Total No. of Questions :8]   [Total No. of Printed Pages :2

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Roll No ....

MEPE-301(A)
M.E./M.Tech., III Semester
Examination, December 2016

Micro Controllers and Control (Elective - I)

Time : Three Hours

Maximum Marks: 70

Note: i) Total no. of questions are eight
ii) Attempt any five questions.
iii) All questions carry equal marks.

1. a) Draw and explain the architectural details of 8 bit 8051 microcontroller.   7

b) Describe the addressing modes of 8051 with example of each.   7

2. a) Explain the interrupts of 8051 microcontroller with priority status.   7

b) Describe the operational features of TMOD and TCON register with block representation.   7

3. a) How many special function register are available in 8051? Explain. Write special function register RAM address.   7

b) Describe the pin configurations of 8051 microcontroller.   7

4. a) Write a program for 8051 to generate a pulse of desired width using timer of microcontroller through its port.   7

b) How will you interface keyboard to 8051. Explain with program of interfacing.   7

5. a) An array of 10 numbers data bytes are stored from memory location 8002 H onwards, write program to find out smallest number from array.   7

b) Write an assembly language program using 8051 instruction to shift an 8 bit number left by 3 bit and store at 50 H memory location.   7

6. a) Explain the interfacing of ADC to 8051 microcontroller. Explain it with program.   7

b) Write an assembly language program using 8051 instruction set to generate time delay of 0.2 msec. Assume that XTAL = 11.0592 MHz.   7

7. a) Explain the overview of Digital Signal Processor and its latest development.   7

b) Describe the instruction set of DSP. Also write few applications of DSP.   7

8. a) Explain with programming the interfacing of Stepper motor to 8051 microcontroller.   7

b) Describe interfacing of DAC chip to 8051 microcontroller. Write program for it.   7

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