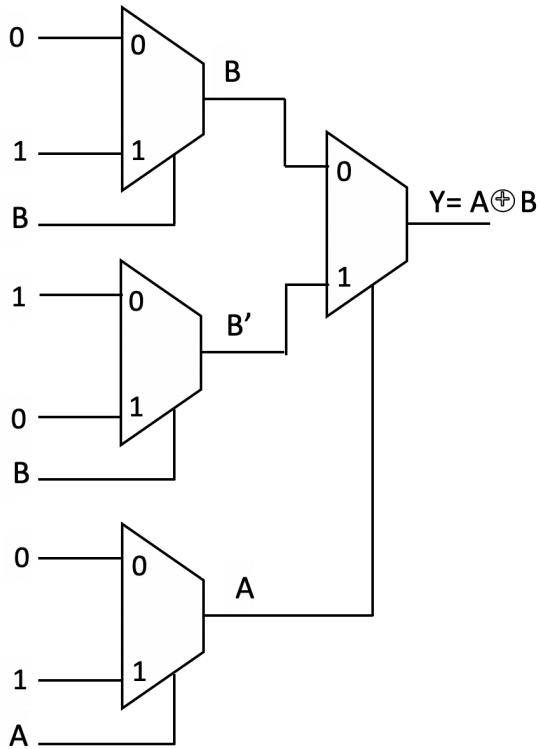
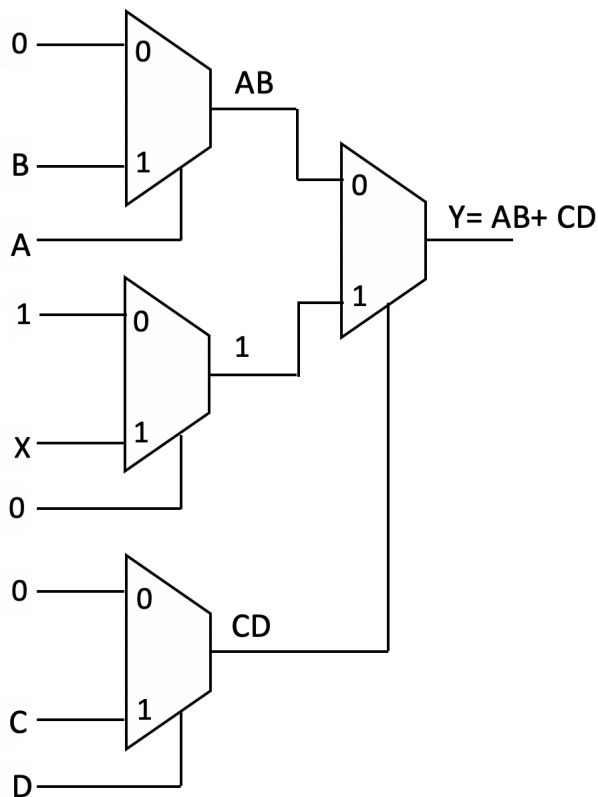


