TCP/IP and Subnet Masking

Questions:

1. What is TCP/IP version 6?

   TCP/IP version 6 is the updated version of TCP/OP version 4.

2. What version of TCP/IP will we focus on?

   We will be focusing on TCP/IP v4, as it is still the most widely used protocol.

3. What does it mean when we say that TCP/IP is actually a protocol suite?

   Calling TCP/IP a protocol suite means that it includes TCP protocol and IP protocol, thus comprising "suite" of protocols.

4. What is a routable protocol?

   A routable protocol contains a network address and a device address and allows packets to be forwarded from one network to another.

5. What OSI layer does IP reside upon?

   IP resides upon layer 3, the Network Layer.

6. What OSI layer does TCP reside upon?

   TCP resides upon layer 4, the Transport Layer.

7. In TCP/IP what is windowing?

   In TCP/IP, windowing is the process by which one computer sends data to another computer.

8. How many bits does an IP v4 address have?

   An IP v4 address has 32 bits (4 octets)

9. In TCP/IP, what is the default gateway?

   In TCP/IP, the default gateway is the router for the subnetwork.

10. What does a Domain Name Server do?

    A DNS server resolves a domain name to an IP address.

11. What is Network Address Translation (NAT)?

    NAT allows there to be an infinite number of connected devices to the Internet because it modifies IP addresses as they move into a new space.

12. In a TCP/IP address, what is an octet?

    An octet is a unit of 8 bits that comprises a full IP address. IP v4 uses four octets IP v6 uses six octets.

13. What is the purpose of a subnet mask?

    The purpose of a subnet mask is to divide the IP address into two parts, which helps increase security mostly, but also helps increase performance.

14. What would the subnet mask be if you wanted to use 8 bits for the network address and 8 bits for subnets?

    255.255.0.0

15. When was the last time that class full addressing was commonly used?

    Class full addressing was commonly used only until 1993

16. What replaced class full addressing?

    Class full addressing was replaced by classless addressing.