PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
B.Tech., Summer 2018 - 19 Examination

Semester: 4   Date: 10/05/2019
Subject Code: 03107257   Time: 02:00 pm to 04:30 pm
Subject Name: Microprocessor   Total Marks: 60

Instructions:
1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1 Objective Type Questions   **(15)**
1. Which Interrupt is non-maskable in 8085 Microprocessor?
   (a) RST7.5   (b) TRAP   (c) INT   (d) RST6.5
2. Justify 8085 is 8 – bit Microprocessor.
3. Give one example of Indirect addressing mode in 8085 Microprocessor?
4. The operating frequency of 8085 Microprocessor is _____, if 8 MHz crystal in connected to 8085 Microprocessor?
5. Stack memory of 8085 Microprocessor operates with which mechanism?
   (a) LIFO   (b) LILO   (c) FILO   (d) FIFO
6. How many t-state required to execute STA 4000h?
   (a) 10   (b) 7   (c) 13   (d) 4
7. The content of Accumulator after execution XRA A is _____H.
8. How many address lines are available in 8086?
   (a) 16   (b) 8   (c) 20   (d) 24
9. Which of the following instruction does not affect ZERO flag?
   (a) ADD B   (b) DCR B   (c) SUI 20H   (d) DCX B
10. Write RIM bit format.
11. Explain the significance of ALE pin.
12. Specify the number of times following loops are executed
    Loop: MVI B,64 H
          NOP
          DCR B
          JNZ Loop
          HLT
13. Explain the function of HOLD pin in 8085 Microprocessor.
14. Vector location for the interrupt RST 6.5 is _____.
15. _____ register maintain the sequence of execution in 8085.

Q.2 Answer the following questions. (Attempt any three)   **(15)**
A) Give the comparison of Memory Mapped I/O and Peripheral Mapped I/O.
B) Write a program to perform multiplication of two 8-bit numbers.
C) Draw 8085 Interrupt vector diagram.
D) Write Addressing modes of 80286.

Q.3 A) Draw the timing diagram of instruction IN 84H which is written on memory location 2065H. **(07)**
        Machine code for IN instruction is DBH.
      B) Draw and explain block diagram of 8085 microprocessor.   **(08)**
                                          OR
      B) Explain the programmable peripheral interface 8255A with block diagram.   **(08)**

Q.4 A) Write 8085 program to convert binary to ASCII hex code.   **(07)**
                                          OR
      A) Explain architecture of 8086 with all segment registers.   **(07)**
      B) What is stack? Explain PUSH and POP Instruction with example.   **(08)**