Q2: implement the following functions using MUX-based logic blocks

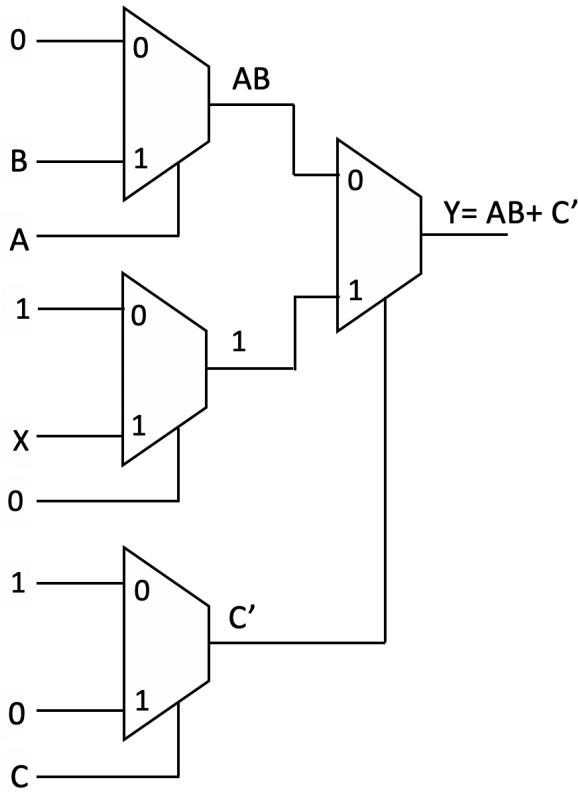
1- $Y = A \oplus B$



