Reg. No. : ⬚⬚⬚⬚⬚⬚⬚⬚⬚⬚⬚⬚⬚

Question Paper Code : 75539

5 Year M.Sc. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2013.

Fourth Semester

Information Technology

XCS 234 – MICROPROCESSORS

(Common to 5 Year M.Sc. Software Engineering/M.Sc. Computer Technology)

(Regulation 2003)

Time : Three hours   Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What are difference between machine language and the assembly language of the microprocessor?

2. Give an example for 8085 based based micro computer.

3. List out the five categories of the 8085 instructions. Give examples of the instructions for each group.

4. List various instructions that can be used to clear accumulator in 8085.

5. List out the maskable and non maskable interrupts available in 8085.

6. Define DMA and two mode of operations of a DMA controller.

7. Give the format of BSR word in 8255 to set pc4 bit.

8. Why is 8251 called USART?

9. What are the different types of methods used for data transmission and define full duplex transmission.

10. Define high level processor.

PART B — (5 × 16 = 80 marks)

11. (a) With a neat sketch explain the architecture of 8085 microprocessor.   (16)

Or

(b) What is memory interfacing in 8085 and project the difference between micro, mini and large computers.   (16)

12. (a) Explain in detail about the instruction set of 8085 microprocessor with suitable examples. (16)

Or

(b) Write an assembly language program to convert on array of ASCII code to corresponding binary (hex) value. The ASCII array is stored starting from 4200H. The first element of the number of elements in the array.(16)

13. (a) Draw the block diagram of the DMA controller and explain its operations. (16)

Or

(b) Explain in detail the various interrupts of 8085 and its instruction set with an example. What are the various types of interrupt controller. (16)

14. (a) Explain with neat waveform the mode 0 of the 8253 timer/counter. Explain with the help of block diagram, functioning of 8253 in various modes. (16)

Or

(b) Explain with block diagram of 8251 for serial data communication and describe how to receive parallel data from the CPU and transmits serial data after conversion. (16)

15. (a) Draw the block diagram and write a program of a 8085 based traffic light controller. (16)

Or

(b) Explain the architecture of an bidirectional data transfer between two micro computers. (16)

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