EXPT NO.7 :
STUDY OF MULTIPLEXER

Objective :

To study the multiplexer.

Equipments :

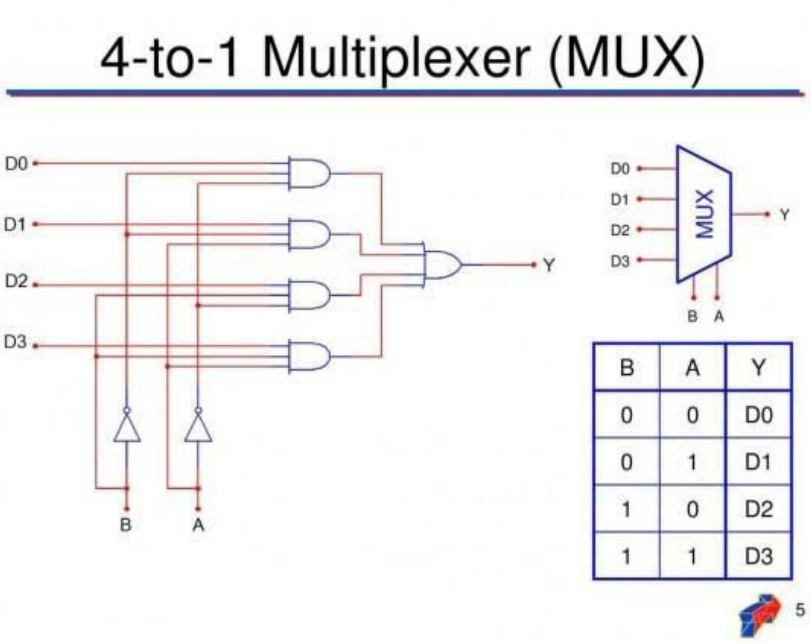
Logic Circuit Simulator Pro.

Theory :

Multiplexer :

Multiplexer means transmitting a large number of information units over a smaller number of channels or lines.

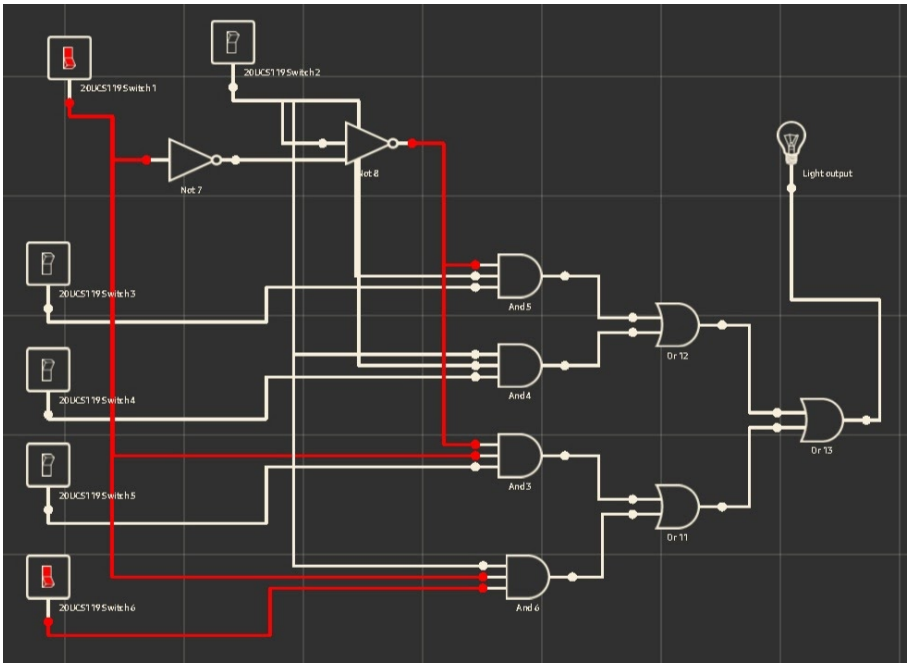
A multiplexer is a combinational logic circuit that selects binary information from one of many input lines and directs it to a single output line. The selection of a particular input line is controlled by a set of selection lines, whose bit combination determines which input is selected.

