EC – 603

B. E./B. Tech. (Sixth Semester) EXAMINATION, 2008

MICROPROCESSORS

Time : Three Hours] [*Maximum Marks : 100*

Note : Attempt any *five* questions.

1. (i) At any time what is the maximum number of memory that on 8086 processor can use ? 2 each

   (ii) Explain why CS cannot be a destination ?

   (iii) What is sequential memory addressing ? Give its advantages.

   (iv) What is Pipelining ? How is 8086 μp architecture designed to incorporate pipelining ?

   (v) Give the difference between TEST and AND instructions.

   (vi) The stack segment register contains 2424 H while the SP register contains 2121 H. What is the physical address of the start of stack ?

   (vii) Which base register is used to address the data in the stack segment ?

   (viii) Differentiate the memory and I/O.

   (ix) Define microcontroller.

   (x) Write down the 16 bit registers of microcontroller 8051.

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2. (a) What are the different features of numeric processors 8087 ? 5

(b) What are the different internal registers in 8086 μp ? 5

(c) Write down the program using 8253 in mode-3 as a square wave generator. 10

3. (a) Write down the program to check whether a given string is a palindrome or not and the string is stored in the data segment. 14

(b) What are the different SFRs in 8051 microcontroller ? 6

4. (a) Explain minimum and maximum operating mode of 8086 μp. 6

(b) What are different assembler directives ? Explain their working in brief. 6

(c) Explain the interfacing of memory chips using 74 LS 138. 8

5. (a) Write an assembly language program for 8086 μp to arrange a string of bytes in ascending order. 10

(b) Explain different serial data transmission modes of 8051 microcontroller. 10

6. Write technical notes on any *four* of the following : 5 each

(a) DMA Controller

(b) BIU and EU of 8086 μp

(c) Physical and Logical memory

(d) Difference between 8086 μp and 8088 μp

(e) Segmented registers in 8086 μp

(f) Interrupts in 8086 μp

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