**Assignment: module -5 Network Fundamentals and Building Networks**

**Section : 1 MCQs**

1. What is the primary function of a router in a computer network?

* Forwarding data packets between networks

1. What is the purpose of DHCP (Dynamic Host Configuration Protocol) in a computer network ?

* Dynamically assigning IP addresses to device

1. Which network device operates at layer 2 (Data link layer) of the OSI model and forward data packet on MAC addresses?

* Switch

1. Which network topology connect all device in a liner fashion ,with each device connected to a central cable or backbone ?

* Bus

**Section 2: true or false**

1. A VLAN (Virtual Local Area Network) allows network administrators to logically segment a single physical network into multiple virtual networks , each with its own broadcast domain

* True

1. TCP (transmission control protocol) is a connectionless protocol that provides reliable , ordered , and error-checked delivery of data packets over a network

* False

1. A firewall is a hardware or software – based security system that monitors and control incoming and outgoing network traffic based on predetermined security

* True

**Section 3:short answer**

1. Describe the steps involved in setting up a wireless network for a small office or home office (SOHO) environment ?

* 8. Steps to up a wireless network for a SOHO environment :
* Choose a good internet plan
* Buy a wireless router
* Connect the router and to the moder
* Power on the router and device
* Go to the router setting using a browser
* Set up the Wi-Fi name and password
* Make sure DHCP is on
* Connect device to the Wi-Fi
* Secure the network with password and firewall
* Test internet access

**Section 4: practical**

1. Demonstrate how to configure a router for internet access using DHCP (dynamic host configuration protocol) ?

* Connect router to the modem with a cable
* Open a browser and enter router IP (like :192.168.1.1)
* Log in with default username and password
* In the setting , choose dynamic IP or DHCP
* Save the setting
* Make sure DHCP sever is enable in LAN setting
* Reboot the router
* Check the internet connection

**Section5: Essay**

1. Discuss the importance of network documentation in the context of building and managing network ?

* As a beginner ,I realized network documentation is very importance . It helps us know what device are connected , IP addresses used , and the network layout . If there a problem, good documentation makes fixing it easier . It also helps new team member understand the setup. In the future , if we want to add new device or upgrade the network documentation helps in planning so I think it’s like a guidebook for building fixing and growing a network.