Design & Layout of Dynamic CMOS logic circuit

-Self Project by Priyansh Kasyap, 213070114

Dynamic CMOS logic circuit
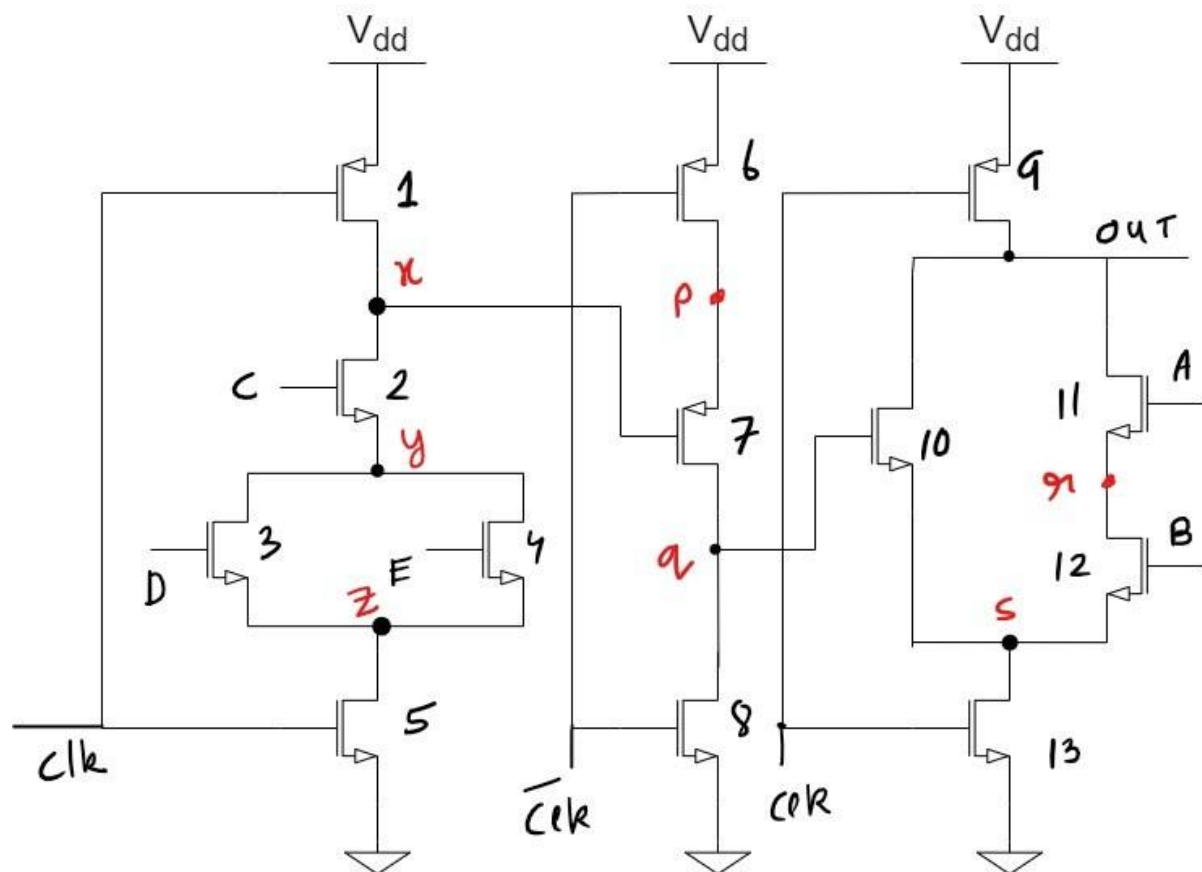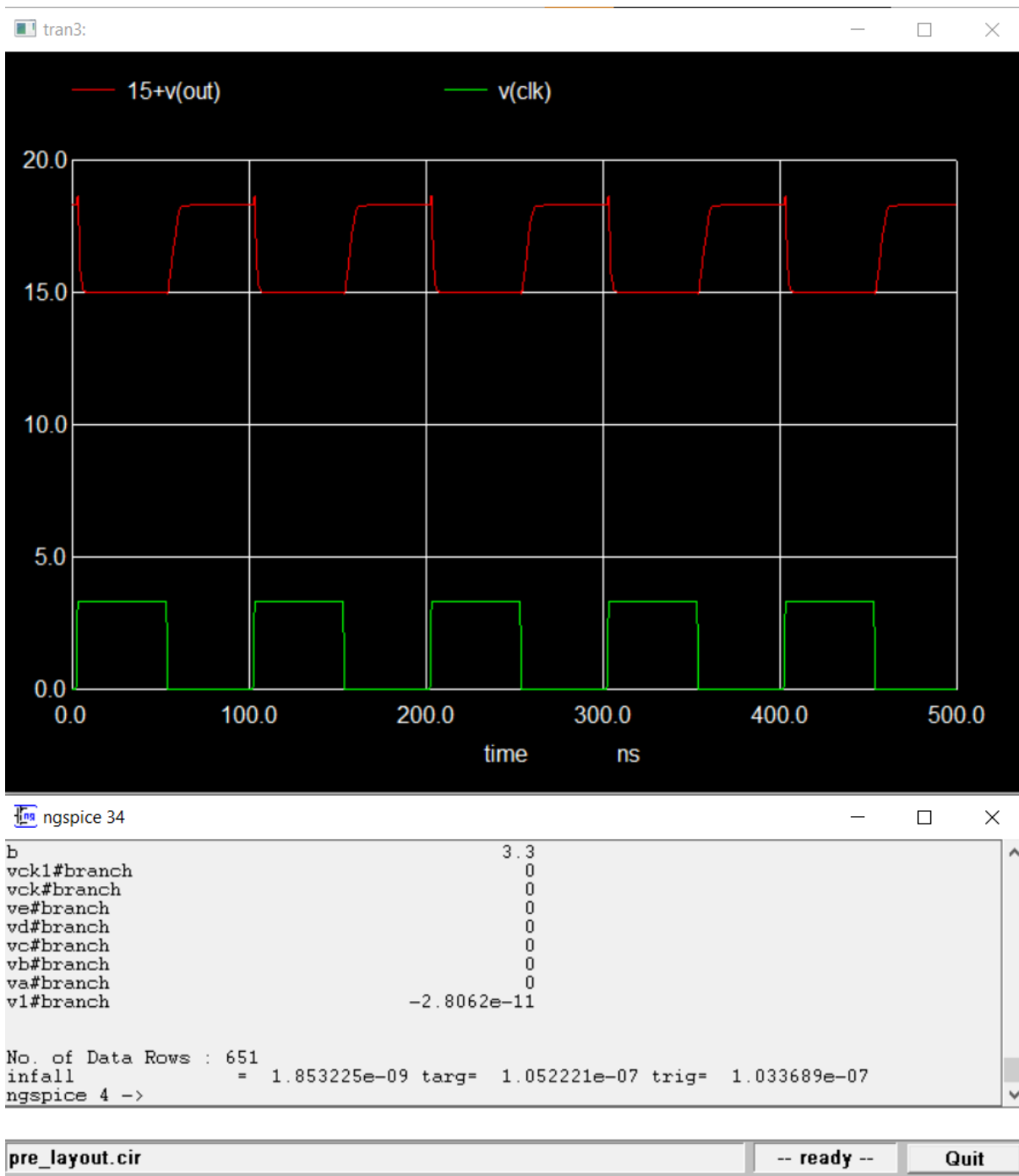
Given logic:

