Describe the basic structure of the Internet.

- The Internet is structured in a hierarchal sense. At the top, you have strong internet providers known as AT&T, Sprint, Verizon, etc. These are called tier 1 ISPs and they connect and exchange data between internet exchange points (IXPs). Orignially, the IXPs were designed to connect the tier 1 ISPs, however over time regional ISPs were introduced (tier 2). These tier 2 ISPs are known as Comcast or Bellsouth. The structure goes down to tier 3 which is local ISPs (sellers of internet access).

What is desktop management and what are its responsibilities?

- Desktop management could be also known as electronic software delivery. It allows you to install software on workstations without physically being next to it. Most desktop management packages provide application-layer software for the network server and all client computers.

List the seven OSI layers. For each layer, list the associated responsibilities of that layer. Minimum 4 things per layer.

7) Application
   - Human interaction layer, applications access network services, uses HTTP, FTP, SMTP, DHCP, etc.
6) Presentation
   - Ensures data is in usable format, where encryption occurs, file types (JPEG, MPEG, etc), SSL
5) Session
   -Maintains connections, responsible for controlling ports and sessions, uses Net Bios and PAP
4) Transport
   - transmits data, uses transmission protocols like TCP and UDP, data packetizing
3) Network
   - Decides the physical path data will go through, routers IPsec, IPv4, IPv6, routing packets and logical ARP
2) Data Link
   - Defines format of data, switches, frame relay, single network connection, Token ring
1) Physical
   -transmits raw bit stream over physical, hardware layer, MAC + LLC layer controls, hubs, ethernet, DSL, Wi-Fi

Explain Spanning Tree Protocol. How does it work and what can it do?

- Layer 2 protocol that runs on switches and bridges. The purpose of STP is to create disabled loops when having redundant paths in a network.

Net Admin supplement

Describe, explain the following: Active Directory, Containers, Domain, Tree, Forest.

- A database and services that connects end users with the network resources.
- Containers a form of virtualization. A methos of operating system virtualization as compared to VMs.
- Domain can refer to the resources a network provides, group of users and/or devices, and database servers.
- Tree refers to the tree topology where there is a combination of star and bus topology
- Forest is a logical structure formed by combining two or more trees.