GANDHI SCHOOL OF ENGINEERING,BHABANDHA,BERHAMPUR

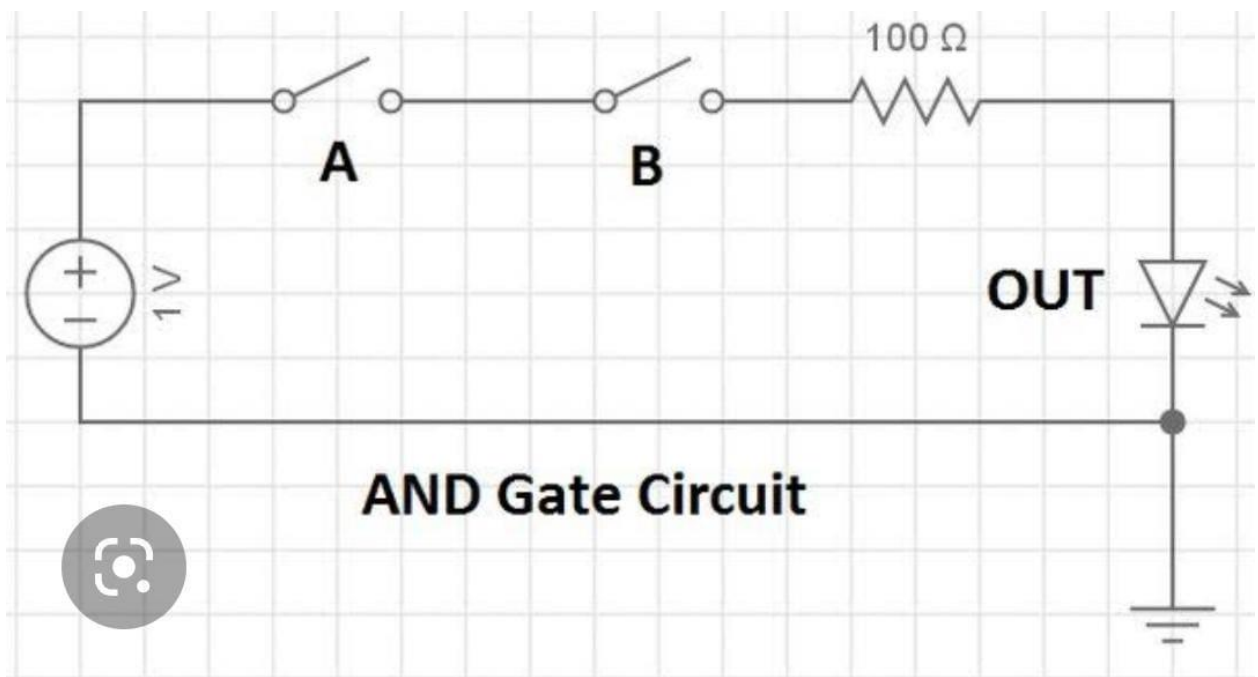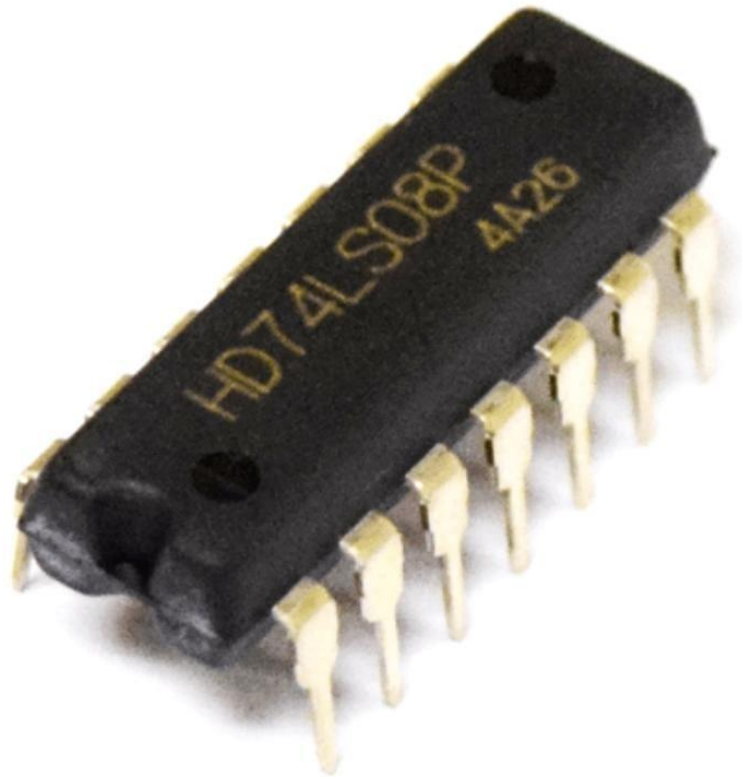# TEACHING AND LEARNING MATERIAL

