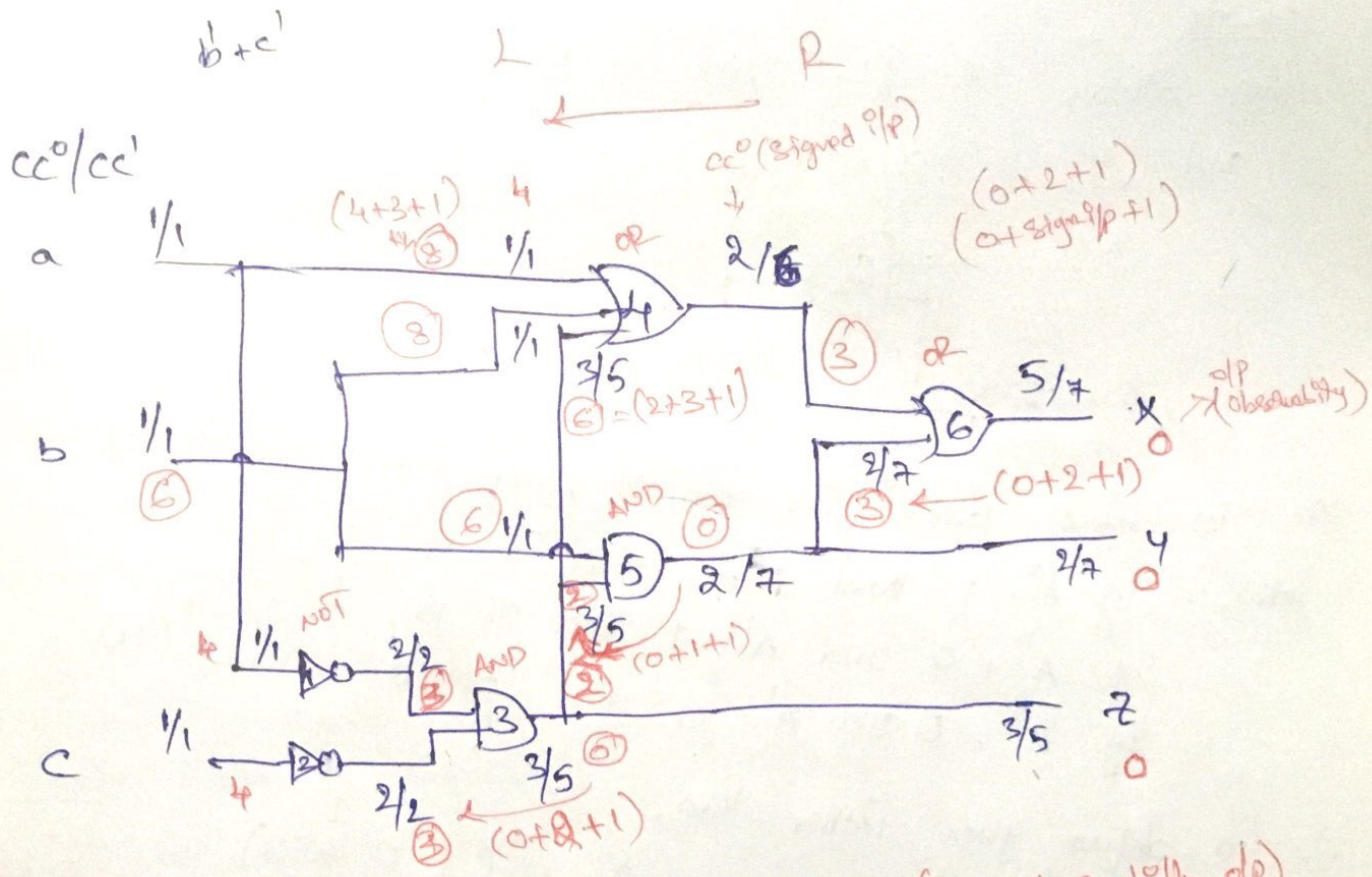

Step 1:-
As all o/p of x ; y ; z are 0, 0, 0 (for observability o/p)

Step 2:- (Right to Left)
from x:- ⇒ (0 + signed i/p + 1) is i/p's assigned to gate-'6'
i.e (0 + 2+1) = (3)

step: 3 :-
At fanout stem observability = min of fanout branches (i.e. 3, & 0)
so we Consider (0).

Step 4:-
At gate '5' o/p observability is '0' and on Consideration to i/p side we define (0+1+1) = (2)

Step 5:-
At gate '3' o/p observ is '0' and on Consid i/p side we define (0 + 2 + 1) = (3)

Step 6:-
for not gate = (3+1) = (4)