

Programme(Diploma)/4th/DCSE405

2025

Hardware and Networking

Full Marks: 100

Time: Three hours

The figures in the margin indicate full marks for the questions.

*Answer **any five** questions.*

1.	a)	Explain the term "BIOS" and its role in the booting process.	10
	b)	Explain the various types of computer memory with a neat diagram.	10
2	a)	Write the full form and one function of the following: CPU, POST, UPS, SSD.	10
	b)	How will you troubleshoot the "no display" issue in a desktop PC?	10
3	a)	Discuss the components and working of a client-server network architecture. Include a labeled diagram.	10
	b)	Describe various types of computer buses (data, address, control) and their roles in system performance.	10
4	a)	Describe the different categories of UTP cables and their respective standards. Mention where each is used.	10
	b)	Write detailed steps for formatting, partitioning, and installing an operating system on a new computer.	10
5	a)	Describe the various causes of slow internet connectivity and steps to troubleshoot it.	10
	b)	Define virtualization in the context of hardware. Explain installation of a virtual machine.	10
6	a)	Draw and explain the TCP/IP layer model. Compare it briefly with the OSI model.	10
	b)	Describe the working of the Domain Name System (DNS) with a neat diagram showing client, resolver, root, TLD, and authoritative servers.	10
7	a)	Explain how data travels from one computer to another over the internet, referencing layers and addressing.	20