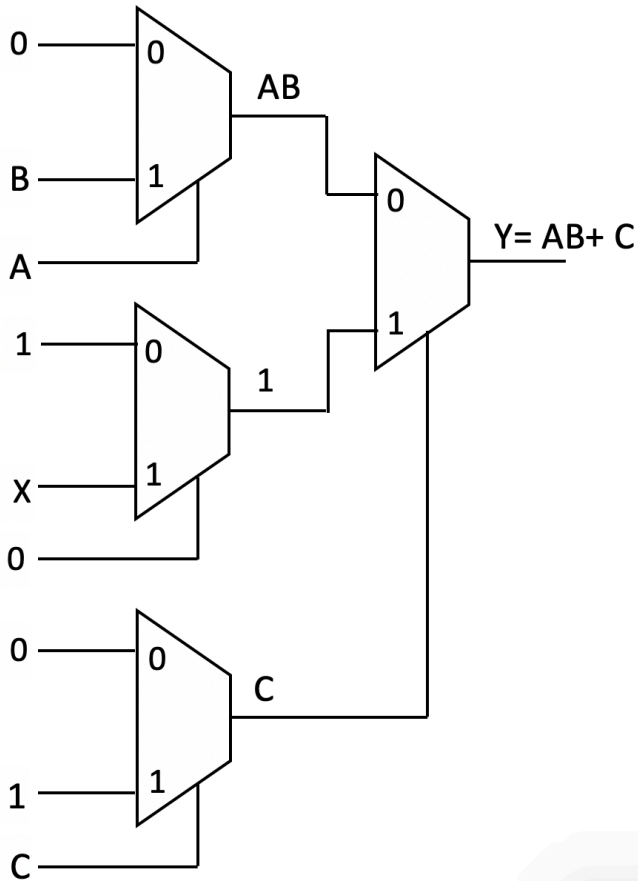
2- $Y = AB + CD$



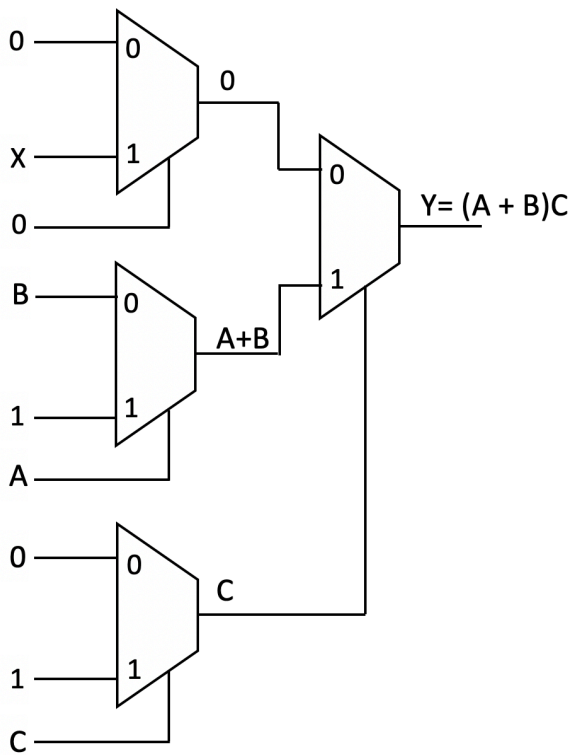
3- $Y = AB + C'$



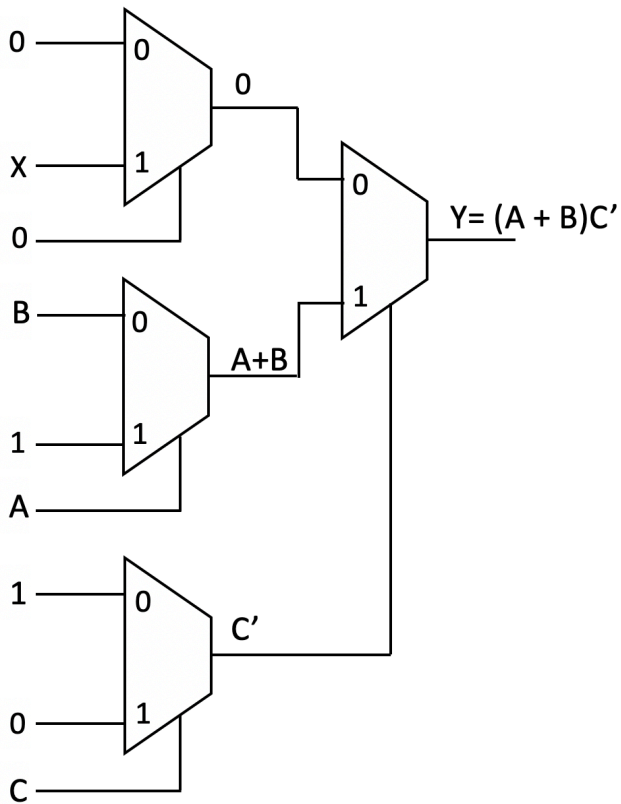
