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Roll No.....

MEDC-102**M.E./M.Tech. I Semester**

Examination, June 2017

Micro Controller System Design**Time : Three Hours**

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Maximum Marks : 70**Note:** i) Attempt any five questions out of eight.

ii) All questions carry equal marks.

1. a) Explain the concept of segmented memory. What are its advantages? What is the purpose of segment registers?
b) Draw the schematic block diagram of 8086 and explain the function of each block.
2. a) What is an instruction format? What are the types of instructions of 8086 microprocessors based on format?
b) What is a procedure? What are the different types of procedure in 8086? Discuss each type procedure with examples.
3. a) What are the advantages and disadvantages of memory-mapped I/O over I/O mapped I/O?
b) What are the advantages of having a provision for both internal and external memory in 8051.
4. a) What are the different addressing modes supported by the 8051? Explain with examples.

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- b) What is an interrupt? Explain interrupt structures of the 8051 microcontroller? What are vectored and non-vectored interrupts?

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5. a) What are the different software development phases in a project?
b) Describe the functions of ICE. Explain the program segments in a monitor. How do these help in debugging the targeted application?
6. a) Draw and explain the IDE screen environment.
b) Explain debugger and simulator.
7. a) Describe PIC microcontroller architecture. List the innovative features with respect to the 8051 architecture.
b) Describe the functioning of CCP1 and CCP2 units for the capture mode.
8. a) Enlist the key features of C55x DSP processor.
b) Draw and explain the address flow unit diagram of TMS320C55x processor.

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