SUBJECT:DIGITAL ELECTRONICS
SEMESTER:3RD
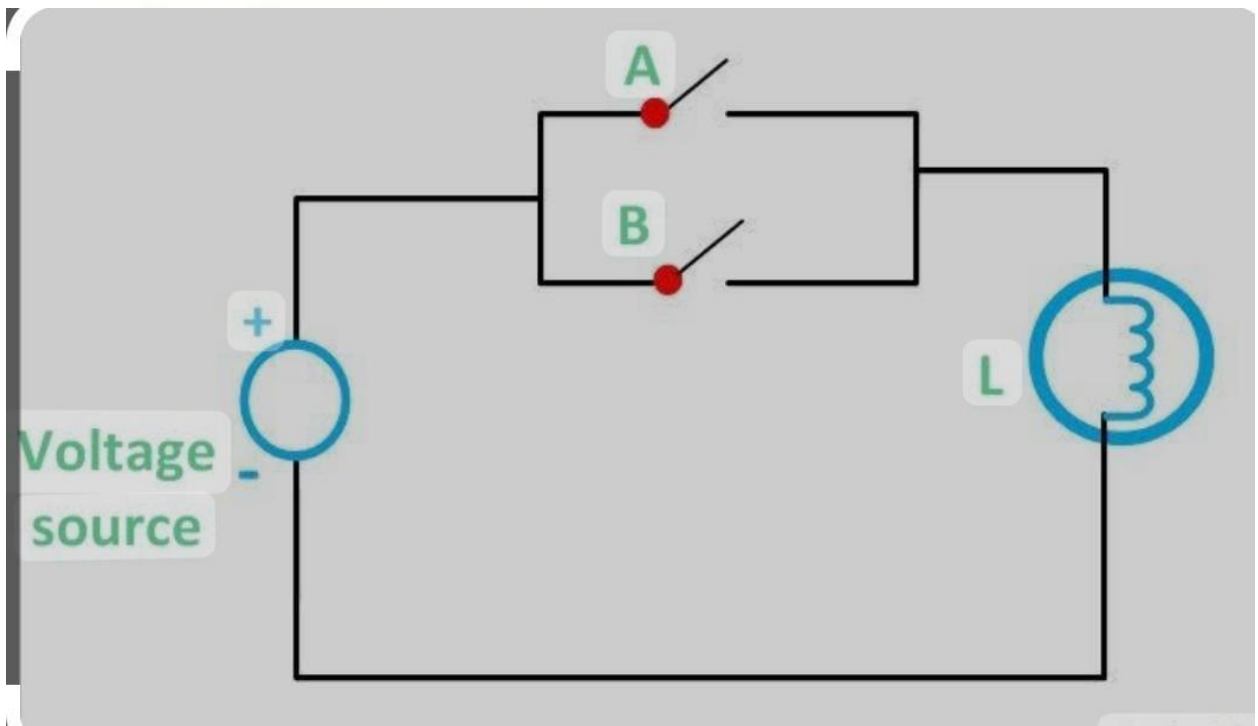
PREPARED BY:PRABHAMAYEE ACHARYA

UNIT-1

2-input AND gate

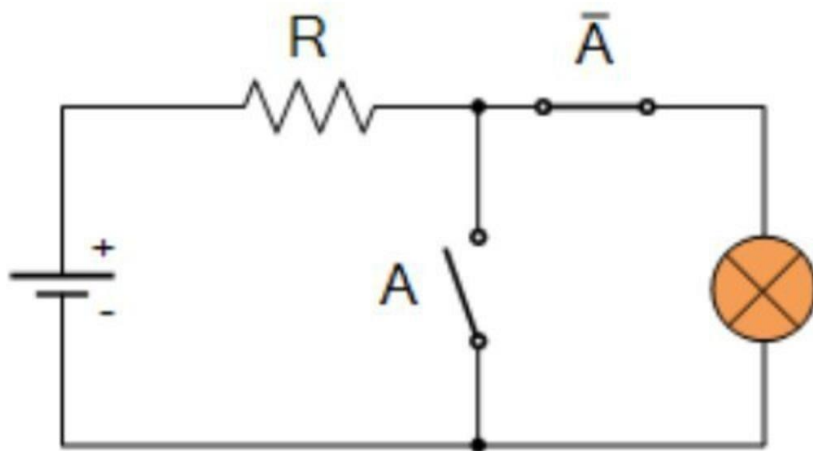

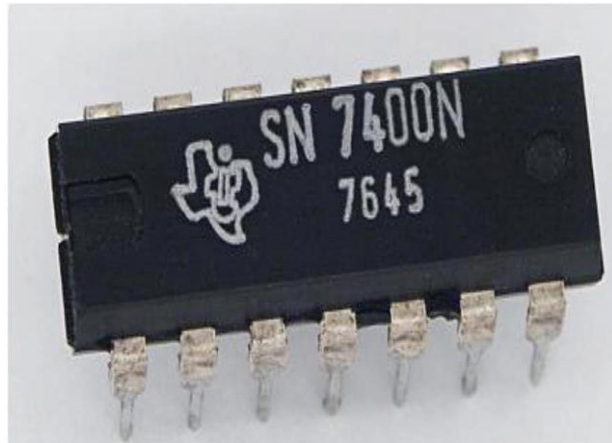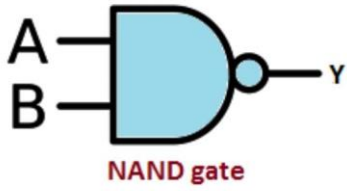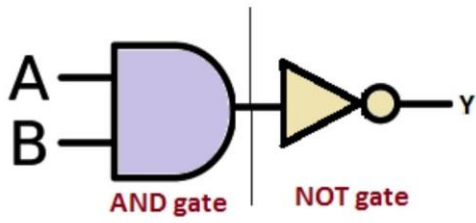**AND Gate Circuit**

