

**DIPLOMA - VIEP
(DECVI)**

**Term-End Examination
December, 2013**

BIEL-036 : MICROPROCESSOR

Time : 2 hours

Maximum Marks : 70

Note : Question No.1 is compulsory. Answer any four from rest.

1. (a) In 8085 micro processor the first machine cycle of every instruction is _____ cycle. **2x7=14**
(i) Memory Read (ii) Memory Write
(iii) Op Code Fetch (iv) Idle
- (b) All interrupts are sampled during _____ clock cycle of an instruction cycle.
(i) Last (ii) First
(iii) Last but one (iv) Second
- (c) 8085 microprocessor can access the following size of memory :
(i) 64 kByte (ii) 64 MByte
(iii) 256 kByte (iv) 256 Byte
- (d) The content of Accumulator in 8085 after the execution of XRA, A instruction is :
(i) 1
(ii) 0
(iii) No change
(iv) can not be predicted

- (e) STACK in 8085 is used as _____ memory.
- (i) FIFO
 - (ii) LIFO
 - (iii) Random Access
 - (iv) None of the above
- (f) Which one of the following is a software interrupt ?
- (i) RST 5.5
 - (ii) RST 6.5
 - (iii) RST 5
 - (iv) INTR
- (g) After RESET 8086 microprocessor will start fetching the instruction from the memory address :
- (i) 0 0 0 0 0 H
 - (ii) 0 0 0 0 F H
 - (iii) F F F F F H
 - (iv) F F F F O H
2. (a) Compare the memory mapped I/O and I/O mapped I/O scheme used for I/O addressing. 7
- (b) Discuss the INTR interrupt of 8085. 7
3. (a) Explain the difference between : 8
- (i) HLT and HOLD states of 8085
 - (ii) RESET IN and RESET OUT signal
- (b) Discuss the concept of WAIT states in 8085 microprocessor. 6
4. Write a program to store in ten 8-bit numbers stored starting from memory location 2100H. Add the numbers and store the results at 3500H memory location and carry at 3501H. Draw the flow chart also. 14
5. Write a program in assembly language to display even digits 0, 2, 4, 6, 8 and then odd digits 1, 3, 5, 7, 9 for 1 seconds repeatedly in seven segment display interface with 8085 microprocessor. 14

6. Draw the timing diagram for the execution of instruction OUT (82) H. Show all the relevant informations on timing diagram. **14**
Instruction is stored at (2200) H memory on wards with Accumulator content = (FF)H
7. (a) Discuss the three control Flags of 8086. **4**
(b) Draw the Architecture of 8086 microprocessor. Discuss the functions performed by various blocks such as BIU, EU etc. **10**
8. Write short notes on **any two** of the followings : **7x2=14**
(a) Mode 2 of 8255 (PPI)
(b) Rate generator mode of 8253
(c) Pipelining in 8086 microprocessor
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