DIPLOMA IN ELECTRONICS (ROBOTICS) / MECHATRONICS ENGINEERING

CENTRALIZED QUESTION BANK

4040636 – EMBEDDED SYSTEMS PRACTICAL

DIRECTORATE OF TECHNICAL

EDUCATION GOVERNMENT OF

TAMILNADU

DIPLOMA END SEMESTER / YEAR EXAMINATION – 2023

Course : Electronics (Robotics) / Mechatronics Engineering

Subject : Embedded systems practical   **QP Code :** 4040636

Time   : 3 Hours **Date :**   **Session:**   **Max Marks:** 100

Answer the Following Question

1. Write and simulate the assembly language program for addition and subtraction.

2. Write and simulate the assembly language program for multiplication.

3. Write and execute C program to blink the LEDs using software delay routine.

4. Write and execute C program to blink the LEDs using on chip TIMER/COUNTER for the delay (Using Polling method).

5. Write and execute C program to blink the LEDs using on chip TIMER/COUNTER for the delay (Using Interrupt method).

6. Write and execute C program to read the switch and display in the LEDs.

7. Write and execute C program to count external interrupt pulses EINTx (using VIC) and show the binary count value in LEDs.

8. Write and execute C program to display a number in seven segment LED.

9. Write and execute C program for serial transmission and reception using on chip UART. Send the received character back to the PC by Polling method.

10. Write and execute C program for serial transmission and reception using on chip UART. Send the received character back to the PC by Interrupt method.

11. Write and execute C program for accessing an internal ADC and display the binary output in LEDs.

DETAILED ALLOCATION OF MARKS

Algorithm or Flow chart	:	20
Program	:	30
Execution	:	30
Output/Result	:	10
Viva-Voce	:	10
Total	:	100