Roll No. | | | | | | | | | | | | |

Total No. of Pages : 01

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M.Tech.(EE) (2013 Batch E-II) (Sem.–2)

MICROPROCESSOR AND MICROCONTROLLER

Subject Code : MTEE-205B

M.Code : 71364

Time : 3 Hrs. Max. Marks : 100

INSTRUCTIONS TO CANDIDATES :

1. Attempt any FIVE questions out of EIGHT questions.
2. Each question carries TWENTY marks.

1. What is Pipelining? What are the two types of Pipelining? Explain a four-stage pipeline and system resource used in each stage.
2. a) With neat sketch, explain the ADC architecture of a PIC microcontroller.
   b) Draw and explain the internal architecture of 8086 microprocessor.
3. a) What is Addressing modes? Explain the various addressing modes of 8086 microprocessor by giving example of each addressing mode.
   b) Write an assembly language program for finding smallest number in a data array using 8086 microprocessors.
4. a) Write a short note on programming model of 8051 microcontroller.
   b) How will you interface any sensor with 8051 microcontrollers?
5. a) Classify the timers of PIC microcontroller and explain it.
   b) Describe the instruction set of PIC microcontrollers and explain the programming of PIC microcontroller with suitable example.
6. Draw the pin description of DMA controller and explain series of action that a DMA controller will perform after it receive a request from peripheral device to transfer data from the peripheral device to memory.
7. a) With suitable examples, explain the addressing modes available in 8086 microprocessors.
   b) Explain the different operating modes of 8086 microprocessor.
8. a) Define the function of various extra flag bits in 8086 microprocessors.
   b) Write a program to convert BCD to 7 segment code using look up table.

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.