

POS Expression for Paper 2013 Question 6)c

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Abstract

This manual shows how to use Arduino with LED to represent SOP expression for the function "X" shown in the below truth table.

A	B	C	X
0	0	0	1
0	0	1	1
0	1	0	0
0	1	1	0
1	0	0	0
1	0	1	1
1	1	0	0
1	1	1	1

1 Components

Components	Value	Quantity
Arduino	UNO	1
LED	-	1
Jumper wires	M-M	3
Breadboard		1

2 Hardware

Make connections between the Arduino and LED using Breadboard.

3 Software

Now make the connections as per Table and execute the following program after downloading.

<https://github.com/Rahulraj00/Assignments/Assignment1>

LED	pin-1	pin-2
Arduino	2	GND

U, V, W are the inputs and LED is the output. Using boolean logic,

$$X = (!A \& !B) || (A \& C) \quad (1)$$

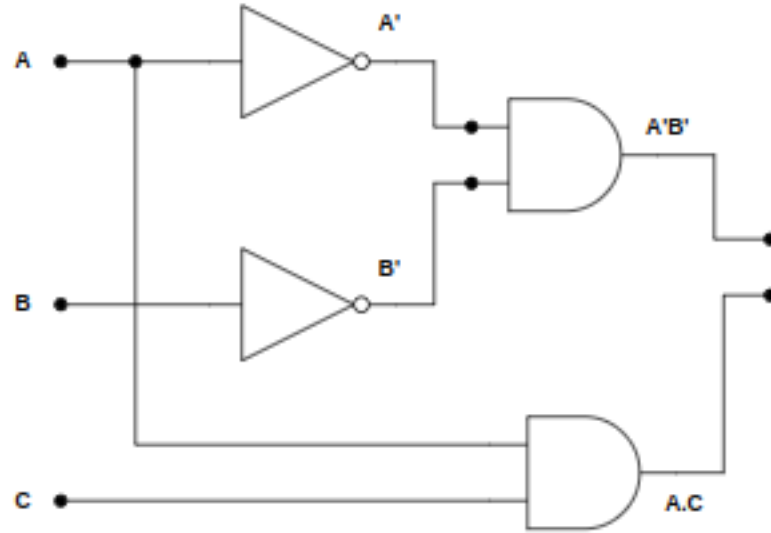


Figure 1: logic diagram for $A'B' + A.C$