4- $Y = AB + C$



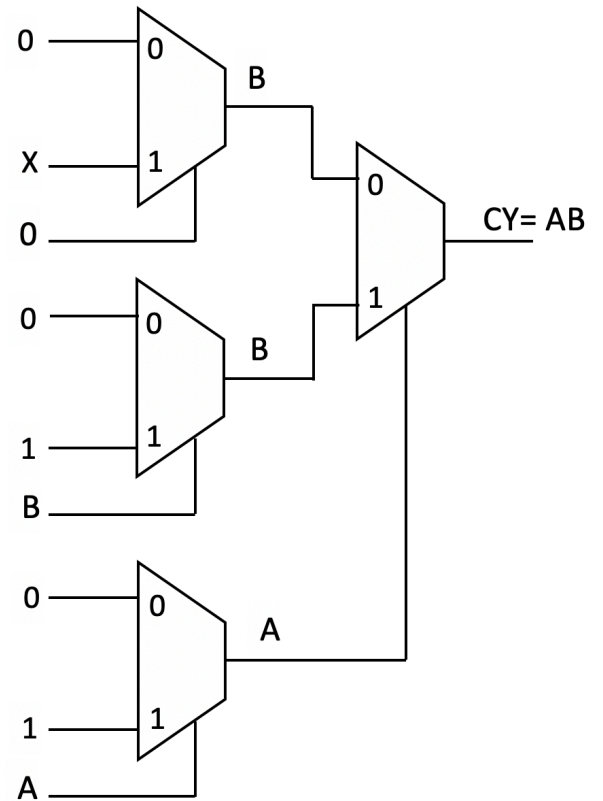
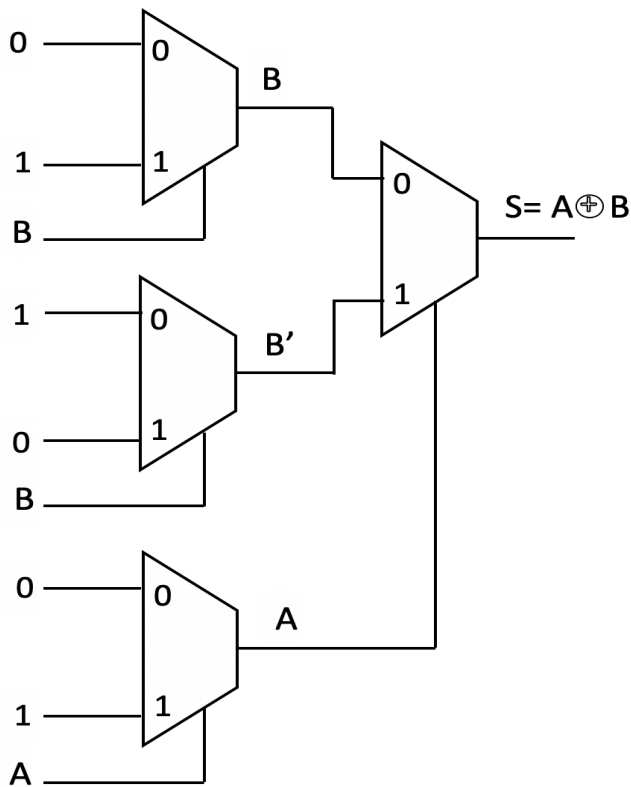
5- $Y=(A+B)C$



