1. You are designing a network, which needs to support 55 users. You don't plan to extend the segment beyond the current number of users. Which subnet mask would best meet your needs?

A. 255.255.0.0   
B. 255.255.255.0   
C. 255.255.255.192   
D. 255.255.255.160

1. Your organization is using the 192.168.1.0/24 address space. You need 28 subnets. What subnet mask would you use to create these subnets?

A. 255.255.255.0   
B. 255.255.255.128   
C. 255.255.255.192   
D. 255.255.255.224   
E. 255.255.255.240   
F. 255.255.255.248

1. Identify three valid host addresses in any subnet of the 201.168.27.0 network, assuming a fixed subnet mask of 255.255.255.240. (Choose three.)

A. 201.168.27.33   
B. 201.168.27.112   
C. 201.168.27.119   
D. 201.168.27.126   
E. 201.168.27.175   
F. 201.168.27.208

1. You are given an IP network of 192.168.5.0 and told that you need to separate this network into subnetworks that can support a maximum of 16 hosts per subnet. This will help alleviate congestion on the network. What subnet mask can you use to create the subnets necessary to meet the given criteria?

A. 255.0.0.0   
B. 255.255.0.0   
C. 255.255.255.0   
D. 255.255.255.224   
E. 255.255.255.240

1. You have added a new switch to your network. You want to manage it remotely, so you need to assign it an IP address. Your router that connects to the switch has an IP address of 172.16.12.33/27. Which of the following addresses can you assign to this switch?

A. 172.16.12.33/28   
B. 172.16.12.32/27   
C. 172.16.12.33/27   
D. 172.16.12.34/27   
E. 172.16.12.35/28   
F. 172.16.12.38/28   
G. 172.16.12.63/27

1. You are troubleshooting your router's interfaces. For some reason, the Ethernet interface will not accept the IP address of 192.168.5.95/27 that you've assigned. Which of the following explains the router's refusal to take the IP address?

A. Class C addresses cannot be assigned to Ethernet interfaces.   
B. The /27 is an invalid mask.   
C. It is a broadcast address.   
D. It is a public IP address.   
E. It is a private IP address

1. Your junior network administrator cannot seem to ping a host in another network and asks you why it isn't working. Which of the following is not an answer that you would give him?

A. The host's default gateway is down.   
B. The destination host is not powered on.   
C. The IP address of the router interface is incorrect.   
D. The IP address of the switch to which the destination host connects is incorrect.   
E. The host is in a different subnet.