**SAVEETHA SCHOOL OF ENGINEERING**



**SAVEETHA INSTITUTE OF MEDICAL AND TECHNICAL SCIENCES**

**UNIVERSITY PRACTICAL EXAMINATION OCTOBER 2022**

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| Course Code | **CSA12** | Course Name | | **Computer Architecture** | |
| Branch | **B.E. C.S.E & E.C.E.**  **B.Tech. IT** | | Date & Session | |  |

**LIST OF EXPERIMENTS**

1. Write an assembly language program for adding two 8-bit data A7 A6 A5 A4 A3 A2 A1 A0 and B7 B6 B5 B4 B3 B2 B1 B0 using 8085 processor.
2. Write an assembly language program for subtraction of two 8-bit data A7 A6 A5 A4 A3 A2 A1 A0 and B7 B6 B5 B4 B3 B2 B1 B0 using 8085 processor.
3. Write an assembly language program for adding two 16-bit datausing 8086 processor.
4. Write an assembly language program for subtracting two 16-bit datausing 8086 processor.
5. Write an assembly language program for multiplication of two 8-bit data A7 A6 A5 A4 A3 A2 A1 A0 and B7 B6 B5 B4 B3 B2 B1 B0 using 8085 processor.
6. Write an assembly language program for division of two 8-bit data A7 A6 A5 A4 A3 A2 A1 A0 and B7 B6 B5 B4 B3 B2 B1 B0 using 8085 processor.
7. Write an assembly language program for multiplying two 16-bit datausing 8086 processor.
8. Write an assembly language program for dividing two 16-bit datausing 8086 processor.
9. Write an assembly language program to find the Greatest of 2 numbers.
10. Write an assembly language program to find the Smallest of 2 numbers.
11. Write an assembly language program to find the LCM of 2 numbers.
12. Write an assembly language program to find the GCD of 2 numbers.
13. Write an assembly language program to arrange numbers in Ascending order.
14. Write a program to convert Decimal number to Hexadecimal number using any high level language.
15. Write a program to convert Binary to Octal number using any high level language.
16. Design and implement 2-bit half adder using logisim simulator.
17. Design and implement 3-bit full adder using logisim simulator.
18. Design and implement 2-bit half adder with NAND gates using logisim simulator.
19. Write an assembly language program to find factorial of n in the given number.
20. Write an assembly language program to find the largest number in an array.
21. Write a program to convert Binary to Hexadecimal number to number using any high level language.
22. Design of 2 stage pipeline for addition of two numbers using any high level language.
23. Design of 2 stage pipeline for subtraction of two numbers using any high level language.
24. Design of 3 stage pipeline for AND of two numbers using any high level language.
25. Design of 3 stage pipeline for OR of two numbers using any high level language.
26. Design of 3 stage pipeline for XOR of two numbers using any high level language.
27. Write an assembly language program to find the Minimum number in an array.
28. Design of 4 stage pipeline for Multiplication of two numbers using any high level language.
29. Write a program to perform Booth’s multiplication of two signed numbers using any high level language.
30. Write a program to perform Restoring Division of two numbers using any high level language.
31. Write a program to find the Hit ratio for the given number of Hits and Misses in Cache memory using any high level language.
32. Write an assembly language program to find 1’s complement of 8 bit number.
33. Write an assembly language program to find 2’s complement of 8 bit number.
34. Write an assembly language program to arrange numbers in Descending order.
35. Design and implement 2-bit half adder with NOR gates using logisim simulator.
36. Write a program to convert Decimal number to Binary number using any high level language.
37. Write a program to convert Decimal number to an Octal number using any high level language.
38. Write a program to convert Binary number to Decimal number using any high level language.
39. Write a program to find the CPU performance of a processor using any high level language.
40. Write an assembly language program to swap two 8-bit datausing 8085 processor.
41. Write a program to find the Single Precision for a given floating point number using any high level language.
42. Write a program to perform Non Restoring Division of two numbers using any high level language.
43. Design and implement 3-bit Full adder with NAND gates using logisim simulator.
44. Design and implement 3-bit Full adder with NOR gates using logisim simulator.
45. Design and implement 4-bit ripple carry adder circuit using logisim simulator.
46. Design and implement 4-bit carry look ahead adder circuit using logisim simulator.
47. Design of 4 stage pipeline for Division of two numbers using any high level language.
48. Write an assembly language program to find the given 8-bit number is Prime or not using 8085 processor.
49. Write an assembly language program to find the given 8-bit number is Odd or Even using 8085 processor.
50. Write an assembly language program to find the given 8-bit number is Positive or Negative using 8085 processor.