

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

May-June 2025		Scheme : III
(B. Tech) Program: EXTC		Semester: IV
Regular Examination: SY		Course Name: Microcontrollers
Course Code: EXC403 and		Max. Marks: 60
Date of Exam: 23.05.2025	Duration: 02.5 Hours	

Instructions: (1) All questions are compulsory. (2) Draw neat diagrams wherever applicable. (3) Assume suitable data, if necessary.				
Q. No.	Question	Max. Marks	CO	BT level
Q 1	Solve any two questions out of three: (05 marks each)	10		
a)	Outline the Features of 8051 microcontrollers.		1	U
b)	Explain Cache Memory		2	U
c)	What is stack? How is it implemented in 8051		3	U
Q 2	Solve any two questions out of three: (05 marks each)	10		
a)	Explain the need of Assembler & Cross Assembler, Assembler Directives		4	U
b)	Explain ARM 7 operating modes		5	U
c)	Explain Timer Mode in ARM		6	U
Q.3	Solve any two questions out of three. (10 marks each)	20		
a)	Explain concept of timers and counters in 8051		1	U
b)	Explain different types of Semiconductor memories Classify Memory : Primary and Secondary		2	U
c)	Explain Serial Communication in 8051		3	U
Q.4	Solve any two questions out of three. (10 marks each)	20		
a)	WAP to sort numbers using 8051 .		4	Ap
b)	Explain ARM 7 Load Store Model Distinguish between Thumb state and ARM state		5	U
c)	Write Short Note on LPC2148		6	U
