

Date: 21/12/2022

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

End Semester Exam

Nov/Dec 2022

(B.Tech) Program: Artificial Intelligence & Data Science

Examination: SY Semester: IV

Course Code: 1UAIC405 and Course Name: Microprocessors

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)	Draw a neat diagram of BIU of 8086	2	1	R
ii)	Draw and label the clock and reset circuit of 8086	2	2	R
iii)	Explain the instruction: LOOPE AGAIN	2	4	U
iv)	List different Data Transfer instructions in 8086	2	4	R
v)	Draw a neatly labelled diagram of a memory read cycle of 8086	2	2	U
vi)	At reset, interrupts of 8086 processor are disabled. Give reason	2	1	U
vii)	List out different operating modes of PPI 8255	2	3	R
viii)	Define Branch Prediction in Pentium.	2	1	R
Q.2	Solve any four questions out of six.	16		
i)	Explain the difference between JMP and CALL instruction	4	4	An
ii)	Discuss flag register and interpretation of its contents	4	1	U
iii)	Write a short note on dedicated interrupts of 8086	4	5	R
iv)	Explain address demultiplexing operation using latch in 8086	4	2	U
v)	Describe different operating modes of DMAC 8257	4	3	U

Sem - IV - AI & DS - Date: 21/12/22

vi)	Discuss concept of superscalar operation	4	1	U
Q.3	Answer any two questions out of three	16		
i)	Draw a neat block diagram and explain the operation of PIC 8259	8	3	U
ii)	Explain with suitable examples the following instructions of 8086: i)MOVSB ii) XCHG iii) ROL iv) CLC	8	4	Ap
iii)	Explain Memory Segmentation in 8086. State its advantages	8	1	U
Q.4	Solve any two questions out of three.	16		
i)	Write a program in assembly language to arrange a series of numbers in ascending order.	8	6	Ap
ii)	Classify and explain 8086 instruction set	8	4	Ap
iii)	Write short note on pipelining in Pentium	8	1	U