DLD Assignment No 01 : Due Date 28 October, 2021

Problem No 1

Given the two unsigned numbers $X=(9BE.F)_{16}$ and $Y=(5142.043)_{6}$

a. Perform subtraction X-Y using1's complement.
b. Convert your answer to Decimal

Problem No 2

In the following case, determine the radix r $(225)_r=(89)_{10}$

Problem No 3

Consider the signed numbers N_1=0 11011.01_2 and N_2=0 10110.10_2, perform subtractions $N_1–N_2$ and $N_2–N_1$ using 2's complement method. Convert the answer to decimal.

Redo it using 1's complement method.

Problem No 4

Simplify the following function f to the minimum number of terms and postulates using postulates and theorems of Boolean algebra.

$$f(A,B,C,D)=A´C´+BC+AB´+A´BD+B´C´D´+ACD´$$

How many terms and literals the simplified function contains?