Roll No ....

CS-601 (GS)

B.E. VI Semester Examination, June 2020

Grading System (GS)

Microprocessor and Interfacing

Time : Three Hours

Maximum Marks : 70

Note: i)   Attempt any five questions.

ii) All questions carry equal marks.

1. Calculate delay of following routine:
   MVI B, 10H
   LOOP2: MVI C, FFH
   LOOP1: DCR C
   JNZ LOOP1
   DCR B
   JNZ LOOP2

2. Assemble the following program, starting at location 2000H
   START: IN F2H   : Read input switches at port F2H
          CMA   : Set ON switches to logic 1
          ORA   A   : Set Z flag if no switch is ON
          JZ START   : Go back and read input port if all switches are off.

3. a) Explain Programmable Interrupt Controller in detail.
   b) Discuss various modes of DMA transfer.

4. What does it means "Evaluation of Microprocessor"? Explain various Data Transfer Schemes in detailed.

5. Write the initialization instructions of 8259A PIC, to meet the following specifications:
   i) Interrupt type 32
   ii) Edge Triggered, single and ICW4 needed, interval of 8
   iii) Mask IR1 and IR3 interrupts.

6. Why are buffer and latches often required in an 8086 based system? Explain how address, data and control buses of 8086 microprocessor are demultiplexed.

   OR

   Draw typical 8086 maximum mode configuration and explain the function of signals used in maximum mode.

7. Given that BX=2500H, SI= 5000H, displacement=1000H and IP=2000H. Determine the effective address for the following addressing modes:
    a) Immediate
    b) Register using SI
    c) Direct
    d) Base
    e) Index
    f) Base Index

8. Write short notes on any of the followings.
    a) DMA controller
    b) 8086 addressing modes
    c) Flags of 8085

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