N+ Assignment

Module -1

▢ What is network?

ANS: two and multiple device are connected with each other.

▢ Explain type of network-- LAN, MAN, WAN?

Ans: lan – local area network, two or more than computer device are connected in a same network but all pc user different.

Man – metropolitian area network, two or more than lan network are connected with each other.

Wan – wide area network, two and more than network are connected with each other.

▢ What is Internet?

Ans: we can access private and public network from everywhere.

▢ Define Network Topologies

Ans: Work on router device – firewall, using ip address.

Routing process run in netwok layer

1. Route discover- multiple types choose
2. Path selection- on path selection

▢ Define list of cables in use of network—Twisted pair , fiber optics

Ans: Twisted pair:-

1. Ethernet – 10mbps – cat3
2. Fastethernet – 100mbs – cat5e
3. Gigabiteethernet – 1 gbps – cat6
4. Ten gigabiteethernet – 100gbps – cat6e

Fiber optics:-

1. Straight cable – different device – both of side same color code
2. Cross cable – same device – both of side different color code
3. Roll over cable - use for confi.router – both of reverse color code

▢ Straight cable standard sequence 568 A and 568 B

Ans: 568A   568B

g/w   o/w

g   o

o/w   g/w

b   b

b/w   b/w

o   g

br/w   br/w

br   br

▢ What is fiber optics module and fiber connector

Ans: fiber optics module- a device that converts electrical signals into light and on other side

Fiber connector- a device is small piece that connects two optical fibers

▢ Explain Switch

Ans: switch is a networking device that connects multiple devices wthin local area network

Switch have mac address collect of any pc

☐ Explain Router

Ans: two and more than two different type of network it is called router

Its create a ip table to identify a network

☐ Explain MODEM

Ans: In computer network is hardware device that facilitates communication between computers and other digital devices over analog communication channels

☐ Explain DHCP Dynamic host configuration protocol Explain Domain Naming Services What is protocol?

Ans: dhcp it is use for assign ip address automatically to pc

Port no. 67-68

67- server to cient

68 – client to server

☐ What is unicast multicast and broadcast?

Ans: unicast – one sender to one receiver

   Multicast – one sender to selected receiver

   Broadcast – one sender to all received

☐ What is OSI model?

Ans: osi means open system interconnect model is a conceptual framework that describes how computer systems communicate over a network using seven layers

⬜ What is port number?

Ans: port no. is a way to identify a specific process to which an internet or other network message is to be foerward when it arrives at a server

⬜ Difference between TCP V/S UDP communications What is session development?

Ans: transmission control protocol and user datagram protocol are both transport protocols that are used to transfer data over the internet:

Tcp – a connection-oriented protocol that's used for reliable data transmission. Tcp is known for its error correction, order delivery, and reliability. Its used for things like email, file transfer, and other operations that require ordered, error-free data

Udp – a connectionless protocol that's focused on speed and is used for real-time communiations.

⬜ What is flow control?

Ans: the data reaches the receiver end point at the same speed at which the sender sends it.

⬜ What is the difference between TCP IP model and OSI model?

Ans: tcp ip model- 1. Has four layers

2.fewer layers that do multiple jobs
3.made by the us government
4.uses specific rules
5.used on the internet everyday

Osi model- 1. Has seven layers

2.each layer has a clear job

3.made by an international group

4.does not specific rules

5.good for learning

▪ What is arp broadcast?

Ans: address resolution protocol

It is use for converting mac address to ip address

▪ What is mac-address?

Ans: mac address is a unique no. that is given to device like switch and It helps devices find to communicate to each other

▪ What is ip address? Difference between ipv4 address and ipv6 address Assign multiple IPv4 in single network adapter in pc what are network vulnerabilities?

Ans: ip address – it is unique no. assigned to a device on a network like mobile

Ipv4 – this version has a 32 bit address space, which means there are 4,294,967,296 possible ipv4 address. However, not all of these addresses are available for use, as some are reserved for private networks and other purposes. Usually written in dot-dcimal notaion, with four numbers separated by dots, each ranging from 0 to 255 subnetting is the process of divivding and Ip network into smaller subnets, or subnetworks. Subnetting is used to make networks more efficient by optimizing ip address usage and reducing the distance theat network traffic needs to trave. Here's an example of subnetting:

1. Original network
   A network with 256 possible host addresses, from 192.168.1.1 to 192.168.1.256
2. Subnet mask

A subnet mask of 255.255.255.0 is used to divide the network into two subnets

Ipv6- internet protocol version 6 addresses are 128bits long and are written in hexadecimal notation. They are divided into eight groups of 16 bits, separated by colons. Some examples of ipv6 address types include:

1.globla unicast

2.unicast address

3.anycast

4.multicast

5.link local

6.unique local

▢ What is a firewall to use for?

Ans: firewall is security device that stop incoming network traffic

Uses of a firewall:-

1.protection

2.filtering

3.monitoring

4.control

Wireless router configure for internet connection and wireless security what is wireless access point? And what is wireless extender?

Ans: wap- A device that allows wireless devices like laptops and smartphones, to connect to a wired network

Key points about a wireless point:

1.connects- links to a router with a cable

2.extends- helps wifi reach more areas

3.adds- gives more wireless spots in big places

4.secure- can set passwords fo safety

Wireless extender – a device that boosts and extends your wifi signal