6- $Y=(A+B)C'$

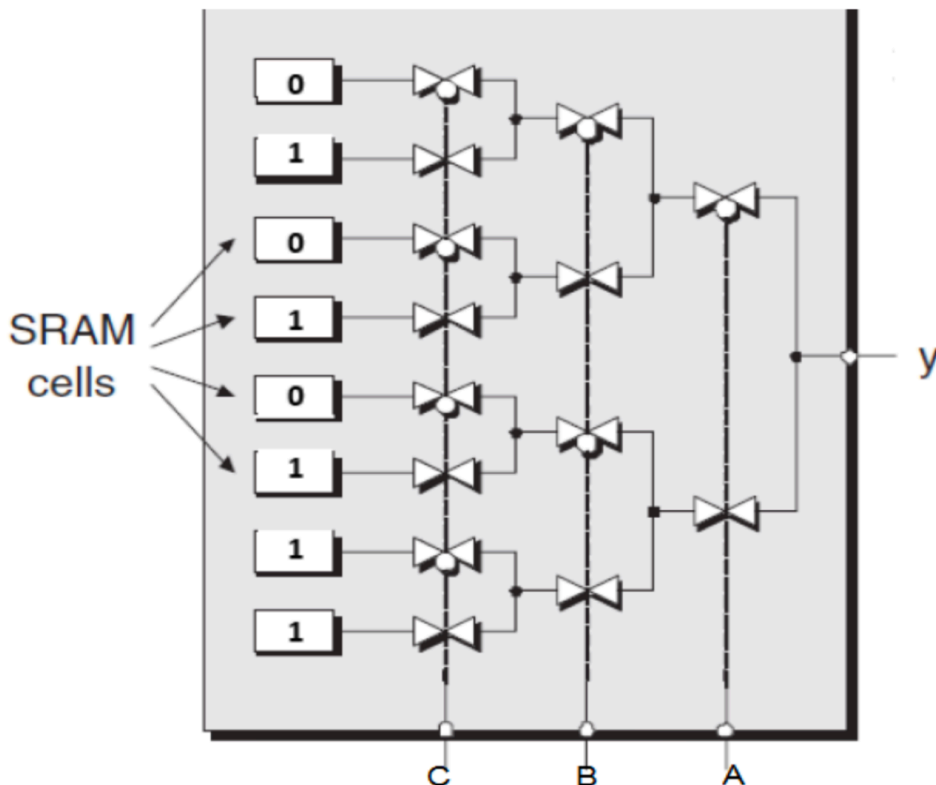


7- Full adder

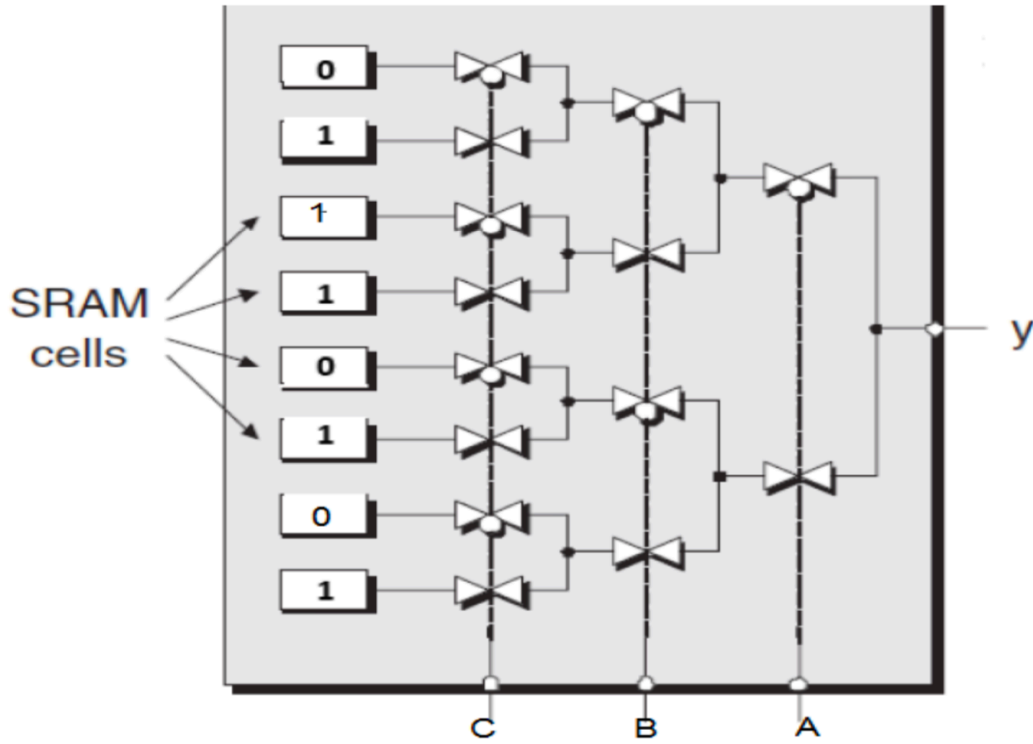


Q3: implement the following functions using LUT-based logic blocks:

