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IITH - Future Wireless Communication

Contents

1 Components

Component	Value	Quantity
Resistor	220 ohm	1
Arduino	UNO	1
Decoder	7447	1
Display		1
Bread board		1
Jumper wires	M-M	15

Table 1:

2 Connections

Make connections between Seven segment and 7447 IC as per table3.

7447	a'	b'	c'	d'	e'	f'	g'
Display	a	b	c	d	e	f	g

Table 2:

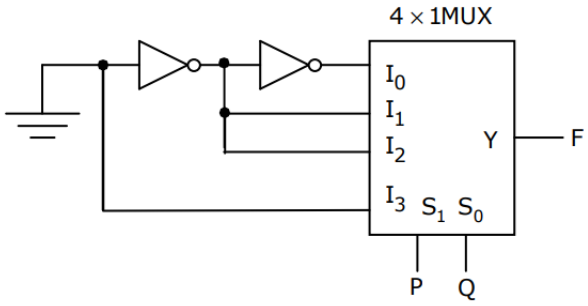
Make connections between Arduino and 7447 IC as per table4.

Arduino	2	3	4	5
7447	A	B	C	D

Table 3:

3 Problem

The logic function implemented by the circuit given below is that of an XOR Gate



F = PQ'+ P'Q

4 Truth table

.

P	Q	F
0	0	0
0	1	1
1	0	1
1	1	0

Table 4:

5 Karnaugh-map

P \ Q	0	1
0	0	1
1	1	0

F = PQ'+ P'Q

6 Code Link

Execute the following program to realize the Boolean logic for the given circuit