06/06/2022

K. J. Somaiya Institute of Engineering and Information Technology, Sion, Mumbai-22

(Autonomous College Affiliated to University of Mumbai)

End Semester Exam

April - May 2022

(B.Tech.) Program: Computer Engineering

Examination: SY Semester: IV

Course Code: 1UCEC405 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)	State use of control flags in 8086.	2	CO1	U
ii)	What do you mean by assembly directives of 8086?	2	CO2	U
iii)	Explain memory segmentation in brief.	2	CO3	U
iv)	What do you mean by real mode and protected mode.	2	CO4	U

v)		Explain pipeline stages for Pentium processor.	2	CO5	U
vi)		What is the role of branch prediction?	2	CO6	U
vii)		Write a difference between Pentium and Pentium Pro processors.	2	CO5	U
viii)		What do you mean by cache memory?	2	CO4	U
Q.2		**Solve any four questions out of six.**	**16**		
i)		State and explain the general-purpose registers.	4	CO1	Ap
ii)		Draw and explain the architecture for 8255.	4	CO3	U
iii)		Write assembly language program for division of two BCD numbers in unpacked form.	4	CO2	Ap
iv)		List out and explain the special instructions for data transfer.	4	CO2	U
v)		Differentiate between the real mode and protected mode of the X86 family.	4	CO4	An
vi)		Explain mode 1 and mode 2 for 8255.	4	CO3	U
Q.3		**Solve any two questions out of three.**	**16**		
i)		Write a program to display string Electrical and Electronics Engineering for 8086.	8	CO2	Ap
ii)		Explain the memory management in detail for 80386.	8	CO4	U
iii)		Write the features for Pentium IV processors.	8	CO6	U

Q.4	Solve any two questions out of three.	16		
i)	What is segmented memory? State the advantages of it in 8086.	8	CO1	U
ii)	What is interrupt? How it will get executed in 8086, explain with an example.	8	CO3	U
iii)	Explain memory paging mechanism in detail.	8	CO4	U