

K. J. Somaiya Institute of Technology, Sion, Mumbai-22
(Autonomous College Affiliated to University of Mumbai)

April – May 2023

(B.Tech.) Program: AI & DS Scheme I/II: **II**

Examination: SY Semester: IV

Course Code: AIC405

Course Name: Microprocessor

Date of Exam: 23/05/23

Duration: 2.5 Hours

Max. Marks: 60

Instructions:				
(1) All questions are compulsory.				
(2) Draw neat diagrams wherever applicable.				
(3) Assume suitable data, if necessary.				
		Max. Marks	CO	BT level
Q 1	Solve any six questions out of eight:	12		
i)	Explain the terms 'Offset Address' and 'Physical Address' with examples	2	1	U
ii)	Draw and Explain 'Flag Register' of 8086	2	1	U
iii)	Classify the 'Instruction Set' of 8086 with at least two examples in each group	2	2	R
iv)	Compare 'Procedure' and 'Macros' in programming	2	3	U
v)	Draw and explain 'Power on Reset & Manual Reset ckt' for 8086	2	4	U
vi)	What is the necessity of 8087 Co-Processor?	2	5	U
vii)	Generate the command word to set PC4-bit of Port C of 8255	2	5	A
viii)	List five important features of Pentium Processor	2	6	R
Q.2	Solve any four questions out of six.	16		
i)	Discuss addressing modes with examples for 8086	4	1	U
ii)	What are 'Assembler Directives'? Explain with examples.	4	2	U
iii)	Explain the advantages of 'Mixed language Programming' with examples.	4	3	U
iv)	Compare 'Minimum & Maximum Modes' of 8086	4	4	U
v)	Draw the functional block diagram of 8259 and list few important features	4	5	U
vi)	Discuss 'Instruction & Data Cache' concept	4	6	U
Q.3	Solve any two questions out of three.	16		
i)	Draw and explain 'Programmer's Model' of 8086	8	1	U

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Course Name: Microprocessor

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Duration: 2.5 Hours

Max. Marks: 60

ii)	Write assembly language program to sort 10 bytes stored in the array and also find out smallest and largest element of the array.	8	2	A
iii)	Discuss 'Interrupt structure' of 8086 in detail	8	3	U
Q.4	Solve any two questions out of three.	16		
i)	Draw and explain 'Read & Write' cycles for 8086	8	4	U
ii)	Draw the functional block diagram of 8237 and discuss DMA transfer modes	8	5	U
iii)	Discuss the concept of 'Pipelining' with example in Pentium Processor	8	6	U
