

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

End Semester Exam

May 2022 (B.Tech.) Program: AI & DS

Examination: SY Semester: IV

Course Code: IC402 and Course Name: Microprocessor

Duration: 03 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)	State advantages of memory segmentation.	2	CO1	U
ii)	List different addressing modes of 8086	2	CO1	U
iii)	Calculate the value of each of the physical addresses that follows. Assume all numbers are hexadecimal numbers. a) A000 : ? = A0123 c) D765 : ? = DABC0	2	CO2	U
iv)	Explain following instructions with example: a. SHR b. ROR	2	CO2	U
v)	Explain types of procedures.	2	CO3	U
vi)	Discuss mixed mode programming.	2	CO4	U
vii)	Write in short what is math co-processor.	2	CO5	U
viii)	What are the features of Pentium?	2	CO6	U
Q.2	Solve any four questions out of six.	16		
i)	Draw pin diagram of 8086.	4	CO1	U
ii)	List and explain data transfer instructions.	4	CO2	U

iii)	Write short note on procedures in 8086.	4	CO3	U
iv)	Explain minimum mode configuration of 8086	4	CO4	U
v)	Write short note on PIC.	4	CO5	U
vi)	Discuss branch prediction in Pentium.	4	CO6	U
Q.3	Solve any two questions out of three.	16		
i)	Explain flag registers of 8086 in detail.	8	CO1	U
ii)	Discuss string instructions in 8086 with suitable examples.	8	CO2	U
iii)	Explain the interrupt structure of the 8086 processor.	8	CO3	U
Q.4	Solve any two questions out of three.	16		
i)	Explain maximum mode configuration of 8086 microprocessor with memory write machine cycle.	8	CO4	U
ii)	Draw and explain block diagram of 8257 DMA controller.	8	CO5	U
iii)	Explain pipeline stages on the Pentium processor.	8	CO6	U