N+ Assignment

Module 5. Network Fundamentals and Building Networks

- Beginner Question

1. What is network?

Ans: When 2 or more computer or communicating device connected to each other and communicate to each other it's network.

2. List Common Network Components

Ans: switch, hub, router, modem, repeater etc.

3. Add and configure loopback adaptor in network and sharing center

Ans: done

- Intermediate Question

1. Explain application of network

Ans: application network

2. What do you mean by Node?

Ans: the connection point or a communication endpoint in devices such as routers and printers

3. practice of simple file folder sharing

Ans: done

- Advance Question

1. List types of devices

Ans: Hub, switch, router, modem, access point, etc

2. Explain types of router

Ans: wireless router, wired router.

Topic: Types of Network

- Beginner Question

1. What is Difference between a LAN, MAN, WAN?

Ans: lan is usually used for communicating computers in one building, man is usually used for communicating computers in different town, cities, Wan is usually used in worldwide communications.

2. Common Network Components

Ans: switch, hub, router, modem, repeater.

- ## Intermediate Question

1. Explain Wide Area Network

Ans: WAN is usually used for communicate computer which are not In one country it can help us to communicate two different countries computers.

2. Explain Network Backbone

Ans: backbone is a part of network it's connected with lan and subnet to exchange information.

3. Explain CAN

Ans: campus area network is same as lan but it's used by small campus area to communicate two pc at one place.

- ## Advance Question

1. Define Physical Network Topologies

Ans: physical network topologies explain how our pc connected and communicating each other.

2. Network Architecture: Peer-to-Peer

Ans: p2p is technology that allows pc to share data without a specific server.

3. Point-to-multipoint network

Topic: Network Devices

- ## Beginner Question

1. Why we use Network and Devices

Ans: To communicate with another pc.

2. Explain Switch?

Ans: Switch is an intelligent device.
Switch is layer2 device.

- Switch is help pc to connect at the same
  Network.
  Switch is single broadcast domain device.

Intermediate Question

1. Define list of cables in use of network

Ans: STP AND UDP, fibre cable, lan cable etc

2. Explain Define Access point

Ans: access point is a device that helps wireless device like mobile laptop to connect between wired device.

3. Which types of transmission modes in computer network

Ans:

4. Practice on Remote Desktop connection

Ans: done

5. Practice on remote assistance

Ans: done

Advance Question

1. Explain Repeater and router

Ans: Wi-Fi repeater is a device that forwards wireless signals from the router to cover a larger area and router help us to communicate another network that not connected with same subnet.

2. What is multiplexer?

   Ans: A multiplexer is a network device that allows one or more analog or digital input signals to travel together over the same communications transmission link

3. Explain MODEM.

Ans: A modem is a hardware which connects to a computer, broadband network or wireless router

4. Monitor "event viewer"

Ans: done

Topic: Install and configure DHCP, DNS

- Beginner Question

1. Explain DHCP Dynamic host configuration protocol

Ans: DHCP is a server that provides our pc ip address, DNS, automatically.

2. Application of DHCP with one example

Ans: provide a ip address and example is router, DNS SERVERS, etc.

- Intermediate Question

1. Explain Domain naming Services

Ans: DNS is a server that help us in name resolving it convert name to ip and ip to name.

2. Application of DNS with one example

Ans: application of dns is NMAP.

Topic: Network Topologies

- Beginner Question

1. What are the 5 network topologies?

Ans: Point to point, bus, ring, star, tree.

2. What is Internet topology?

Ans: Internet topology is the structure by which hosts, routers or autonomous systems are connected to each other.

3. What is protocol

Ans: protocol is set of rules.

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- Intermediate Question

1. What is the most common network topology?

Ans: star topology.

2. Explain star topology in networking?

Ans: a topology for a Local Area Network in which all nodes are individually connected to a central connection point

- Advance Question

1. Explain Hybrid topology

Ans: hybrid topology is an interconnection of two or more basic network topologies, each of which contains its own nodes.

2. What is physical and logical topology?

Ans: A logical topology is how devices appear connected to the user. A physical topology is how they are actually interconnected with wires and cables.

3. What are the types of logical topology?

Ans: BUS AND RING.

Topic: OSI Model

- Beginner Question

1. What is OSI model explain?

Ans: OSI model is framework that describe the function of network system.

2. List of Application layer protocol

And: FTP, telnet, SMTP, etc.

3. How many types of protocols are there?

Ans: there are maybe 14 protocols in there.

• Intermediate Question

1. What is the difference between TCP IP model and OSI model?

Ans: TCP ip model has 4 layer and osi model has 7 layer

TCP ip low in usage and osi model mostly usage.

TCP ip is less reliable and osi model is reliable

2. What is TCP IP networking?

Ans: a suite of communication protocols used to interconnect network devices on the internet.

Advance Question

1. What is a wired Internet connection?

Ans: if we connect laptop computers to the Internet using cables that's wired Internet connection.

2. What are the disadvantages of wired networks?

Ans: It's tethered to router, less flexible, physically connected so more cable required.

3.How do I configure network authentication?

Ans: system > Security. Right-click Network Authentication Service and select Configure to start the configuration wizard

3. Practice of Team viewer, Any Desk, Google Hangout, Skype, zoom

And: done

4. Download google chrome

Ans: done

5. configure "date and time" opting in control panel

Ans: done

Topic: TCP/IP

- Assignment level Basic:

1. What is TCP/IP?

Ans: tcp is is a protocol that help Pc's to send and receive data.

2. What is the full form of TCP/IP?

Ans: Transmission Control Protocol.

