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Examination: Even Semester Examination 2023

Paper Name: Microcontrollers *Paper Code: BTECE-403*
Time: 3 Hours *Maximum Marks: 75*

Section A

Note: Attempt all the questions **(7x5=35)**

Q. No.	Question	Marks	CO	BL
1.	Discuss segmentation register and memory segmentation of 8086.	5	CO2	BL3
2.	Write an assembly language program in 8085 for the addition of two 8-bit numbers with carry and store result in main memory.	5	CO1	BL5
3.	Discuss and describe 8087 coprocessor.	5	CO2	BL2
4.	Describe cache memory and also mention its advantages.	5	CO3	BL3
5.	Analyse the features of ARM processors.	5	CO4	BL4
6.	Explain 80286 architecture in brief.	5	CO2	BL3
7.	Draw and explain block diagram of 8253 timer IC.	5	CO2	BL2

Section B

Note: Attempt any four (4) Questions **(4x10=40)**

Q. No.	Question	Marks	CO	BL
1.	Discuss architecture of 8085 microprocessor with the help of a neat diagram.	10	CO1	BL1
2.	Define and describe all the flags of 8086.	10	CO2	BL2
3.	Explain all the modes of 8255 programmable peripheral IC in detail.	10	CO3	BL2
4.	(a) Find the memory location from where the next instruction is to be fetched. If the content of CS#2550H, DS#2000H, ES#2500H, SS#2200H, IP#0550H, SI#2300H and DI#2700H.	10	CO1	BL6

	(b) Explain Instructions: (i) MOV AL, [2000] (ii) MOV AX, BX.			
5.	Draw and explain architecture of 8051 microcontroller.	**10**	**CO5**	**BL3**
6.	Write a short note on any two of the followings: a. ARM processors b. 80486 Processors c. Virtual memory d. CISC (Complex Instruction Set Computer)	**10**	**CO1, CO2, CO4, CO5**	**BL2**

BL: Blooms Taxonomy Level; (1-remembering, 2-understanding, 3-apply, 4-analyse, 5- evaluate, 6-create)
CO: Course Outcomes