(Pages : 2) **5575**

Reg. No. : .....

Name : .....

Seventh Semester B.Tech. Degree Examination, October 2014
(2008 Scheme)
08.704 : Elective – III (g) : MICROPROCESSOR BASED SYSTEM DESIGN

Time : 3 Hours Max. Marks : 100

PART – A

Answer **all** questions. **Each** question carries **4** marks.

1. What are the different functions in 8155 ?
2. Explain hand shaking mode of modes of 8255.
3. What are the different functions of 8253 ?
4. Explain the format of serial transmission.
5. What are the different functions of 8251 ?
6. What are the features of 8279 ?
7. What are the different registers in 8086 ?
8. Explain how 20 bit physical address is calculated from 16 bit segment address and 16 bit offset.
9. What is meant by segmentation ?
10. What is meant by vectored interrupt ?

PART – B

Answer **any one full** question from each Module. **Each** question carries **20** marks.

Module – I

11. a) Explain with program interfacing 8155 with a seven segment display.
    b) Explain how a square wave can be generated using programmable interval timer 8253.

OR

12. a) Draw the functional block diagram of 8259 interrupt controller and explain.
    b) Explain how multiple interrupts can be interfaced with a processor using an interrupt controller.

P.T.O.

Module – II

13. a) What is DMA ? Explain the different DMA operations.

    b) Draw the architecture of 8257 and explain its different features.

OR

14. a) Draw the block diagram of 8275 CRT controller and explain.

    b) Explain how 8275 CRT controller can be programmed for different modes of operation.

Module – III

15. a) Explain command word and data format of 8279 Keyboard display interface.

    b) Draw the circuit of keyboard display interface using 8279 and explain.

OR

16. a) Explain the different addressing modes of 8086 with examples.

    b) Explain how a matrix keyboard is interfaced with 8086 processor.