

EXPERIMENT 02

Implementation of a Circuit from Given Expressions

Objective:

To implement a circuit from given expression, make its truth table, find its minterms. Now Implement the circuit from the minterms again and verify the results with the initial given expression.

$$I. \quad F = X + \bar{X}.Y$$

Equipment /Tool:

Trainer, 74LS32 (OR), 74LS08 (AND), 74LS04 (NOT).

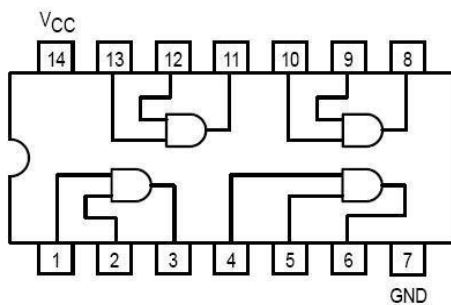


Figure 1. AND Gate 7408

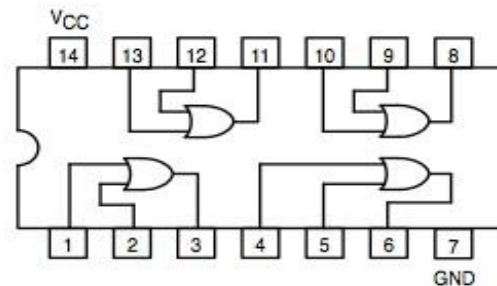


Figure 2. OR Gate IC 7432

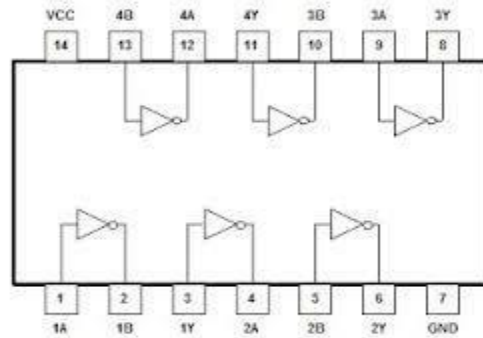


Figure 3. NOT Gate IC 7404

Procedure:

From the Expression given make the circuit on the trainer using ICs mentioned and fill in the truth table.

X	Y	\bar{X}	$\bar{X}.Y$	F

Now find the minterms of this expression and write it on the following blank

F=_____.

Implement the above expression on the trainer and fill the following table:

X	Y	F
0	0	
0	1	
1	0	
1	1	

Now verify the results of both the tables. Are they both the same or not? And why?