

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

*July/Aug/Sept/Dec/Jan/May/June 2025*

(B. Tech) Program: EXTC

Regular Examination: SY

Course Code: EXC403

and

Date of Exam: **01 - 08 - 25** Duration: 02.5 Hours

Scheme : III

Semester:IV

Course Name: Microcontrollers

Max. Marks: 60

**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
<b>Q 1</b>	<b>Solve any two questions out of three: (05 marks each)</b>	10		
a)	Distinguish between Von Neumann and Harvard Architecture.	1	U	
b)	Classify Memory : Primary and Secondary	2	U	
c)	Comparison of 8051 family members	3	U	
<b>Q 2</b>	<b>Solve any two questions out of three: (05 marks each)</b>	10		
a)	List 8051 Data types and directives	4	U	
b)	Explain ARM 7 CPSR and SPSR	5	U	
c)	WAP to ADD and multiply in ARM 7	6	U	
<b>Q.3</b>	<b>Solve any two questions out of three. (10 marks each)</b>	20		
a)	Explain concept of Interrupts in 8051	1	U	
b)	Explain Virtual Memory Concept with Memory Management Unit with Segmentation and Paging.	2	U	
c)	Explain serial data input and output concept in 8051	3	U	
<b>Q.4</b>	<b>Solve any two questions out of three. (10 marks each)</b>	20		
a)	WAP to find smallest and Largest number in series	4	Ap	
b)	Explain ARM 7 Interrupts and Exception	5	U	
c)	Write Short Note on LPC2148	6	U	

\*\*\*\*\*