

Roll No. ....

Total Pages : 02

BT-6/M-19

36157

INTRODUCTION TO MICROCONTROLLER  
IT-308-N

Time : Three Hours]

[Maximum Marks : 75

**Note :** Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

**Unit I**

1. (a) What do you understand by micro-controller ? Write a brief note on the evolution of micro-controllers.  
(b) What are the different types of micro-controllers ? Discuss.
2. (a) Draw the block diagram of 8051 micro-controller.  
(b) Discuss in detail the Interrupt Enable (IE) register of 8051.

**Unit II**

3. (a) What do you understand by addressing modes ? Discuss the immediate addressing mode in 8051.

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- (b) Differentiate between JC and JNC instructions using suitable example.
- 4. (a) Differentiate between one-byte, two-byte and three-byte instruction formats in 8051 micro-controller using suitable examples.
- (b) Differentiate between PUSH and POP instructions using suitable examples.

### Unit III

- 5. What is timer mode register ? Indicate which mode and which timer are selected for each of the following :
  - (a) MOV TMOD, #01H
  - (b) MOV TMOD, #20H
  - (c) MOV TMOD, #12H
- 6. (a) What is the use of SBUF and SCON registers ? Discuss.
- (b) Write a program for 8051 to transfer "A" serially at 4800 baud, continuously.

### Unit IV

- 7. What is LCD ? Write the code to interface 8051 with LCD.
- 8. Write the code to interface stepper motor with 8051 micro-controller. Draw the circuit diagram also.