College of Computer Sciences & Engineering
Department of Computer Engineering
COE: 202: Fundamentals of Computer Engineering (071)

Quiz 1

Qn. 1.

Find the value of X that satisfies the following equations.

a. $(173)_{16} - (X)_2 = (2123)_4$
b. $(739)_{10} = (X)_7$
c. $(11010.101)_2 = (X)_{10}$
d. $(1010.0101)_4 = (X)_{16}$
e. $(1101010.00101)_2 = (X)_{16}$
f. $(BEE)_X = (2699)_{10}$

Qn.2

Without converting to decimal, compute using r_s complement method:

a. $(11010.01)_4 - (111.101)_2 = (Y)_2$
b. $(AE.F3)_{16} - (103.111)_4 = (Z)_{16}$

Qn.3

a. Perform $(694)_{10} + (835)_{10}$ using BCD addition. That is, convert the two decimal numbers to BCD code, and add the two to get the result.

b. Write numbers 0 to 7 in Gray Code

c. Add even parity bit to the 5-bit binary numbers 10001P, 11001P, 11111P. That is, replace P by 0 or 1 in each of the three strings.