Seat No: _____ **Enrollment No: _____**

PARUL UNIVERSITY

FACULTY OF ENGINEERING & TECHNOLOGY

B.Tech. Summer 2018 - 19 Examination

Semester: 4 **Date: 03/05/2019**
Subject Code: 03107255 **Time: 2:00pm to 4:30pm**
Subject Name: Microprocessor & Interfacing **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 - (All are compulsory) (Each of one mark) **(15)**

1. How many buses contain by Microprocessor?
a. 2 b. 4 c. 3 d. 6

2. Which is not the control bus signal:
a. READ b. WRITE c. RESET d. None of these

3. What is the size of the accumulator (register A) 8085 microprocessor?
a. 6 bits b. 8 bits c.12 bits d. 16 bits

4. How many bytes does the following set of instructions occupy? MVI A, 35Ha. 3 bytes
b. 2 bytes c. 5 bytes d. 1 byte

5. Why 8085 processor is called an 8 bit processor?
a. 8085 processor has 8 bit ALU b. 8085 processor has 8 bit data bus. c. a & b.

6. How much memory access by 8085 microprocessor. _.

7. Suppose A=AAH, _____will be the value of Accumulator after RLC.

8. The circuits in the Microprocessor that provide the arithmetic and logic functions are called the _____

9. The structure of the stack is _____type structure.

10. Instruction Fetch Machine cycle is _____T-state long.

11. List Interrupts of 8085 processor.

12. Define machine cycle.

13. Write function of READY pin.

14. How many times the following loop is executed?

```
      MVI C,17H
LOOP:DCR C
      JNZ LOOP
```

15. What do you mean by subroutine?

Q.2 Answer the following questions. (Attempt any three) **(15)**

A) Draw and explain timing diagram of MVI B, 04H.
B) Write a note on general purpose & special purpose registers of 8085.
C) What are the vectored interrupts? Distinguish between the hardware & software interrupts.
D) Write a Program to design a binary down-counter to count from FFH to 00H.

Q.3 (A) Draw the functional block diagram of internal architecture of IC 8085 and explain special purpose register. **(07)**

B) Design an 8085 microprocessor system such that it should contain 8KByte of EPROM and 8KByte of RAM and find starting and Ending Address Range. **(08)**

OR

B) Write a program to sort the following set of marks scored by ten students in a database course in Ascending order. [Data(H) 63, 41, 56, 62, 48, 5A, 4F, 4C, 56, 56] **(08)**

Q.4 A) Discuss Various addressing modes of 8085 microprocessor with example. **(07)**

OR

A) What is stack and stack pointer? Explain working of PUSH and POP instruction with suitable example. **(07)**

B) Draw and explain the block diagram of 8255A programmable peripheral port. **(08)**