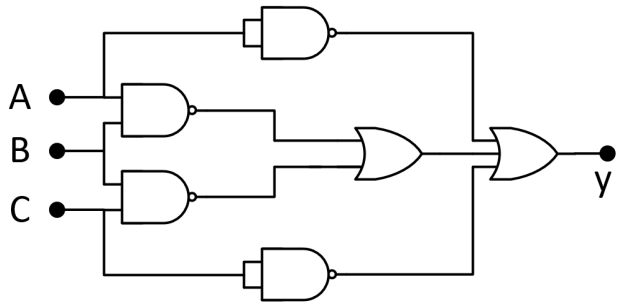
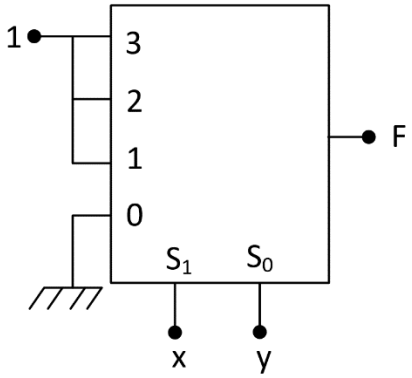
1. For the logic circuit shown, the simplified expression for output y is _____

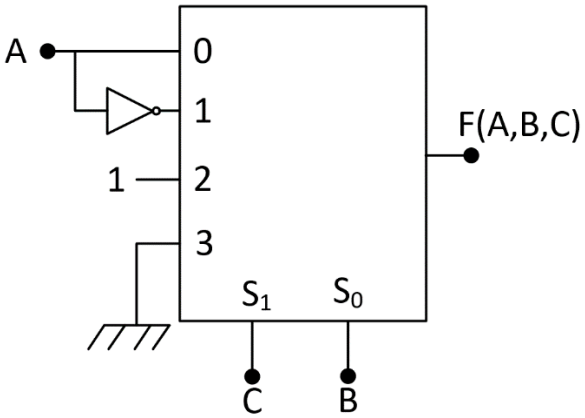


2. The output F in terms of x & y for the 4-1 MUX shown in figure is _____



3. 4-1 MUX is used to implement a 3 input Boolean function as shown in figure. The Boolean function F(A,B,C) implemented is _____

   {Write in terms of F(A,B,C)=Σ(x, x, x, ... , x)}



4. A 3-bit code converter is required which would cyclically add 3 to input code. i.e. 000 should be converted to 011, ... , 111 to 010. Assume that input and output codes to be 'CBA' and 'RQP' respectively.

Inputs			**Outputs**		
C	**B**	**A**	**R**	**Q**	**P**
0	0	0	0	1	1
⋮	⋮	⋮	⋮	⋮	⋮
1	1	1	0	1	0

   a. Write the truth table for input and output conditions

   b. Obtain the minimized function using K-Map
      (Hint: for 3 K-Maps function output R, Q & P)