8051 MICROCONTROLLER

Time : Three Hours   Maximum : 75 Marks
SECTION -A (30 Marks)
Answer ALL questions
ALL questions carry EQUAL Marks (5 x 6 = 30)

1   a Explain the concept of embedded systems.
                              OR
    b Discuss criteria to consider in choosing a microcontroller.

2   a Explain the ROM memory map of the 8051.
                              OR
    b Explain how stacks are accessed in the 8051.

3   a Write a note on I/O ports and bit addressability.
                              OR
    b List the timers of the 8051 and their associated registers.

4   a Explain the process of data framing.
                              OR
    b Describe briefly the interrupt priority in the 8051.

5   a Describe the functions of the pin of a typical LCD.
                              OR
    b Explain briefly, the 8051 interfacing to ADC.

SECTION -B (45 Marks)
Answer any THREE questions
ALL questions carry' EQUAL Marks (3 x 15 = 45)

6   Explain in detail, the assembling and running an 8051 program with suitable examples.

7   Discuss in detail, the 8051 data types and directives with suitable examples.

8   Draw the pin diagram of 8051 and explain the purpose of each pin of 8051.

9   Describe the two external hardware interrupts of the 8051.

10   With suitable sketches, explain the interfacing a stepper motor to the 8051.