2-input OR gate

NOT gate
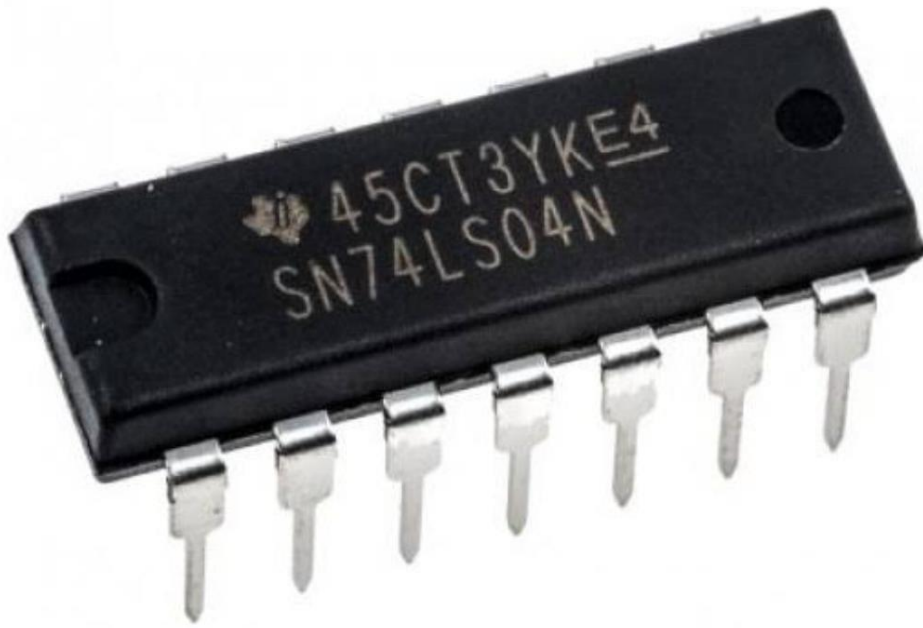
NOT Gate

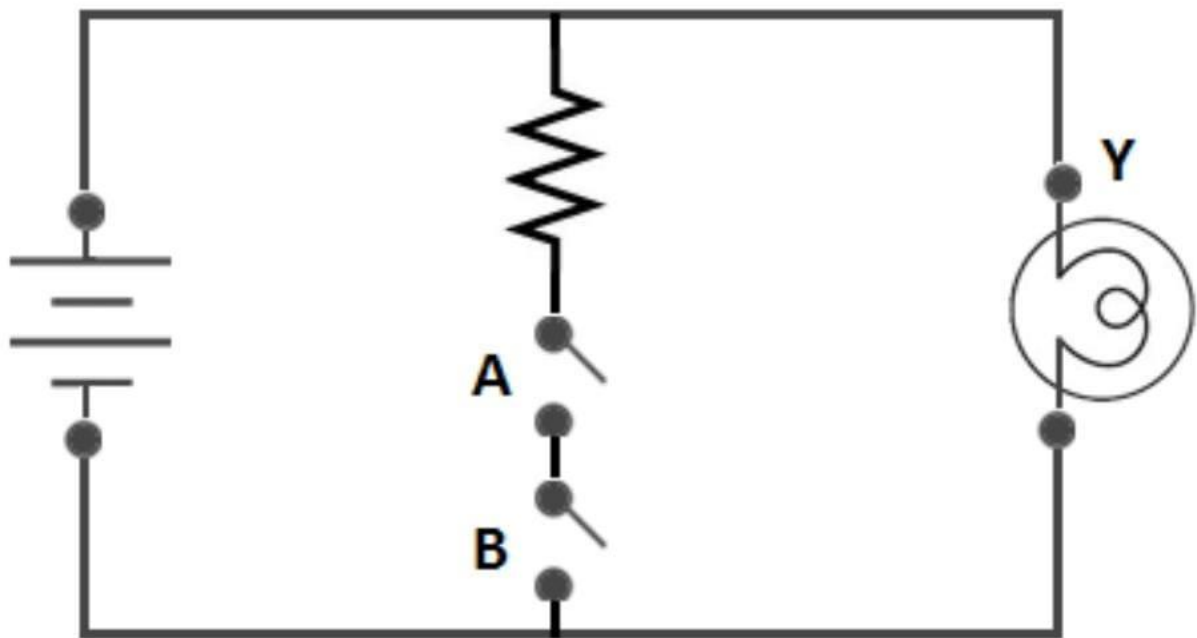Switch A - Open = "0", Lamp - ON = "1"
Switch A - Closed = "1", Lamp - OFF = "0"

