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Total No. of Pages : 02

Total No. of Questions : 09

**B.Tech.(EIE) (2011 & Onwards E-II) (Sem.-6)**  
**MICROCONTROLLER AND ITS APPLICATIONS**  
Subject Code : DE-2.4  
M.Code : 58033

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTIONS TO CANDIDATES :**

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

**SECTION-A****1. Answer briefly :**

- a) List the priority of interrupts in 8051.
- b) What is the address of 23th bit in bit addressable area?
- c) What is the value of stack pointer in 8051 on being reset?
- d) What is the difference between polling and interrupt?
- e) Write the TMOD register.
- f) Which port of the 8051 is used as low order address bus?
- g) What are the various flags in microcontroller 8051?
- h) What is the function of the instruction SWAP?
- i) Define sampling in ADC?
- j) What is the function of the program counter?

### SECTION-B

2. Explain the interrupt execution in 8051 microcontroller
3. Draw and explain the timing diagram for Opcode fetch cycle.
4. What do you mean by the addressing mode? Explain the various addressing modes of 8051 details with the help of examples.
5. Write a program to divide two numbers using successive division method.
6. Explain the concept of lookup table for 8051.

### SECTION-C

7. Explain the interfacing of 8051 with DC motor
8. Explain the architecture of the 8051 with a labeled and neat diagram.
9. Write a program to put ten numbers in an ascending order stored at memory location 2000h.

**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**