



UNIVERSITY MAKE-UP ASSIGNMENT

DIT 222: PRINCIPLES OF COMPUTER SUPPORT AND MAINTENANCE

Due Date: 20th November 2025

INSTRUCTIONS: Answer all the questions

QUESTION ONE (20 Marks)

A computer technician is required to set up communication hardware on a newly assembled workstation. The system must support a legacy serial device, provide dial-up connectivity through a modem, and connect to a local area network via a Network Interface Card (NIC).

- a) Describe the steps involved in configuring a serial port in the system BIOS/UEFI and within the operating system. (10 marks)
- b) Explain the procedure for installing and configuring an internal or external modem. (5 marks)
- c) Outline the process of configuring a NIC to connect to a wired LAN, including IP addressing, duplex/speed settings, and driver/firmware considerations. (5 marks)

QUESTION TWO (15 Marks)

A new employee has joined an organization and needs their workstation connected to both the wired office network and the wireless network for mobility. As the support technician, you are required to set up both connections and ensure proper network access.

- a) Describe the steps required to connect a computer to a wired Ethernet network (5 marks)
- b) Explain the procedure for connecting a device to a secure wireless network. (5 marks)
- c) Identify three common problems that may prevent a device from connecting to a wired or wireless network, and outline appropriate troubleshooting steps for each. (5 marks)

QUESTION THREE (15 Marks)

A small office has just subscribed to a new Internet Service Provider (ISP). As the network technician, you are responsible for setting up internet access for the office computers and ensuring the network operates reliably.

- a) Describe the steps involved in setting up internet access using a router and modem (5 marks)
- b) Explain the difference between static and dynamic (DHCP) IP addressing and state when each would be appropriate during internet setup. (4 marks)
- c) Identify four common internet connectivity problems and describe the troubleshooting steps you would follow to resolve each problem. (6 marks)