Question Paper

Answer all the questions.

1) A. List difference between Microcontroller and   (10)
    microprocessor?
    B. List different types of program memory's available
    for microcontrollers?

    (5 +5 MARKS)

2)   Briefly explain about addressing modes   (10)
        supported by 8051 instruction set with
        relevant examples

3)   Briefly explain about Memory organization   (10)
        model of 8051 with suitable
        diagram.   (10 MARKS)

4)   Explain the flag bits of following register   (10)
        a.TCON
        b.TMOD   (
        5+ 5 MARKS)

5)   Write an ASM and C program to do the   (10)
        following task simultaneously
            a. Generate square wave of 10khz on p1.5
        Assume XTAL=11.0592 MHz
            b. Read data from P0 and transfer it
        serially at 9600 baud rate.
            c. Read data serially and store it in internal
        RAM location starting from 40h
            d. Also monitor EX0 and if activated turn
        off P2 pins introduce delay and turn it on.

(10 MARKS)

6) Explain the following Instructions of ARM 7 (10)
with relevant example ?
    a. SWI
    b. Coprocessor instructions
    c. Special register instructions
    d. Call
instructions   (3 +
3 + 2 + 2 MARKS)

7) Briefly explain following Registers of ARM 7 (10)
    a. CPSR
    b. SPSR
    c. R13
    d. R14
    e. Banked
registers   (2 *
5 MARKS)

8) List and explain about Registers required to (10)
configure and program on chip ADC of LPC
2148 Microcontroller?
(10MARKS)

9) Write C program using to transmit message (10)
"HELLO SOIS" using LPC 2148 UART?   (10
MARKS)

10) List and explain about Registers required to (10)
configure and program GPIO pins of LPC 2148
Microcontroller?   (10MARKS)