SAGARMATHA ENGINEERING COLLEGE

(TU Affiliated)

Sanepa, Lalitpur

LAB NO: 5

A LAB REPORT ON

NUMBER SYSTEM CONVERSION USING 8085 PROGRAM.

Submitted By

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MICROPROCESSOR LAB-05

TITLE

NUMBER SYSTEM CONVERSION USING 8085 PROGRAM.

Objective

- ✓ To be able to convert one number into another using 8085 program.

Hardware/Software Required

- Computer with internet
- 8085 virtual simulator

Theory

Binary Number System

The binary number system uses only two digits: 0 and 1. The numbers in this system have a base of 2. Digits 0 and 1 are called bits and 8 bits together make a byte.

Binary to Decimal Conversion

$100111 = (1\times2^5) + (0\times2^4) + (0\times2^3) + (1\times2^2) + (1\times2^1) + (1\times2^0) = 39$

Hexadecimal Number System

The hexadecimal number system uses sixteen digits/alphabets: 0,1,2,3,4,5,6,7,8,9 and A, B, C, D, E, F with the base number as 16. Here, A-F of the hexadecimal system means the numbers 10-15 of the decimal number system respectively.

Binary coded decimal (BCD)

Binary coded decimal (BCD) is a system of writing numerals that assigns a four-digit binary code to each digit 0 through 9 in a decimal (base-10) numeral.

Example: 0 = 0000 6 = 0110 9 = 1001

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Problems

Q1. WAP to convert a hexadecimal number less than 10H (*Assume 0EH*) into an equivalent BCD number.

Q2. Convert an eight-bit binary number into equivalent BCD number.

Q3. WAP for converting a 2-digit BCD number to its binary equivalent in 8085.

Q4. WAP to convert a hexadecimal digit into ASCII code.

CHARACTER	ASCII
0	30H
1	31H
..	…
A	41H
F	46H

Q5. WAP to convert ASCII into HEX conversion.

Result

Hence, all the given programs are executed and the results are verified.

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