BICS-012

B.Tech. IN - COMPUTER SCIENCE AND ENGINEERING

01872

Term-End Examination

June, 2012

BICS-012 : MICROPROCESSOR

Time : 3 hours   *Maximum Marks : 70*

Note :   Attempt any seven questions.

1. (a)   Draw and explain the pin diagram of 8086.
    (b)   With a timing diagram, explain the activities
           of HOLD and HLDA pins of 8086.   **5x2=10**

2. (a)   Describe   the   main   advantages   of
           multiprogramming   system   over
           uni-programming system ?   **5x2=10**
    (b)   What do you mean by hardware and
           software interrupt ?

3. What is the recursive procedure ? Write a 8086
    program to move a string of data words from
    offset 2000H to offset 3000H, the length of the
    string is $2C3C_H$.   **1x10=10**

4. (a)   show the bit wise flag register of 8086 and
           explain the function of each flag with an
           example.   **5+5=10**
    (b)   Explain why the throughout of an 8086
           based system increases due to asynchronous
           behavior of EU and BU ?

5. Draw and discuss internal architecture of USART 8251. **10x1=10**

6. (a) What do you mean by bus demultiplexing and buffering in 8086 ? **5+5=10**
   (b) Explain 8086 maximum mode operation with suitable diagram.

7. With neat block diagram, explain the working of 8255 A ? Also explain the various modes of 8255 A. **5+5=10**

8. In 8086 maximum mode co-processor configuration, explain the function of the following : **2.5x4=10**
   (a) $\overline{\text{TEST}}$
   (b) $\overline{\text{RQ}}/\overline{\text{GT1}}$
   (c) S6
   (d) FSC code

9. Explain interfacing of 8254 to 8086 in memory mapped I/O. **10x1=10**

10. Write short note on *any two* : **5x2=10**
    (a) Granularity bit in reference to 80386
    (b) GDTR and LDTR in reference to 80386
    (c) 8254 as a counter

———————