BIEL-015

B.Tech. ELECTRONICS AND COMMUNICATION ENGINEERING (BTECVI)

00514

Term-End Examination

June, 2014

BIEL-015 : MICROPROCESSOR AND ITS APPLICATIONS

Time : 3 hours   *Maximum Marks : 70*

Note : *Attempt any **seven** questions. Assume suitable missing data, if any.*

1. (a) Draw and explain the general architecture of a microcomputer system.   5

    (b) What do you mean by addressing modes ? Explain different addressing modes of 8085.   5

2. Draw and discuss the architecture of 8259 programmable Interrupt controller.   10

3. (a) Draw the timing diagram of transfer of byte from memory to microprocessor unit. Also explain the role of ALE signal.   5

    (b) How does assembler MACRO differ from procedure ?   5

4. (a) What do you understand by Memory mapped I/O and Peripheral I/O ?   *5*

   (b) Define Instruction cycle, Machine cycle and T-state.   *5*

5. Write an 8085 assembly language program to find out the 2's complement of a binary number.   *10*

6. (a) Explain the following directives in brief : ASSUME, EXTRN, ENDP.   *5*

   (b) What do you mean by pipelined architecture ? How is it implemented in 8086 ?   *5*

7. (a) Identify the basic differences between 80186 and 80286.   *5*

   (b) What are the basic differences between the 80386 real, protected and virtual 8086 modes ?   *5*

8. (a) Describe with an example the way to generate physical and effective address.   *5*

   (b) Explain the need of program counter (PC) and stack pointer (SP) in a 8085 microprocessor.   *5*

9. Write short notes on any *two* of the following :   *10*

   (a) Interfacing a keyboard

   (b) Cycle stealing

   (c) Memory Segmentation

10. (a) Explain the function of the following instructions : 5

(i) RIM

(ii) RST 4

(iii) DAA

(iv) NOP

(v) STC

(b) Differentiate between Maskable Interrupt and Non-Maskable Interrupt. 5

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