Roll No.

B.E / B.Tech (Full Time) DEGREE END SEMESTER EXAMINATIONS, April/ May 2014
COMPUTER SCIENCE AND ENGINEERING
IV Semester

IT282/ CS281/ CS9251 Microprocessors and Microcontroller

(Regulation 2004/ 2008)

Time : 3 Hours   Answer ALL Questions   Max. Marks 100

PART-A (10 x 2 = 20 Marks)

1. Discuss the functions of the SID and SOD signals of the 8085 microprocessor.

2. When will an auxiliary carry flag be set in 8085 processor

3. What are the advantages of segmentation in 8086?

4. Discuss the functions of the following assembler directives: PUBLIC, EXTERN

5. What is the word length of the 80486 processor?

6. Why a bus arbiter is required in a loosely coupled configuration?

7. What are the different ways of reading the counter values of 8253, the programmable interval timer?

8. Give the differences between two key lock out and N-key roll over in 8279.

9. How does 8051 differentiate between the external and internal program memory?

10. Give the difference between the microprocessor and micro controller.

Part – B (5 x 16 = 80 marks)

11. (i) Write an 8085 ALP to perform a 16 bit BCD addition.   (8)
    (ii) Discuss in detail about the 8085 architecture.   (8)

12. a) (i) Discuss the following assembler directives present in 8086.   (8)
            DW, LENGTH, SEGMENT, ASSUME
        (ii)Write an 8086 ALP to move a block of data from one memory location to the other.   (8)

                                OR

    b) (i) Discuss in detail about the data related addressing modes of 8086 with examples.   (8)
        (ii) Discuss the software interrupt details of 8086.   (8)

13. a) Assume that a loosely coupled multiprocessor system consists of an 8086 with a local memory in one module and in another module an 8086 and an 8089. Determine the major bus interface devices required for each module.   (16)

                                OR

    b) Draw and discuss the configuration diagram for the maximum mode operation of 8086.   (16)

14. a) Show how an 8257 DMA controller is interfaced with the microprocessor and explain ? (16)

OR

b) Draw and discuss the block diagram of 8279 programmable keyboard display interface device. (16)

15. a) Discuss the register set of 8051 and also discuss how memory and I/O addressing is done in 8051. (16)

OR

b) Discuss in detail the internal architecture of an 8051 microcontroller. (16)