NAND GATE

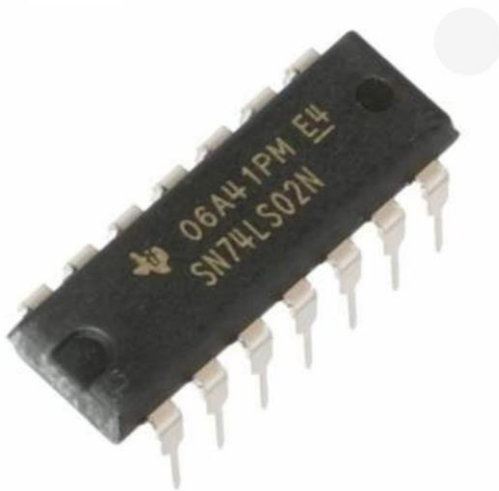AND gate NOT gate

NAND gate

NAND GATE

SN 7400N
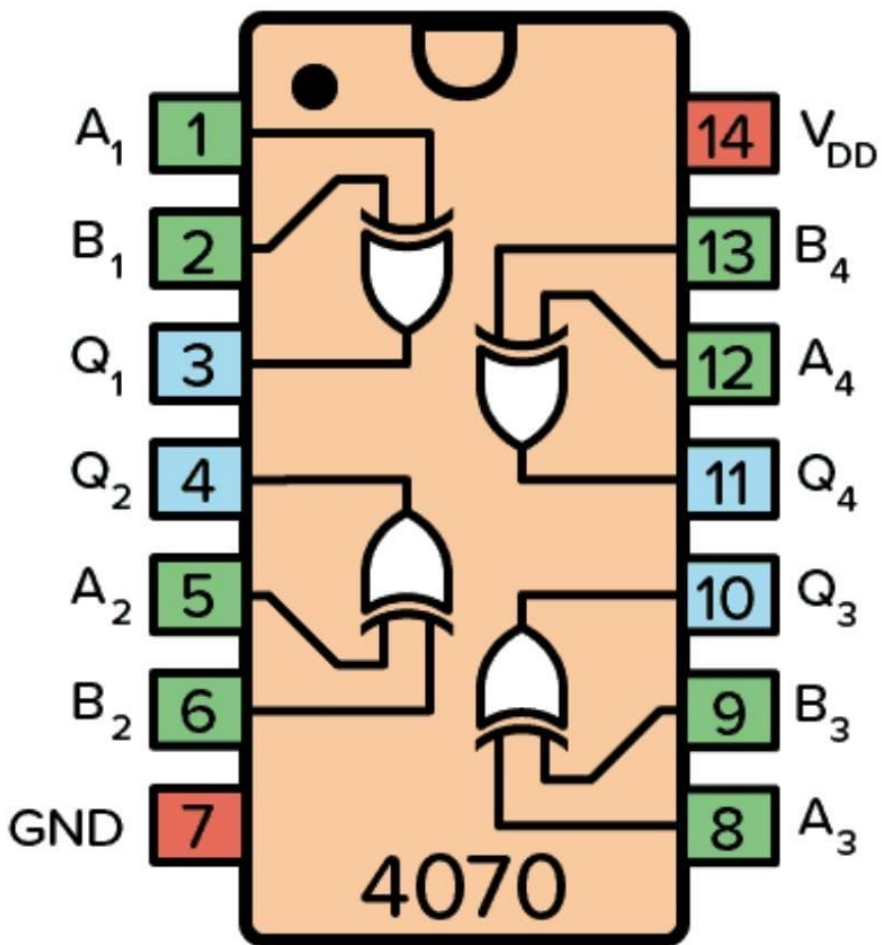7645

Electrical Circuit

A

B

Y

NOR GATE

NOR GATE

