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B.E/B.Tech. (Full Time) DEGREE END SEMESTER EXAMINATIONS, NOV / DEC 2013  
Common to Mechanical/ Manufacturing /Printing

**SIXTH SEMESTER**  
**ME 383 MICROPROCESSORS AND INTERFACING / ME 9352 MICROPROCESSOR AND**  
**MICROCONTROLLER**

(REGULATIONS: 2004 / 2008)

Duration: 3 Hrs.

Answer ALL Questions

Max.Mark:100

**Part – A (10 x 2 = 20 Marks)**

1. What is the use of Tri-state logic?
2. Draw the schematic diagram that shows the de-multiplexing of address bus of 8085 microprocessor.
3. Define machine cycle.
4. What is meant by addressing mode?
5. Compare direct I/O and memory mapped I/O.
6. Generate a square pulse using BSR mode of 8255.
7. Differentiate microprocessor and microcontroller.
8. Write two examples for indexed addressing mode?
9. Mention the components of microprocessor based temperature control system.
10. How do you provide key-debouncing by using microprocessor?

**Part – B ( 5 x 16 = 80 Marks)**

11. Draw and explain the pin configuration of 8085 microprocessor.
12. a. Draw the timing diagram for the instruction INR M and also calculate the execution time. Assume the crystal frequency as 6 MHz.  
(OR)  
b. Write an assembly language program for a 8085 microprocessor to sort the given numbers of an array in ascending and descending order.
13. a. Devise an interfacing circuit for a microprocessor to connect with a 16 kB RAM, a 16 kB EEPROM, an input port and an output port.  
(OR)  
b. Explain how to display a 4 digit number by means of 8085 microprocessor.
14. a. Explain the registers of 8051 microcontroller.  
(OR)  
b. Describe the timers of 8051 microcontroller.
15. a. Explain how a microprocessor can read the DIP switches and display the status through LEDs.  
(OR)  
b. Describe the microprocessor based stepper motor controller.