11.64.6.255

D. 115.64.3.255

E. 115.64.5.128

F. 115.64.12.128

Correct Answer: BCE

Question 152

(Multiple Choice) What two advantages does CIDR provide to a network?

A. reduced routing table size

B. dynamic address assignment

C. automatic route redistribution

D. reduced routing update traffic

E. automatic summarization at classful boundaries

Correct Answer: AE