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

August 2023
(B.Tech.) Program: Computer Engineering   Scheme :II
Examination: SY   Semester: IV
Course Code: CEC405   Course Name: **Microprocessor**
Date of Exam: 01/09/23.   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)	State advantages of memory segmentation?	2	CO1	U
ii)	Explain 8257 DMA request?	2	CO3	U
iii)	Write stages of the floating point pipeline of Pentium Processor?	2	CO5	U
iv)	What is the control registers in 80386 DX?	2	CO4	U
v)	Explain Processor Control / Machine Control Instructions?	2	CO2	U
vi)	List the features of Pentium-IV?	2	CO6	U
vii)	Explain modes of 80386 Microprocessor?	2	CO4	U
viii)	Use of BSR Mode of Port C in 8255?	2	CO3	Ap
Q.2	**Solve any four questions out of six.**	**16**		
i)	Explain the I/O mode Control word format of 8255 PPI?	4	CO3	U
ii)	Explain Logical Instructions in detail?	4	CO2	U
iii)	Differentiate between Pentium and Pentium Pro-processor?	4	CO6	Ap
iv)	State the use of the cache coherence in Pentium processor ?	4	CO5	U
v)	Explain the use of RF, TF, VM, NT, IOPL flag bits ?	4	CO4	U
vi)	Compare 8086 Minimum Mode and Maximum Mode?	4	CO1	An
Q.3	**Solve any two questions out of three.**	**16**		

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i)	Develop an assembly language program to find if the given year is a Leap year or not ?	8	CO2	Ap
ii)	Explain the Debug registers of 80386 DX processor ?	8	CO4	U
iii)	Differentiate between 8086, 80386, Pentium I, Pentium II and Pentium III and Pentium IV ?	8	CO6	U
Q.4	**Solve any two questions out of three.**	**16**		
i)	Explain the branch prediction logic used in Pentium Processor?	8	CO5	U
ii)	Explain memory management in detail for the 80386DX processor?	8	CO4	U
iii)	Interface and Explain 8086 with the PIC 8259 in single mode ?	8	CO3	Ap

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