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BIEL-036

DIPLOMA – VIEP – ELECTRONICS AND COMMUNICATION ENGINEERING (DECVI)

00973

Term-End Examination

December, 2016

BIEL-036 : MICROPROCESSOR

Time : 2 hours *Maximum Marks : 70*

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

1. (a) What is the difference between vectored and non-vectored interrupts in 8085 ?

(b) Why is the instruction queue in 8086 microprocessor 6 bytes long ?

(c) An 8085 microprocessor based system uses a 2 K × 8-bit RAM whose starting address is AA00. The address of the last byte in this RAM is _____ .

(d) The contents of accumulator after the execution of the following set of instructions will be _____ .

```
MVI A, 40H
ADI 02H
XRA A
POP H
```

(e) What is the function of stack pointer ?

(f) Assume that the carry flag is initially unset. The content of the accumulator after the execution of the following program is _____ .

```
MVI A, 07H
RLC
MOV B, A
RLC
RLC
ADD B
RRC
```

(g) What are the various DMA data transfer schemes ? *7×2=14*

2. Draw the pin diagram of 8085 microprocessor and explain the use of the signal associated with each pin. *14*

3. Draw the timing diagram for the execution of the instruction STA 2600H. Opcode for STA instruction is 32H. Content of A register is 05H and this instruction is stored in the memory location 2000H. *14*

4. (a) Explain the use of RIM and SIM instructions with their format. 7

(b) Draw the timing diagram of JMP and CALL instructions and explain the difference between the two. 7

5. Interface two numbers of 8 kb EPROM and one number of 8 kb RAM with 8085 processor. Explain the interface diagram and allocate binary addresses to these memory ICs. 14

6. Draw the complete interfacing diagram of IC 0808 DAC using 8255 and describe its operation. 14

7. Draw the pin diagram of 8086 microprocessor and explain the names of signals associated with maximum mode operation of 8086 microprocessor. 14