DEERWALK INSTITUTE OF TECHNOLOGY

School of Computer Science and Information Technology

**Course Level:** BSCCSIT SEMESTER III

**Course Name:** CSC-153:Microprocessor (LAB)

**Course Lecturer:** Ashish Shrestha

**Course Synopsis:** This course contains of fundamental concepts of computer organization, basic I/O interfaces and Interrupts operations.

**Goals:** The course objective is to introduce the operation, programming and application of microprocessor.

**Evaluation Criteria:**

1. Attendance and punctuality: 30% of total practical marks.
2. Submission of lab journals: 40% of total practical marks.
3. Internal test and assignments: 30% of total practical marks.

**Week 1:** June 10-June 14

Introduction to Microprocessor and its instruction sets, addressing modes and instruction format.

**Week 2:** June 17-June 21

Introduction to Microprocessor training kit.

**Week 3:** June 24-June 28

Concept on addition, subtraction, multiplication and division.

**Week 4:** July 1-June 5

Concept on addition, subtraction, multiplication and division (cond..)

**Week 5:** July 8-June 12

Concept of number representation(binary, hex, BCD, ASCII etc)

**Week 6:** July 15-June 19

Concept of different number representation(binary, hex, BCD, ASCII etc)

**Week 7**: July 22-June 26

Concept of different number representation(binary, hex, BCD, ASCII etc)

**Week 8:** July 29-August 2

Concept of different number representation(binary, hex, BCD, ASCII etc)

**Week 9**: August 12 - August 16

Concept on interfacing and 8255(PPI).

**Week 10:** August 19 - August 23

Concept on interfacing and 8255(PPI).

**Week 11:** August 26 - August 30

Introduction to MASM

**Week 12:** August 26 - August 30

Concept of INT 10h and 12h

**Week 13:** September 2 – September 7

Concept of INT 10h and 12h

**Week 14:** September 10– September 14

Concept of INT 10h and 12h

Programming list:

1. Write an assembly level program to perform addition of two 8 bit numbers using 8085.
2. Write an assembly level program to perform subtraction of two 8 bit numbers using 8085.
3. Write an assembly level program to perform multiplication of two 8 bit numbers using 8085.
4. Write an assembly level program to perform division of two 8 bit numbers using 8085.
5. Write an assembly level program to find the largest number in an array of data using 8085 instruction set.
6. Write an assembly level program to find the smallest number in an array of data using 8085 instruction set.
7. Write an assembly level program to arrange an array of data in ascending order using 8085.
8. Write an assembly level program to arrange an array of data in descending order using 8085.
9. Write an assembly level program to convert two BCD numbers in memory to equivalent HEX number using 8085 instruction set.
10. Write an assembly level program to convert given Hexa decimal number into its equivalent BCD number using 8085 instruction set.
11. Write an assembly level program to convert given Hexa decimal number into its equivalent ASCII number using 8085 instruction set.
12. Write an assembly level program to convert given ASCII Character into its equivalent Hexa decimal number using 8085 instruction set.
13. Write an assembly level program to find the square of the number from 0 to 9 using a Table of Square.
14. Write and assembly level program to display 55H in port A and AAH in port B of 8255 interfacing to 8085.
15. Write and assembly level program to display 55H and AAH in any port of 8255 alternatively with some delay interfacing to 8085.