- Assignment level Intermediate:

1. List out the types of IP

Ans: public ip private ip

IPV4 and IPV6.

2. What is protocol?

Ans: protocol is set of rules.

3. DO a practical to set the tcp/ip in network adapter

Ans: done

Topic: Cables

- Beginner Question

1. Types of cables and connectors?

Ans: Cables: co axial, fibre, cat4,5,6, etc, twisted pair, shielded twisted pair.

Connectors: RJ45, USB, RJ6, etc.

2. Explain twisted pair cable and shielded twisted pair cable

Ans: Shielded twisted pair cable has the individual pairs of wires wrapped in foil, which are then wrapped again for double protection.
Unshielded twisted pair cable has each pair of wires twisted together. Those wires are then wrapped in tubing without any other protection.

• Intermediate Question

1. Which of these cables connect computers to monitors?

Ans: VGA, HDMI.

2. How do I connect to a shared printer?

Ans: In the search box on the taskbar, type control panel and then select Control Panel. Under Hardware and Sound, select View devices and printers, and then select Add a printer. Select the printer you want

- ## Advance Question

1. Which cable that is commonly used to connect a computer to a printer?

Ans: USB TYPE B

2. What are the different ports and connectors?

Ans: RJ45, lightning port, thunderbolt, usb type C, type B, VGA, HDMI, parallel port, etc.

3. How do I connect my laptop to my printer without cable?

Ans: connect it via Bluetooth, than install driver and done.

4. Application and brief explanation of fiber optic cable and Coaxial cable

Ans: Optical fibre is used in HDTV's, aircraft and medical field; whereas coaxial cable is used in cable TV signals, internet and telephone connections

5. Which of following operates at the 5GHz frequency range?

Ans: 802.11a

6. What frequency does 802.11g use

Ans: 2.4ghz

7. What standard is compatible with 802.11a?

Ans: dual mode APs

Topic: TCP/IP concepts - IPv6, IPv4

- ## Beginner Question

1. 1.What is the difference between IPv4 & IPv6?

Ans: The main difference between IPv4 and IPv6 is the address size of IP addresses. The IPv4 is a 32-bit address, whereas IPv6 is a 128-bit hexadecimal address.

2.Explain IPV6 Address with Address structure

Ans: An IPv6 address is 128 bits in length and consists of eight, 16-bit fields, with each field bounded by a colon

2. Define IPV6 reserve address

Ans: this domain as a sequence of nibbles in reverse order, represented as hexadecimal digits as subdomains.

3. Explain Difference between public ip and private ip

Ans: A private IP address, such as a home or office network, is assigned to a device on a local network and is used to identify the device within that network. On the other hand, a public IP address is assigned to a device directly connected to the internet and is used to identify the device on the internet.

4. Create straight and cross cables and it's testing

Ans: done

• Intermediate Question

1. Brief explanation of ip Addresses

Ans: IP stands for "Internet Protocol," which is the set of rules governing the format of data sent via the internet or local network

2. What is the advantage of IPv6 over IPv4?

Ans: IPv6 enables the increased use of summary routes and hierarchical routing. IPv6 fragmentation and reassembly are handled by the sender and receiver, not routers on the path, making routing even more efficient.

3. Assign multiple IPv4 in single network adapter [lan card]

Ans: done

4. Assign simple IPv6 between two system and ping it.

Ans: done

5. 5. Assign and configure simple IPv4 between systems

Ans: done

• Advance Question

1. 1.Which is faster IPv4 or IPv6?

Ans: IPV6

2. 2.What does TCP do?

Ans: enables application programs and computing devices to exchange messages over a network

3. Give security in sharing

Ans: done

4. Configure "Map network drive"

Ans: done

Topic: IP routing and Routing protocols

Beginner Question

1. What Is Routing?

Ans: Routing is the process of selecting a path for traffic in a network or between or across multiple networks.

2. How Routing Starts Up?

Ans: when software on a host device uses a packet's contents, destination, or purpose to select a possible route from a routing table

Intermediate Question

1. What Is Hybrid Routing Protocol?

Ans: combines the advantages of both, reactive and pro-active routing protocols.

2. What Are the Range of Ad Values?

Ans: 0 to 255. Total 256

3. What Is an Autonomous System?

Ans: a set of Internet routable IP prefixes belonging to a network or a collection of networks that are all managed, controlled and supervised by a single entity or organization

- Advance Question

1. Define Static Routing?

Ans: done

2. Explain Dynamic Routing?

Ans: Dynamic routing is a mechanism through which routing information is exchanged between routers to determine the optimal path between network devices

Topic: Switching and VLANS

- Beginner Question

1. What is VLAN?

Ans: virtual LAN (VLAN) is a logical overlay network that groups together a subset of devices that share a physical LAN, isolating the traffic for each group.

2.Which two benefits of creating VLANs?

Ans: reduce network traffic and ease of administration.

2. What is Dynamic VLAN?

Ans: separates and isolates devices into different network segments based on the device or user authorization and their characteristics.

3. What is Static VLAN?

Ans: a group of ports designated by the switch as belonging to the same broadcast domain.

- Intermediate Question

1. What is VLAN and INTERVLAN?

Ans: vlan are networks segments on a switched lan. Intervlan routing refers to the movement of packets across the network between hosts in different network segments.

2. What is trunk port?

Ans: type of connection on a switch that is used to connect a guest virtual machine that is VLAN aware.

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- Advance Question

1. How to configure Trunk port?

Ans: cmd and using specific commands

2. How to delete VLAN information from Switch?

Ans: First select network than configuration than select vlan tab click on vlan to remove click delete done.