CSA Assignment 1

1.Simplify the following

F(X,Y,Z)=∑(3,5,6,7)

F(A,B,C,D)=∑( 0, 2, 4, 5, 6, 7, 8, 10, 13,15)

2. Simplify the following Boolean function in product-of-sums form by means of a four-variable map. Draw the logic diagram with (a) OR-AND gates; (b) NOR gates.

F(w,x,y ,z) =I (2 , 3,4, 5,6,7, 11, 14, 15)

3. Simplify the Boolean function F together with the don't-care conditions d in (1) sum-of-products form and (2 ) product-of-sums form.

F(w,x, y , z) =I (0, 1,2, 3, 7, 8, 10) d(w,x,y ,z) =I (5 , 6, 11, 15)

4.Compare RISC and CISC architectures.

5.Draw and explain various types of shift registers.