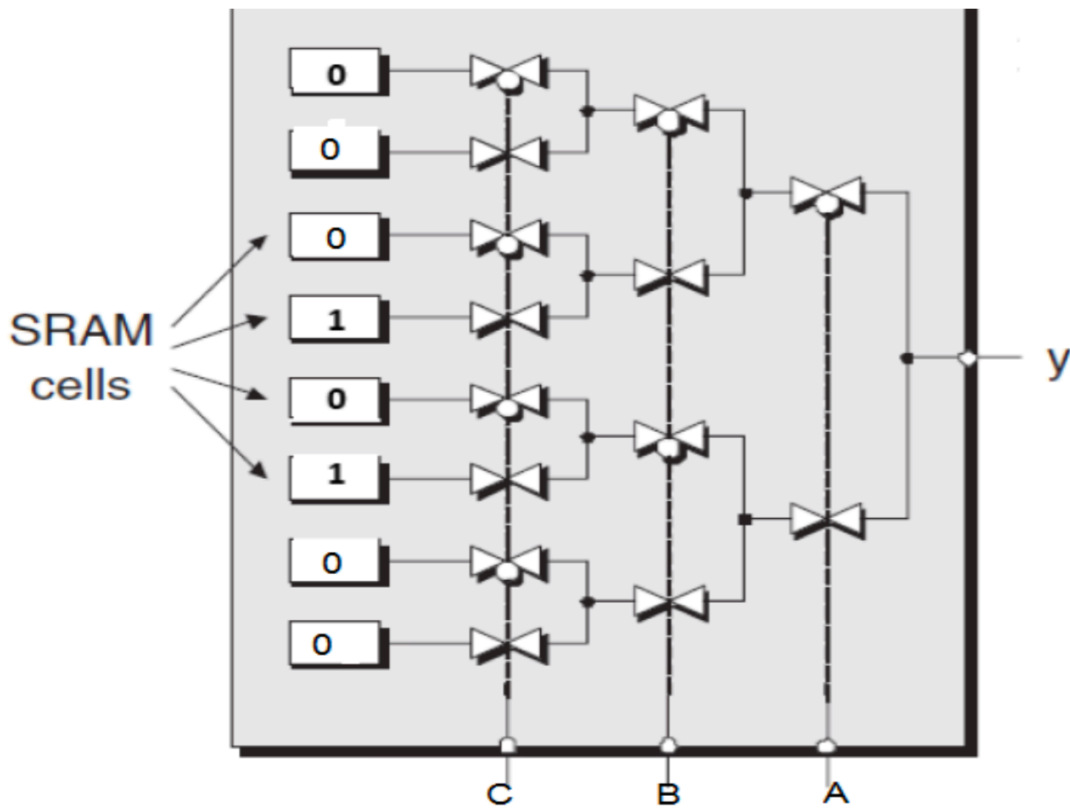
$$1 - Y = AB + C$$



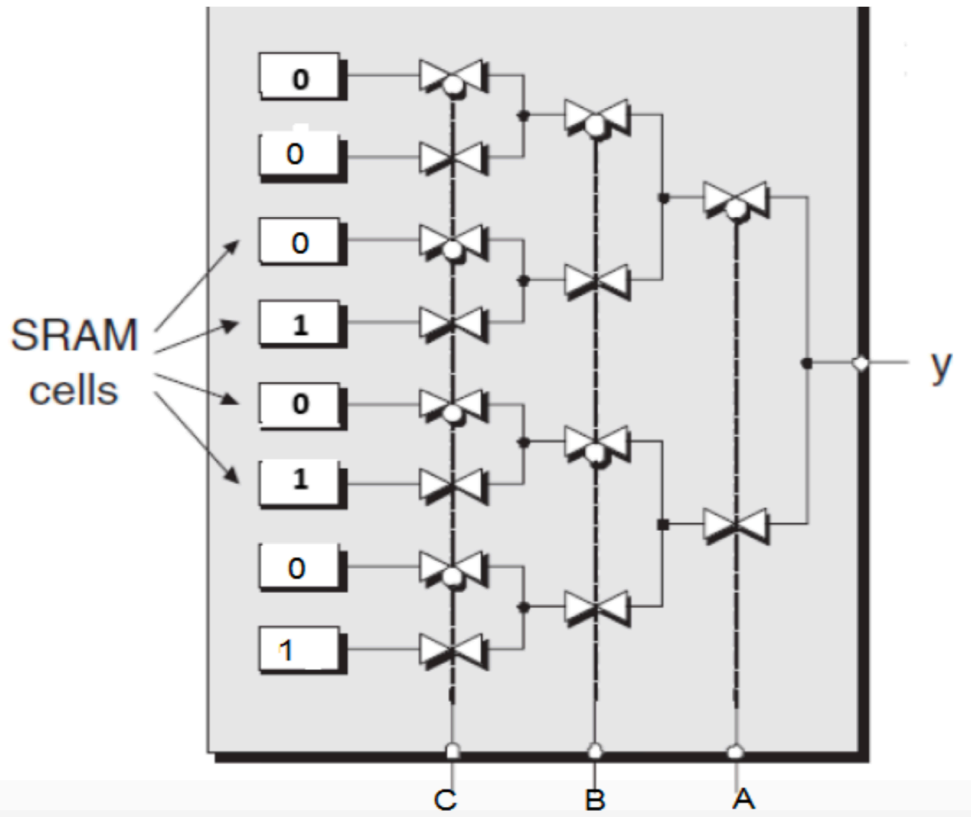
2- $Y = \bar{A}B + C$



3- $Y = (A \oplus B)C$



4- $Y=(A+B)C$



Q4: design the following functions by using PLA type of SPLDs

$$f_1 = x_1x_2 + x_1\bar{x}_3 + \bar{x}_1\bar{x}_2x_3$$

$$f_2 = x_1x_2 + \bar{x}_1\bar{x}_2x_3 + x_1x_3$$

