GIET UNIVERSITY, GUNUPUR – 765022

B. Tech (Fifth Semester Regular) Examinations, December – 2023

21BECPC35001 – Microprocessors and Microcontrollers

(ECE)

Time: 3 hrs   Maximum: 70 Marks

Answer all questions
(The figures in the right hand margin indicate marks)

PART – A   (2 x 5 = 10 Marks)

Q.1. Answer *ALL* questions

		CO #	Blooms Level
a.	Which instructions are used for Stack operation in 8085?	CO1	K2
b.	What will be the value held in the Flag register of 8085 microprocessor after addition of 07H and CFH?	CO1	K4
c.	Describe the difference between the instruction MOV AX, 2437H and MOV AX [2437H] in 8086.	CO2	K4
d.	What are the control words of 8251A and what are its functions?	CO3	K5
e.	Which instruction can be used to access the I/O ports of the 8051?	CO4	K5

PART – B   (15 x 4 = 60 Marks)

Answer *ALL* questions

		Marks	CO #	Blooms Level
2. a.	What is addressing mode and explain the various addressing modes available in the 8085 microprocessor?	7	CO1	K2
b.	Write an assembly language program for comparison between two 8-bit hexadecimal number and store the result in 5798H memory location.	8	CO1	K4
	(OR)			
c.	Explain the features of 8085 microprocessor.	7	CO1	K2
d.	Write an assembly language program to mask off the lower nibble of a 8-bit hexadecimal number using 8085 microprocessor.	8	CO1	K4
3.a.	Write an ALP in 8086 to transfer ten data words from offset address 2000H to offset address 3000H.	7	CO2	K2
b.	Draw the register organization of the 8086 microprocessor and explain typical functions of each register.	8	CO2	K2
	(OR)			
c.	Explain the architecture of the 8086 with a neat function block diagram.	7	CO2	K2

d.	Explain the differences between minimum and maximum mode configuration of 8086 microprocessor.	8	CO2	K2
4.a.	Explain the advantages of using the USART chips in microprocessor based systems.	7	CO3	K2
b.	Explain the function of DMA controller with neat sketch.	8	CO3	K2

(OR)

c.	With neat sketch explain the functions of 8255 PPI.	7	CO3	K2
d.	Explain the function of Keyboard and display controller with neat sketch.	8	CO3	K2
5.a.	Draw and explain the architectural details of the 8051 microcontroller.	7	CO4	K2
b.	What is addressing mode and explain the various addressing modes available in the 8051 microcontroller?	8	CO4	K2

(OR)

c.	Write a program to copy the value 68H to RAM memory locations 40H to 89H using indirect addressing mode with a loop.	7	CO4	K2
d.	Explain the signal descriptions of 8051 microcontroller with a suitable pin diagram.	8	CO4	K2

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