| Branch: BCA | Semester-IV |
|---|---|
| Subject Code: 4202 | Lecture: 04 Credit: 02 |
| Course Opted | Core Course Practical - 12 |
| Subject Title | INTRODUCTION TO MICROPROCESSORS - LAB |

**Course Objectives:**
- To become familiar with the architecture and Instruction set of Intel 8085 microprocessor..
- To be able to develop simple assembly level programs

**Course Outcomes:**
- The student will be familiar with the architecture and Instruction set of Intel 8085 microprocessor
- Will be able to implement assembly level programs

| Modules | Sr. No. | Topic and Details | No. of Practicals Assigned | Marks Weightage % |
|---|---|---|---|---|
| UNIT-I | 1 | Program to find addition of two 8-bit numbers | 1 | 2 |
| | 2 | Program to find subtraction of two 8-bit numbers | 1 | 2 |
| | 3 | Program to find addition of two 16-bit numbers | 1 | 2 |
| | 4 | Programs to find subtractiob of two 16-bit numbers | 1 | 2 |
| UNIT-II | 5 | Program to find addition of two 16-bit BCD numbers | 1 | 2 |
| | 6 | Program to find subtraction of two 8-bit BCD numbers | 1 | 2 |
| | 7 | Program to find multiplication of two 8-bit numbers using successive addition method. | 1 | 2 |
| | 8 | Program to find multiplication of two 8-bit numbers using shift and add method | 1 | 2 |
| | 9 | Program to divide 16-bit number by an 8-bit number | 1 | 2 |
| UNIT-III | 10 | Program to transfer a block of N bytes from source to destination | 1 | 2 |
| | 11 | Program to find Maximum number in an array | 1 | 2 |
| | 12 | Program to find Minimum number in an array | 1 | 2 |
| | 13 | Program to sort the numbers in ascending order | 1 | 2 |
| | 14 | Program to sort the numbers in descending order | 1 | 2 |
| | 15 | Program to convert two BCD numbers to their HEX equivalent | 1 | 2 |
| UNIT-IV | 16 | Program to convert HEX number to BCD | 1 | 2 |

| | 17 | Write a sub routine for 8085 to generate delay of 100 ms | 1 | 2 |
|---|----|--------------------------------------------------------|---|---|
| | 18 | Write a sub routine for 8085 to generate delay of 10 ms | 2 | 4 |
| | 19 | Write a program to generate Fibonacci series | 2 | 4 |
| | 20 | To interface DAC with 8085 to demonstrate the generation of square, saw tooth and triangular wave. | 2 | 4 |
| | 21 | Serial communication between two 8085 through RS-232 C port. | 2 | 4 |
| **Total** | | | **25** | **50** |

**Textbooks:**

1. Microprocessor Architecture Programming ~ Application, with 8080/8085 by Ramesh S. Gaonkar.

**References:**

1. Microprocessor and Digital Systems by D.V.Hall.
2. 16 bit Microprocessor by Triebel and A. Singh.
3. 16 bit microprocessor by Liu and Gibson.