

**2018****MCA 2nd Semester Examination****MICROPROCESSOR LAB.****PAPER—MCA-207  
CODE 32  
(Practical)***Full Marks : 100**Time : 3 Hours**The figures in the 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 questions (Lottery Basis).****2×35**

1. Write an ALP to count the number of 1's in a data byte.
2. Write an ALP to find 2's complement of a set of data bytes.
3. Write an ALP to check whether a number is odd or even.
4. Write an ALP to find largest of a set of data bytes.
5. Write an ALP to find out square root of 0, 1, 4, 9, 16, 25 and 36 using Look up table.
6. Write an ALP to transfer a block of data bytes from one section of memory to another.

*(Turn Over)*

7. Write an ALP to clear a block of data bytes.
8. Write an ALP to sort a set of data bytes in ascending order.
9. Write an ALP to exchange two set of data bytes.
10. Write an ALP to multiply two data bytes.
11. Write an ALP to search an item from a set of data bytes.
12. Write an ALP to sort a set of data bytes in descending order.
13. Write an ALP to count the number of 0's in a data byte.
14. Write an ALP to add a set of data bytes.
15. Write an ALP to find the square of a number (not greater than 5) using Look up table.
16. Write an ALP to find the smallest number from a set of data bytes.
17. Write an ALP to divide a number by another number.
18. Write an ALP to add two 16 bit numbers.
19. Write an ALP to subtract two 16 bit number.

20. Write an ALP to add 10 8-bit number.
21. Write an ALP to find the first 10 terms of Fibonacci Sequence.
22. Write an ALP to check whether a 8-bit no. is palindrome or not.
23. Write an ALP to check whether the 5th bit of a no. is zero or one.
24. Write a program to perform linear search over a set of 19 nos.
25. Write an ALP to multiply two 8-bit nos.
26. Write an ALP to subtract a 8-bit no. from another 8-bit no. without using SUB instruction.
27. Write a program to divide a 16-bit no. by 8-bit no.
28. Write an ALP to add two 16-bit BCD nos.
29. Write an ALP to sort a set of 8-bit nos. in descending order.
30. Write an ALP to determine the HCF of two one-byte nos.
31. Write an ALP to simulate the throw of dice.
32. Write an ALP to convert a binary no. to equivalent ASCII.

33. Write an ALP to display O to F in Hexadecimal with 1 sec. delay.
34. Write a program to implement block move without using XCHG instruction.
35. Write an ALP to implement BCD to Binary Conversion.
36. Write an ALP to find the square root of 0, 1, 4, 9, 16 using look up table.
37. Write an ALP to implement square wave generation of 40% duty cycle.
38. Write an ALP to find the addition of largest and smallest no. from a set of 10 nos.
39. Write an ALP to subtract two 16-bit nos.

***[ Viva-Voce : 20 Marks***

***Practical Note Book : 10 Marks ]***

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