Subnetting Questions and Answers

Question 1: What is the maximum number of IP addresses that can be assigned to hosts on a local subnet that uses the 255.255.255.224 subnet mask?

1. 14
2. 15
3. 16
4. 30

Answer: 4

Question 2: You need to subnet a network that has 5 subnets, each with at least 16 hosts. Which classful subnet mask would you use?

1. 255.255.255.192
2. 255.255.255.224
3. 255.255.255.240
4. 255.255.255.248

Answer: 2

Question 3: If a host on a network has the address 172.16.45.14/30, what is the subnetwork this host belongs to?

1. 172.16.45.0
2. 172.16.45.4
3. 172.16.45.8
4. 172.16.45.12

Answer: 4

Question 4: Which configuration command must be in effect to allow the use of 8 subnets if the Class C subnet mask is 255.255.255.224?

1. Router(config)#ip classless
2. Router(config)#no ip classful
3. Router(config)#ip unnumbered
4. Router(config)#ip subnet-zero

Answer: 4

Question 5: What is the subnetwork address for a host with the IP address 200.10.5.68/28?

1. 200.10.5.56
2. 200.10.5.32
3. 200.10.5.64

4. 200.10.5.0

Answer: 3

Question 6: You have an interface on a router with the IP address of 192.168.192.10/29. What is the broadcast address the hosts will use on this LAN?

1. 192.168.192.15
2. 192.168.192.31
3. 192.168.192.63
4. 192.168.192.127

Answer: 1

Question 7: You have an IP of 156.233.42.56 with a subnet mask of 7 bits. How many hosts and subnets are possible assuming that subnet 0 is not used?

1. 126 subnets and 510 hosts
2. 128 subnets and 512 hosts
3. 510 subnets and 126 hosts
4. 512 subnets and 128 hosts

Answer: 1

Question 8: How many hosts can be addressed on 10.0.0.0/16?

1. 16
2. 254
3. 65536
4. 65534

Ans: 4

Question 9: Convert the following binary to decimal–01101101.

1. 225
2. 109
3. 1101
4. 112

Ans: 2

Question 10: Choose the true statements (choose two).

1. Odd numbers have the least significant bit set to 0
2. Even numbers have the least significant bit set to 0
3. Odd numbers have the least significant bit set to 1
4. Even numbers have the least significant bit set to 1

Ans: 2 & 3

Question 11: What subnet mask will allow for 128 hosts on a subnet? (choose the best two answers)

1. /25
2. /24 <–
3. 255.255.0 <–
4. 255.255.128

Ans: 2 & 3

Question 12: Based on 1.1.1.0/24, the IP address would be:

1. Class A <–
2. Class B
3. Class C
4. Class D

Ans: 1

Question 13: You need to subnet a network that has 5 subnets, each with at least 16 hosts. Which classful subnet mask would you use?

1. 255.255.192
2. 255.255.224
3. 255.255.240
4. 255.255.248

Ans: 4

Question 14: What is the maximum number of IP addresses that can be assigned to hosts on a local subnet that uses the 255.255.255.224 subnet mask?

1. 14
2. 15
3. 16
4. 30

Ans: 4

Question 15: You have a network that needs 29 subnets while maximizing the number of host addresses available on each subnet. How many bits must you borrow from the host field to provide the correct subnet mask?

1. 2
2. 3
3. 4
4. 5

Ans: 4

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Question 16: If an Ethernet port on a router were assigned an IP address of 172.16.112.1/25, what would be the valid subnet address of this host?

1. 16.112.0
2. 16.0.0
3. 16.96.0
4. 16.255.0

Ans: 1

Question 17: You have an interface on a router with the IP address of 192.168.192.10/29. Including the router interface, how many hosts can have IP addresses on the LAN attached to the router interface?

1. 6
2. 8
3. 30
4. 32

Ans: 1

Question 18: What is the subnetwork number of a host with an IP address of 172.16.66.0/21?

1. 16.36.0
2. 16.48.0
3. 16.64.0
4. 16.0.0

Ans: 3

Question 19: The network address of 172.16.0.0/19 provides how many subnets and hosts?

1. 7 subnets, 30 hosts each
2. 8 subnets, 8,190 hosts each
3. 8 subnets, 2,046 hosts each
4. 7 subnets, 2,046 hosts each

Ans: 2

Question 20: You have an interface on a router with the IP address of 192.168.192.10/29. What is the broadcast address the hosts will use on this LAN?

1. 168.192.15
2. 168.192.31
3. 168.192.63
4. 168.192.127

Ans: 1