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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: II

Year- (2021- 2022)

Subject Name: Microprocessor

Time: 1.15 Hours

[SET- B]

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 & 5 are Long answer type (within unit choice) questions carrying 6 marks each. Attempt any one part a or b.

		<u>SECTION – A</u>	[08Marks]	
1.	All questions are compulsory		(4×1=4)	
	a.	If 'n' denotes the number of clock cycles and 'T' denotes period of the clock at which the microprocessor is running, then the duration of execution of loop once can be denoted by a) $n+T$ b) $n-T$ c) $n*T$ d) n/T	(1)	CO2
	b.	What does microprocessor speed depends on? a) Clock b) Data bus width c) Address bus width d) All of these	(1)	CO2

	c. Instruction decoder a) Holds the address of the current instruction b) Contains next instruction to be fetch c) Decodes the OPCODE and generates control signals d) Fetches operands from memory	(1)	CO3
	d. What is the status of z flag, cy flag, sign flag at the end of this program? MVI A, 02H MVI B, 03H ADD B XRA A a) 1,0,0 b) 0,1,0 c) 1,0,0 d) 1,0,1	(1)	CO2
2.	All questions are compulsory	(2×2=4)	
	a. Write down the classification of Instruction Set of 8085.	(2)	CO2
	b. Define looping.	(2)	CO3
<u>SECTION – B</u>		[10Marks]	
3.	Answer any <u>two</u> of the following-	(2×5=10)	
	a. Explain data transfer operations in 8085 microprocessor with examples.	(5)	CO2
	b. Write a program to subtract two 8-bit numbers.	(5)	CO2
	c. Explain Counting and Indexing with flow chart.	(5)	CO2
<u>SECTION – C</u>		[12Marks]	
4.	Answer any <u>one</u> of the following-	(1×6=6)	
	a. Write a program to count from 0 to 9 with a one-second delay between each count. At the count of 9, the counter should reset itself to 0 and repeat the sequence continuously. Use register pair HL to set	(6)	CO3

		up the delay and display each count at one of the output ports. Assume the clock frequency of the microcomputer is 1 MHz.		
	b.	Briefly explain arithmetic instructions in 8085 microprocessor with examples.	(6)	CO2
5.	Answer any <u>one</u> of the following-		(1×6=6)	
	a.	Explain Stack and Subroutine.	(6)	CO3
	b.	Write 8085 Assembly language program for BCD to binary conversion.	(6)	CO3