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Printed Pages : 2

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BT-7 / M-17
MICROCONTROLLERS
Paper–ECE-415 E

Time allowed : 3 hours]   *[Maximum marks : 100*

Note : Attempt five questions in all, selecting at least one question from each unit. All questions carry equal marks.

Unit–I

1. (a) What is microcontroller ? Why microcontroller is a true computer on chip ? Explain with an application example.   10

    (b) Explain the criteria for choosing a microcontroller.   10

2. Discuss features, uses and manufacturers of 4bit, 8 bit, 16bit and 32bit microcontrollers.   20

Unit–II

3. With the help of pin diagram explain function of each pin of 8051 microcontroller.   20

4. Explain the following Internal units of 8051 :   5×4=20
    (i)   Registers
    (ii) PSW
    (iii) RAM
    (iv) Stack
    (v)   Oscillator

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Unit–III

5. (a) What is interrupt and ISR ? Explain the IE and IP register in 8051.   10

    (b) Explain the purpose of time delay and lookup table.   10

6. Write a program using two 8 bit no. (12H and 32H) for the following arithmetic and logical instructions :   5×4=20
    (i)   ADD
    (ii) SUBB
    (iii) MUL
    (iv) DIV
    (v)   XOR
    Also write flags are affected after execution of program.

Unit–IV

7. Explain the operation, programming and interfacing diagram of LCD with 8051 MC.   20

8. Explain the operation, programming and Interfacing diagram of DAC with 8051MC.   20

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