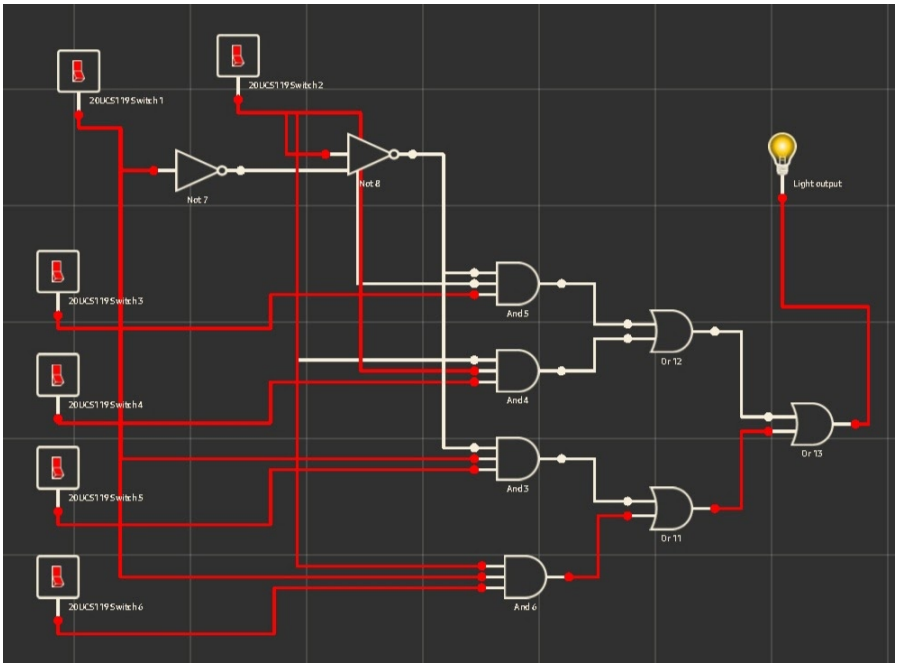


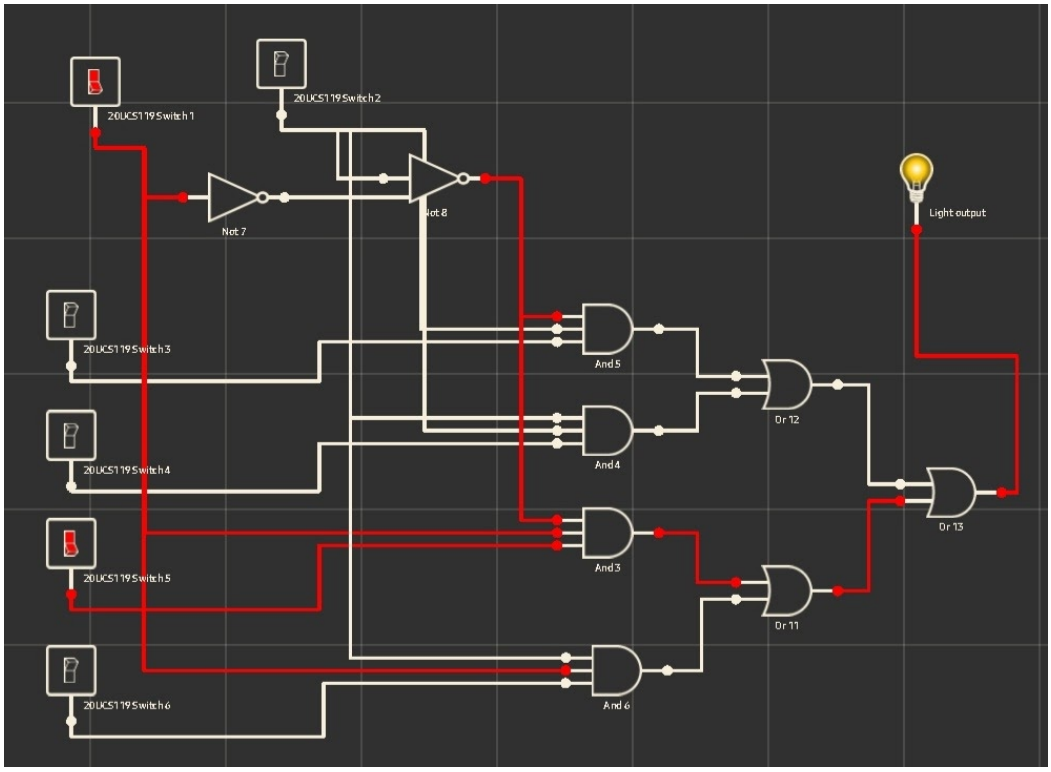
B	A	Y
0	0	D0
0	1	D1
1	0	D2
1	1	D3

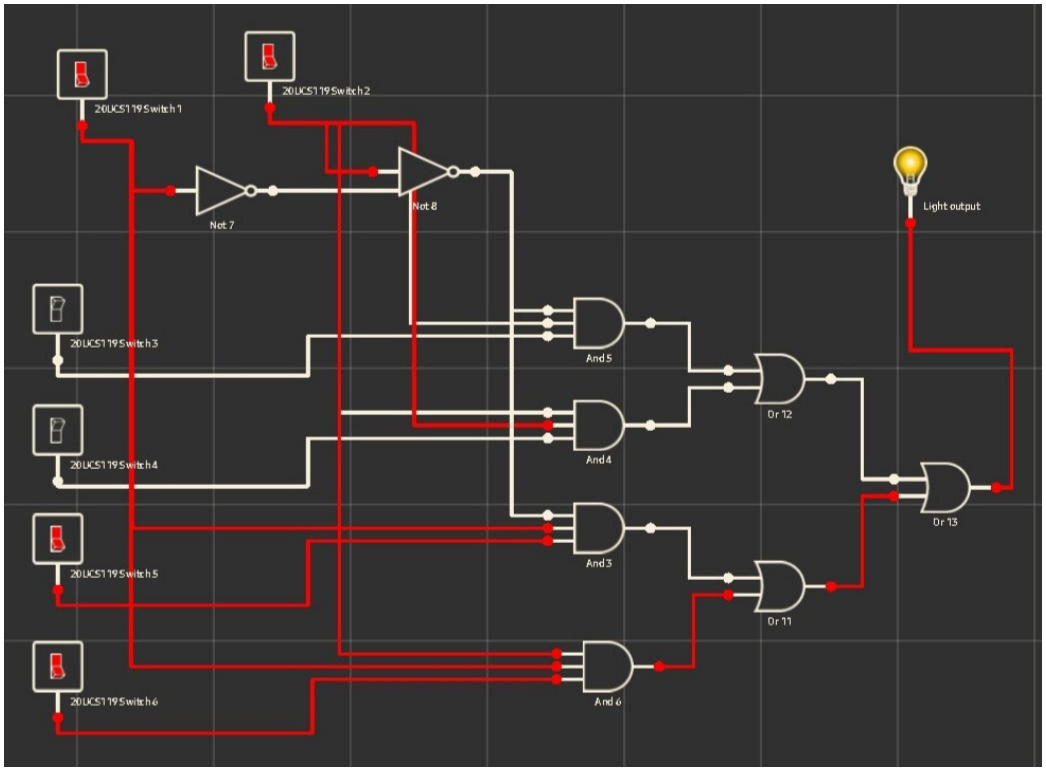
Procedure :

- Do the connections as shown and switch on the power supply.
- Apply proper logic inputs on the multiplexer and observe the output on LEDs.
- Verify the function table of the multiplexer in both the cases.






20UCS119 Switch 1
20UCS119 Switch 2
Not 7
Not 8
Light output
20UCS119 Switch 3
20UCS119 Switch 4
20UCS119 Switch 5
20UCS119 Switch 6
And 5
And 4
And 3
And 6
Or 12
Or 11
Or 13


20UCS119 Switch 1
20UCS119 Switch 2
Not 7
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Light output
20UCS119 Switch 3
20UCS119 Switch 4
20UCS119 Switch 5
20UCS119 Switch 6
And 5
And 4
And 3
And 6
Or 12
Or 11
Or 13

TRUTH TABLE:

Select Data Inputs		Output
S_1	S_0	Y
0	0	D_0
0	1	D_1
1	0	D_2
1	1	D_3

Conclusion :

Hence the functionality of Multiplexer is verified.