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NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute)

Affiliated to Dr. A.P. J. Abdul Kalam Technical University, Uttar Pradesh, Lucknow

Course: B. Tech **Branch: CSE**

Semester: IV **Sessional Examination: I** **Year- (2021 - 2022)**

Subject Name: Microprocessor

Time: 1.15 Hours **[SET- A]** **Max. Marks:30**

General Instructions:

- This Question paper consists of 3 pages & 5 questions. It comprises of three Sections, A, B, and C
- Section A -Question No- 1 is objective type questions carrying 1 mark each, Question No- 2 is very short answer type carrying 2 mark each. You are expected to answer them as directed.
- Section B - Question No-3 is Short answer type questions carrying 5 marks each. Attempt any two out of three questions given.
- Section C - Question No. 4 & 5are Long answer type (within unit choice) questions carrying 6 marks each. Attempt any one part *a* or *b*.

		SECTION – A	**[08Marks]**	
1.		**All questions are compulsory**	**(4×1=4)**	
	a.	Which of the following is true about microprocessors? a) It has an internal memory b) It has interfacing circuits c) It contains ALU, CU, and registers d) It uses Harvard architecture	**(1)**	**CO1**
	b.	Flag register is an 8-bit register having _____ 1-bit flip-flops. a) 3 b) 4 c) 5 d) 6	**(1)**	**CO1**
	c.	An interrupt breaks the execution of instructions and diverts its execution to a) Interrupt service routine b) Counter word register	**(1)**	**CO1**

		c) Execution unit d) control unit		
	d.	What is true about Program counter? a) It is an 8-bit register, which holds the temporary data of arithmetic and logical operations. b) When an instruction is fetched from memory then it is stored in the program counter c) It provides timing and control signal to the microprocessor d) It is a 16-bit register used to store the memory address location of the next instruction to be executed.	**(1)**	**CO1**
2.	**All questions are compulsory**		**(2×2=4)**	
	a.	What are the different types of Flags in 8085?	**(2)**	**CO1**
	b.	With the help of a neat symbol explain tri-state buffer.	**(2)**	**CO1**
			[10Marks]	
		SECTION – B		
3.	**Answer any <u>two</u> of the following-**		**(2×5=10)**	
	a.	Differentiate Von Neumann and Harvard Architecture.	**(5)**	**CO1**
	b.	What is meant by interrupt? And explain different types of interrupts available in 8085.	**(5)**	**CO1**
	c.	How many signal groups are in 8085 pins?	**(5)**	**CO1**
			[12Marks]	
		SECTION – C		
4	**Answer any <u>one</u> of the following-**		**(1×6=6)**	
	a.	Sketch the internal architecture of 8085 microprocessor.	**(6)**	**CO1**
	b.	What are the data transfer instructions? Explain with examples.	**(6)**	**CO2**
5.	**Answer any <u>one</u> of the following-**		**(1×6=6)**	

	a.	Draw and explain the timing diagram of opcode fetch cycle.	**(6)**	**CO1**
	b.	Explain Functions of PIN configuration of 8085 microprocessor.	**(6)**	**CO1**