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**PRESIDENCY UNIVERSITY
BENGALURU**

**SCHOOL OF ENGINEERING
END TERM EXAMINATION - AUGUST 2024**

Semester: IV	Date: 08/08/2024
Course Code: ECE3003	Time: 9:30 am to 12:30 pm
Course Name: Microprocessor Programming and Interfacing	Max Marks: 100
Program: SOE/ECE	Weightage: 50%

Instructions:

- (i) Read all questions carefully and answer accordingly.
- (ii) Question paper consists of 3 parts.
- (iii) Scientific and non-programmable calculator are permitted.
- (iv) Do not write any information on the question paper other than Roll Number.

PART A			
ANSWER ANY 4 QUESTIONS		4Q X 5M = 20M	
1	Draw 8086 Flag Register and Explain any 5 flags.	(CO 1)	[Knowledge]
2	List any 5 Addressing Modes in 8086 with an example	(CO1)	[Knowledge]
3	Explain instruction template in 8086	(CO2)	[Knowledge]
4	Differentiate between memory mapped IO and IO mapped IO (any 5)	(CO3)	[Knowledge]
5	With a neat diagram explain 8086 Memory Banking technique	(CO1)	[Knowledge]
6	What is memory hierarchy? Explain in terms of speed, size and cost	(CO4)	[Knowledge]

PART B			
ANSWER ANY 5 QUESTIONS		5Q X 10M = 50M	
7	With neat diagram explain the ARCHITECTURE of 8086 Microprocessor	(CO1)	[Comprehensive]
8	Which programming IC increases Interrupt handling capacity. Explain the block diagram and its features.	(CO3)	[Comprehensive]
9	With neat block diagram explain the features of programmable interval	(CO3)	[Comprehensive]

	Timer(8254)		
10	Explain with neat diagram instruction execution cycle and Pipelining	(CO4)	[Comprehensive
11	Explain following instruction in 8086 with an example :ADD,CMP,DIV,RCR,INC	(CO2)	[Comprehensive
12	Explain following instruction in 8086 with an example: MOV,JNZ,JNC,CLD,LOOP	(CO2)	[[Comprehensive
13	With a neat diagram explain 8086 MAX mode operation	(CO1)	[[Comprehensive

PART C			
ANSWER ANY 2 QUESTIONS		2Q X 15M=30M	
14	To implement an assembly language program to find the largest in an array.	(CO2)	[APPLICATION]
15	Given a string of character "PRESIDENCY UNIVERSITY", implement an assembly language program to transfer this string in forward direction from "MEMORY1" to "MEMORY2".	(CO2)	[APPLICATION]
16	To implement an assembly language program to perform 8-bit arithmetic operations such as addition, subtraction, multiplication and division	(CO2)	[APPLICATION]