

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Microcontroller Lab for the AY:2025-26 EVEN SEMESTER

List of Experiments / Programs									
Sl. No.	Programs	CO	RBT Levels	Dates					
				A1	A2	A3	B1	B2	B3
1	<ol style="list-style-type: none"> Write an ALP to move a block of n bytes of data from source (20h) to destination (40h) using Internal-RAM. Write an ALP to move a block of n bytes of data from source (2000h) to destination (2050h) using External RAM. 	CO1, CO2	L3						
2	<ol style="list-style-type: none"> Write an ALP To exchange the source block starting with address 20h, (Internal RAM) containing N (05) bytes of data with destination block starting with address 40h (Internal RAM). Write an ALP to exchange the source block starting with address 10h (Internal memory), containing N (06) bytes of data with destination block starting at location 00h (External memory). 	CO1, CO2	L3						
3	<ol style="list-style-type: none"> Write an ALP to add the byte in the RAM at 34h and 35h, store the result in the register R5 (LSB) and R6 (MSB), using Indirect Addressing Mode. Write an ALP to subtract the bytes in Internal RAM 34h & 35h store the result in register R5 (LSB) & R6 (MSB). 	CO1, CO2	L3						
4	<ol style="list-style-type: none"> Write an ALP to multiply two 8-bit numbers stored at 30h and 31h and store 16-bit result in 32h and 33h of Internal RAM. Write an ALP to perform division operation on 8-bit number by 8-bit number. 	CO1, CO2	L3						
5	<ol style="list-style-type: none"> Write an ALP to separate positive and negative in a given array. Write an ALP to separate even or odd elements in a given array. 	CO1, CO2	L3						

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6	<ol style="list-style-type: none"> Write an ALP to arrange the numbers in Ascending & Descending order. Write an ALP to find Largest & Smallest number from a given array starting from 20h & store it in Internal Memory location 40h. 	CO1, CO2	L3						
7	<ol style="list-style-type: none"> Write an ALP for Decimal UP-Counter. Write an ALP for Decimal DOWN-Counter. Write an ALP for Hexadecimal UP-Counter. Write an ALP for Hexadecimal DOWN-Counter. 	CO1, CO2	L3						
8	<ol style="list-style-type: none"> Write an 8051 C program to find the sum of first 10 Integer Numbers. Write an 8051 C program to find Factorial of a given number. 	CO1, CO2	L3						
9	<ol style="list-style-type: none"> Write an 8051 C program to find the Square of a number (1 to 10) using Look-Up Table. Write an 8051 C program to count the number of Ones and Zeros in two consecutive memory locations. 	CO1, CO2	L3						
10	<ol style="list-style-type: none"> Write an 8051 C Program to rotate stepper motor in Clock & Anti-Clockwise direction. Write an 8051 C program to Generate Sine & Square waveforms using DAC interface. 	CO3, CO4	L3						
11	Projects based on real world problems	CO3, CO4	L4						