(AB+C(D+E))'

Dynamic style used :
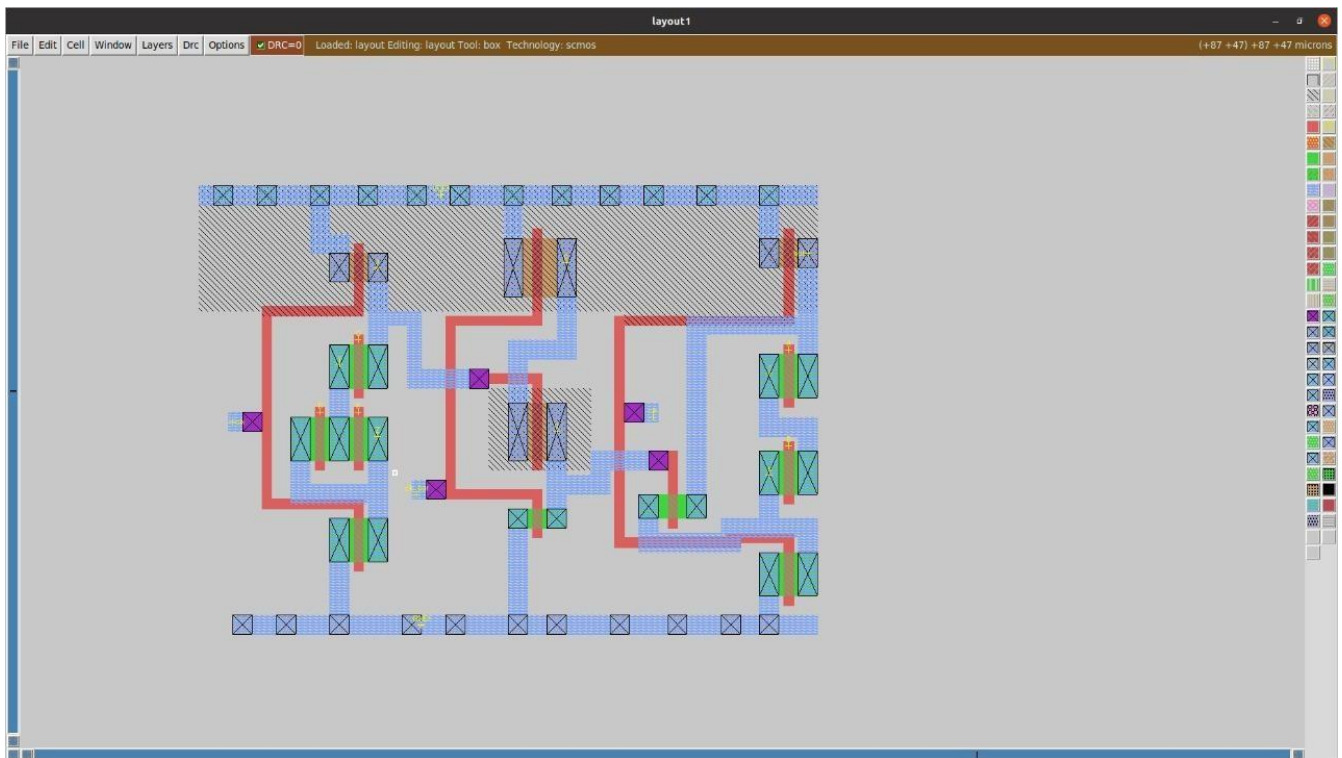
Zipper Style

Circuit Diagram

PRE-LAYOUT SIMULATION
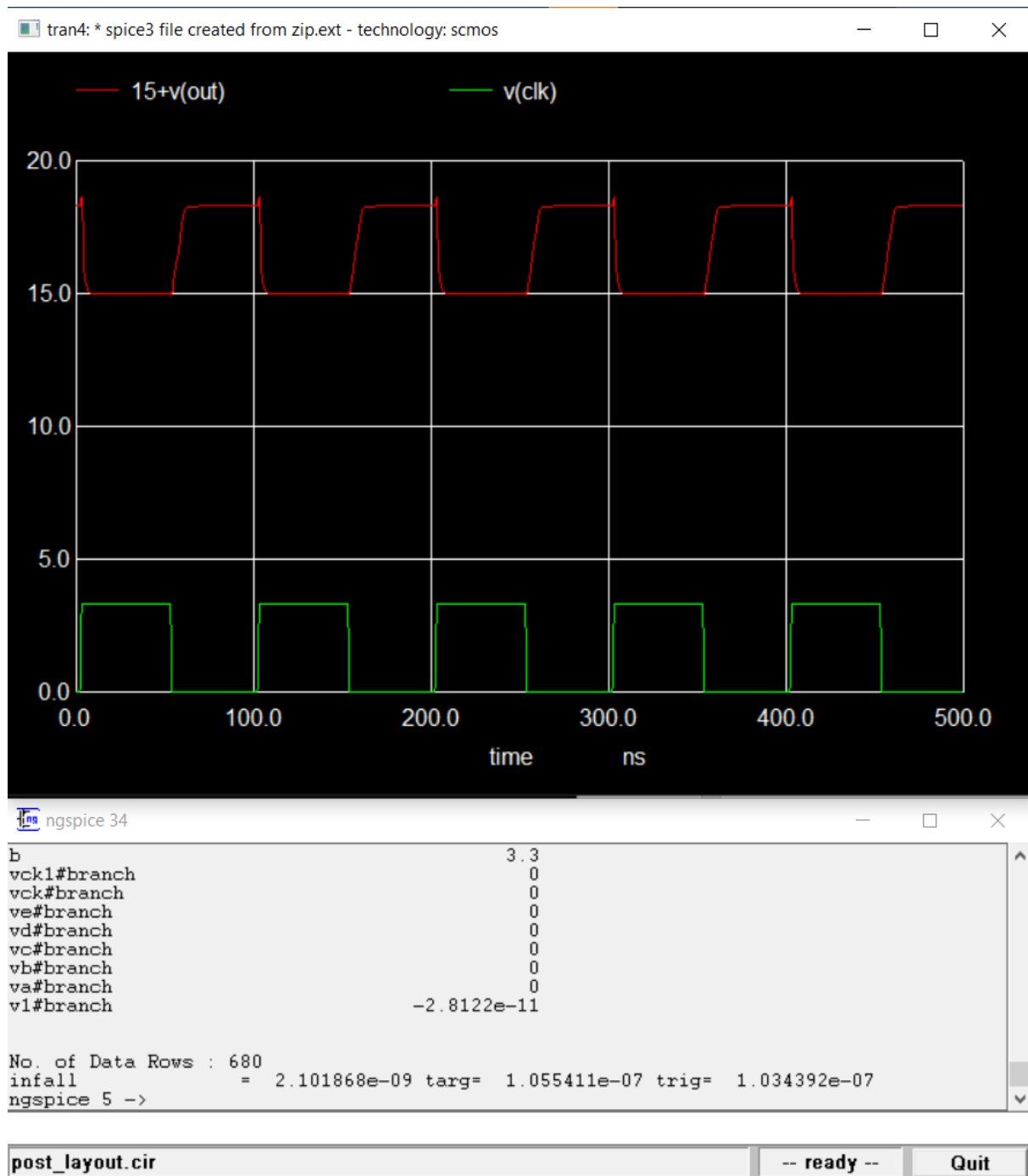

For Max frequency of operation, input vector chosen:

A=1,B=1 , C=0, D=x , E=x as this corresponds to the worst case condition.

Max Freq = 1/infall = 539.6 MHz

LAYOUT OF THE CIRCUIT

POST-LAYOUT SIMULATION

For Max frequency of operation, input vector chosen:

A=1,B=1 , C=0, D=x , E=x as this corresponds to the worst case condition.

Max Freq = 1/infall = 475.7826 MHz

Thus,

We can operate at a higher frequency for the pre-simulation case.