

**2019**

**MCA**

**2<sup>nd</sup> Semester Examination**

**MICROPROCESSOR LAB.**

**PAPER – 292**

**Full Marks : 100**

**Time : 3 Hours**

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their

Own words as far as practicable.

Illustrate the answers wherever necessary.

Answer any **TWO** question (on lottery basis)

35x2

1. Write an ALP to transfer a block of data bytes from one section of memory to other.
2. Write an ALP to multiply two data bytes .
3. Write an ALP to exchange a set of data bytes with another.
4. Write an ALP to clear a block of data bytes.
5. Write an ALP to count the number of 1's in a data byte.
6. Write an ALP to find the square of a number (not greater than 5 )using look up table .
7. Write an ALP to find 2's complement of a set of data bytes .
8. Write an ALP to search an item from a set of data bytes.
9. Write an ALP to sort a set of data bytes in descending order.
10. Write an ALP to add two 16 bit data without using DAD instruction.
11. Write an ALP to find the smallest of data bytes .
12. Write an ALP to divide a data byte by another .
13. Write an ALP to find the square root of a number (not greater than 5 ) using look up table.
14. Write an ALP to count the number of 0's in a data byte.
15. Write an ALP to subtract a 16 bit data from another .

16. Initialize four consecutive memory locations  $D000 - D003_H$  arbitrarily . Initialize B – C Register pair and D – E register pair from memory locations  $D000 - 01_H$  and  $D002_H - 03_H$  Respectively. Add these two 16 – bit numbers and display the result . (Assume result will Not exceed 16 – bit ).
17. Initialize B, C, E registers manually . Then perform  $(B \wedge C) \oplus E$  where  $\wedge$  is bit-wise and  $\oplus$  Is bitwise XOR gate .
18. Find the number of even numbers present in the memory locations  $C000_H - C006_H$  .
19. Add the content registers H and L . Store this result ( 8 – bit ) in memory location  $F000_H$  . Set the MSB ( most – significant bit ) of this memory location.
20. Check the memory locations  $AD00_H - AD09_H$  for odd numbers. If any location contains Odd number then replace that by  $FF_H$  .

**Viva-Voce: 20 Marks.**

**Practical Note Book: 10 Marks.**