

**DIPLOMA - VIEP - ELECTRONICS AND  
COMMUNICATION ENGINEERING (DECVI)**

**Term-End Examination**

00216

**June, 2016**

**BIEL-036 : MICROPROCESSOR**

*Time : 2 hours*

*Maximum Marks : 70*

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**Note :** Attempt any **five** questions. Question no. 1 is **compulsory**. Use of scientific calculator is permitted.

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1. (a) What are the hardware interrupts of 8085 ?
- (b) List the various 8085 instructions that can be used to clear accumulator.
- (c) If the following program starts at 0100H, the contents of accumulator, when PC reaches 0109H, will be

LX1 SP, 00FFH

LX1 H, 0107H

MVI A, 20H

SUB M

- (d) What is the purpose of the control word written to control register in 8255 ?
- (e) Consider the following addresses for PA = 30H, PB = 31H, PC = 32H, CWR = 33H. Write the set of instructions to set PC0 and PC2 using BSR mode.
- (f) Give the different types of command words used in 8259.
- (g) An Intel 8085 microprocessor is operated at a frequency of 2 MHz. If the instruction STA E 000H is executed, then what is the instruction cycle time ?  $7 \times 2 = 14$
2. With the help of a neat block diagram, explain the architecture of the 8085 microprocessor. 14
3. Draw the timing diagram for execution of the instruction LDA 2600H. Upcode for the LDA instruction is 3AH. Content of 2600 is 05H and this instruction is stored in memory location 2000H. 14
4. (a) Give a brief explanation of addressing modes of 8085 instruction set with suitable examples of each. 7
- (b) Sixteen bytes of data are stored in memory locations, starting at 2150H to 215FH. Write a program to transfer the entire block of data to a new memory location starting at 2170H. 7

5. (a) Differentiate between memory mapped I/O and I/O mapped I/O. 7
- (b) Draw and explain the internal block diagram of 8255 PPI. 7
6. Write a program to interface ADC and DAC with 8085 and demonstrate the generation of square waves. 14
7. Write short notes on any *two* of the following:  $2 \times 7 = 14$
- (a) Interrupt Structure of 8086
- (b) Comparison between 80286 and 80486 Microprocessors
- (c) 8253 Programmable Interval Timer
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