b) What is the significance of control register of 8255 programmable peripheral interface? Explain BSR mode in detail of 8255.

5. a) Discuss timer programming of 8051 microcontroller with the help of internal structure of timer.
   b) Write steps involved for handling a general purpose interrupt in 8085 microprocessor.

6. a) Design a 4-bit ALU and illustrate. Addition, Shift and decrement operation on it.
   b) Design a 64 KB memory using 8 KB memory chips on 16 bit address space.

7. a) Draw block diagram of programmable interval timer. Also discuss different modes of operation of 8253.
   b) Differentiate serial communication and parallel communication. Explain RS 232 in brief.

8. a) Design a microcontroller based temperature monitor and control system for an industrial furnace.
   b) Write a short note on any two:
      i) 8-bit successive approximation ADC
      ii) Addressing modes in 8085 microprocessor.
      iii) Interrupt in 8086 microprocessor.

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

Roll No ..... 

# MEPE - 202

## M.E./M.Tech., II Semester

Examination, June 2014

## Advanced Microprocessor And Application

***Time : Three Hours***

***Maximum Marks : 70***

*Note :* i) Total no. of Questions in this paper are Eight.
ii) Attempt any Five.

1. a) Draw internal architecture of 8 bit microprocessor.
   b) Draw timing diagram for following instruction.
   6000H OUT F2H

2. a) Compare memory mapped I/O interfacing and peripheral I/O interfacing.
   b) Explain memory segmentation and flag register of 8086 microprocessor.

3. a) Write a program in assembly level language to compare three number and find greatest among them. Using 8085 microprocessor.
   b) Draw 8086 based system in minimum mode with suitable control signals, address/data bus, memory, I/O devices etc.

4. a) Draw and explain internal structure of ports of 8051 microcontroller.