

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/
COMMERCIAL PRACTICE, NOVEMBER - 2024**

COMPUTER SYSTEM ARCHITECTURE

[Maximum marks: 75]

[Time: 3 Hours]

PART A

I. Answer all the following questions in one word or one sentence. Each question carries 1 mark.

(9 x 1 = 9 Marks)

		Module outcome	Cognitive level
1	Stored Program Concept is introduced by	M1.02	R
2	SATA stands for	M1.04	R
3	DMA transfers data between I/O devices and	M2.02	U
4	DRAM stores data in capacitors. Say True/False.	M2.01	U
5	A hard disk is divided into tracks which further divided into	M2.04	R
6	Define microoperation.	M3.03	R
7	What is throughput?	M3.04	R
8	Which addressing mode is used in ADD AX, BX?	M4.04	U
9	8086 is a bit microprocessor.	M4.01	R

PART B

II. Answer any eight questions from the following. Each question carries 3 marks.

(8 x 3 = 24 Marks)

		Module outcome	Cognitive level
1	Distinguish between different types of system buses.	M1.03	U
2	Compare Von Neumann and Harvard architecture.	M1.02	U
3	Distinguish between any three motherboard form factors.	M1.04	U
4	Write short note on output devices.	M2.01	U
5	Explain the steps performed during booting process.	M1.06	R
6	Distinguish between different levels of cache memory.	M2.04	U
7	Distinguish between different storage access methods.	M2.04	U
8	Name any three pointing devices.	M2.01	R
9	Explain the micro-operations in a fetch cycle.	M3.03	U
10	Explain about Bus Interface Unit.	M4.02	R

PART C

Answer all questions. Each question carries seven marks.

(6 x 7 = 42 Marks)

		Module outcome	Cognitive level
III	Explain the major functional units of a computer with block diagram.	M1.01	R
	OR		
IV	Explain the motherboard components of a laptop.	M1.05	R
V	Explain memory hierarchy with a neat sketch.	M2.03	U
	OR		
VI	Compare different types of I/O transfer methods.	M2.02	U
VII	Draw and explain the structure of processor.	M3.01	R
	OR		
VIII	Define instruction cycle. Explain the different stages in an Instruction Cycle.	M3.03	U
IX	Compare Hardwired and Microprogrammed implementation of Control Unit.	M3.02	U
	OR		
X	Distinguish different Flynn's classification of parallel processing.	M3.04	U
XI	Explain about 8086 flag registers.	M4.02	U
	OR		
XII	Write an assembly language program to multiply two 8-bit numbers.	M4.04	U
XIII	Explain 8086 Addressing modes.	M4.03	U
	OR		
XIV	Write an assembly language program to subtract two 8-bit numbers.	M4.04	U
