

Digital Logic Design

(EL-1005)

LABORATORY MANUAL

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LAB 02

Basic logic Gates

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MARKS AWARDED: /02

LAB TASKSName Sohaib Sarosh ShamsiStudent ID 21K-3278Section D**LAB TASK # 01**

Implement the following Basic Logic AND logic – OR Logic and Inverter Circuit on logic trainer

LAB TASK# 02

Implement the following logic circuit on logic trainer, and write truth table in the space provided below:

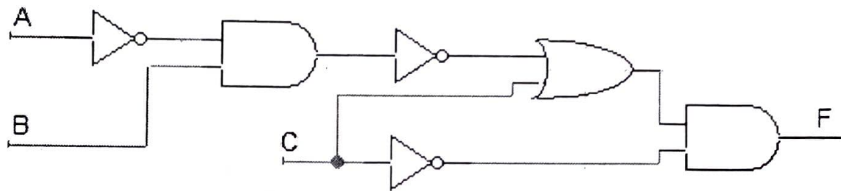


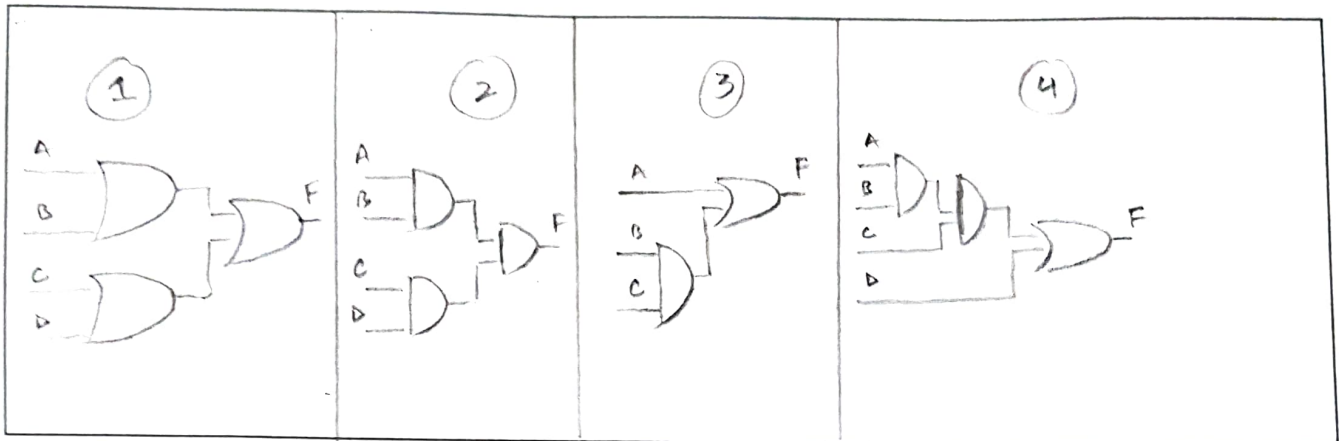
Figure 1: Combinational Circuit

A	B	C	F (output)
0	0	0	1
0	0	1	0
0	1	0	0
0	1	1	0
1	0	0	1
1	0	1	0
1	1	0	1
1	1	1	0

LAB TASK#3

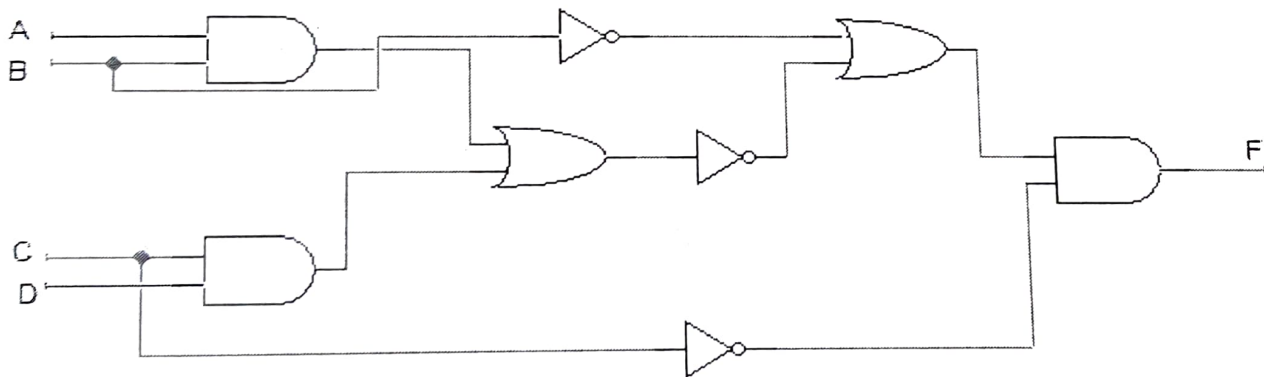
Draw the logic circuit represented by each of the following expression:

1. $A+B+C+D$
2. $ABCD$
3. $A+BC$
4. $ABC+D$



Exercise # 04

Implement the following logic circuit on logic trainer, and write truth table in the space provided below:



A	B	C	D	F (output)
0	0	0	0	1
0	0	0	1	1
0	0	1	0	0
0	0	1	1	0
0	1	0	0	1
0	1	1	0	0
0	1	1	1	0
1	0	0	0	1
1	0	0	1	0
1	0	1	0	0
1	0	1	1	0
1	1	0	0	0
1	1	0	1	0
1	1	1	0	0
1	1	1	1	0