B. Tech. IN ELECTRONICS AND COMMUNICATION ENGINEERING

Term-End Examination

June, 2012

BIEL-015: MICROPROCESSOR AND ITS APPLICATIONS

Time : 3 hours   *Maximum Marks : 70*

Note :   *(i) Attempt any seven questions.*

       (ii) Assume suitable missing data, if any.

1. (a) What is an Instruction ? Provide instruction   **5**
   format with suitable examples.

   (b) Draw the pin diagram of 8085 and explain   **5**
   function of each pin.

2. Explain the function of Macros and labels in 8085   **10**
   microprocessor. Also differentiate in subroutine
   and macros.

3. (a) Provide similarity and differences in   **5**
   CALL-RET and PUSH - POP operation.

   (b) Write the description for the following :   **5**

   (i) ADI (ii) ANA (iii) DAA

   (iv) DCX (v) LDAX.

4. (a) Discuss the various schemes of I/O data   5
        transfer from CPU to I/O devices and
        vice - versa.

    (b) How SIM and RIM instructions are used for   5
        maskable interrupts, explain with an
        example ?

5. What is the difference between Instruction cycle   10
    and machine cycle ? Identify the machine cycle
    for PUSH B in 8085 and draw the timing diagram
    for the same.

6. How are interrupts are used in 8086 ? What are   10
    the interrupt vector address for NMI and
    INT 21 (H) in 8086 vector table.

7. List the operating modes of IC 8255. Specify the   10
    handshake signals and their functions if port A
    of 8255 is setup as an output port in model.

8. Define addressing mode and with the help of an   10
    example of segmented programming discuss the
    various addressing modes of 8086 microprocessor.

9. (a) What does granularity bit (G) of 80386   5
        descriptor specify ? What is size of segment
        when (i) G = 0 (ii) G = 1 ?

(b) Discuss the protected mode programming 5
model of 80386/80486 microprocessor
giving details and functions of registers.

10. Write short Note on *any two* of the following. **5x2=10**

(a) Functionality of IC 8259.

(b) Multiple Interrupts.

(c) Interfacing static RAM.

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