Electrical Circuit

EX-OR GATE

$Y = A \oplus B$

A_1	1	14	V_{DD}
B_1	2	13	B_4
Q_1	3	12	A_4
Q_2	4	11	Q_4
A_2	5	10	Q_3
B_2	6	9	B_3
GND	7	8	A_3

4070

EX-NOR GATE

Off = 0
On = 1

UNIT-2

HALF ADDER

Half Adder & Full Adder Circuit
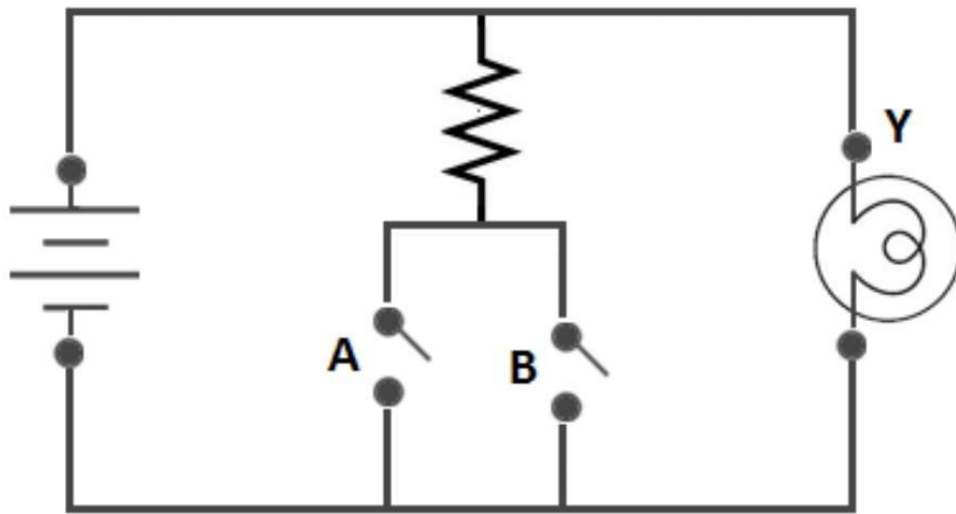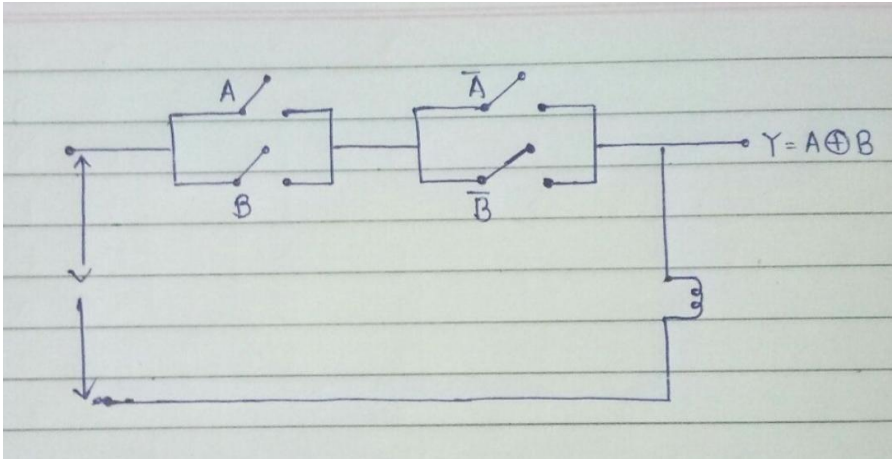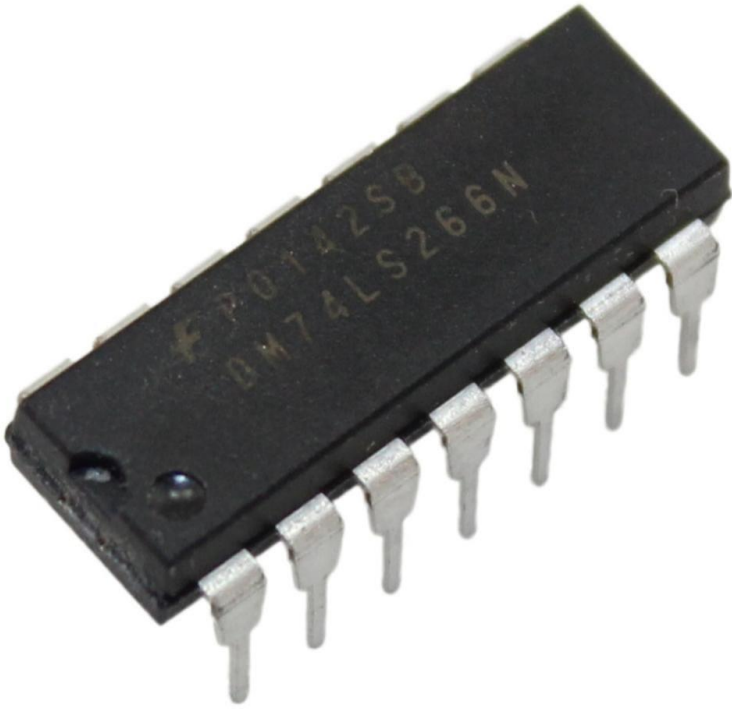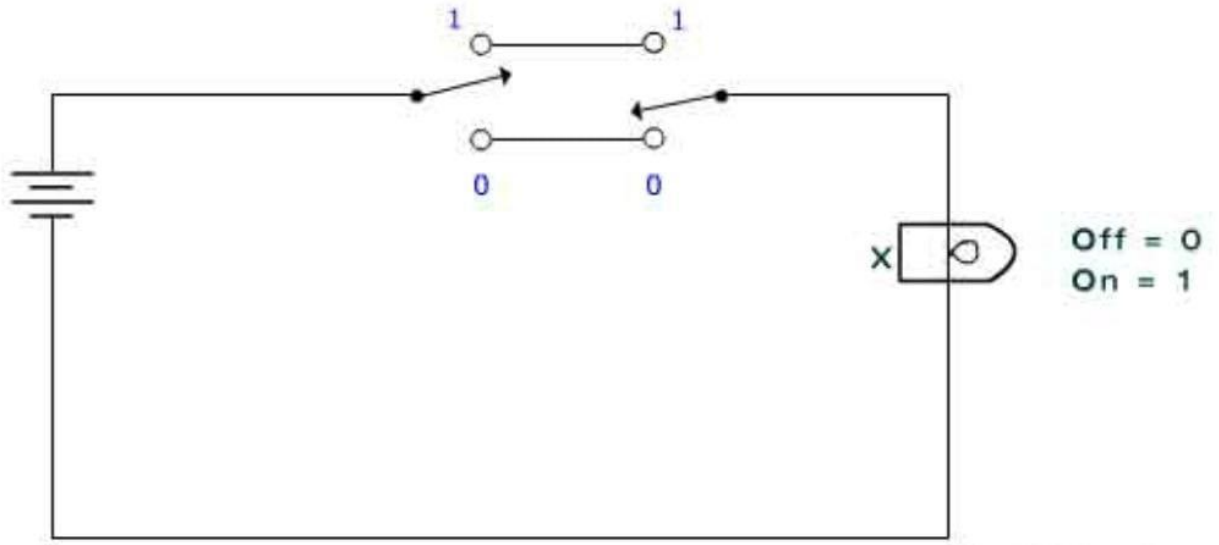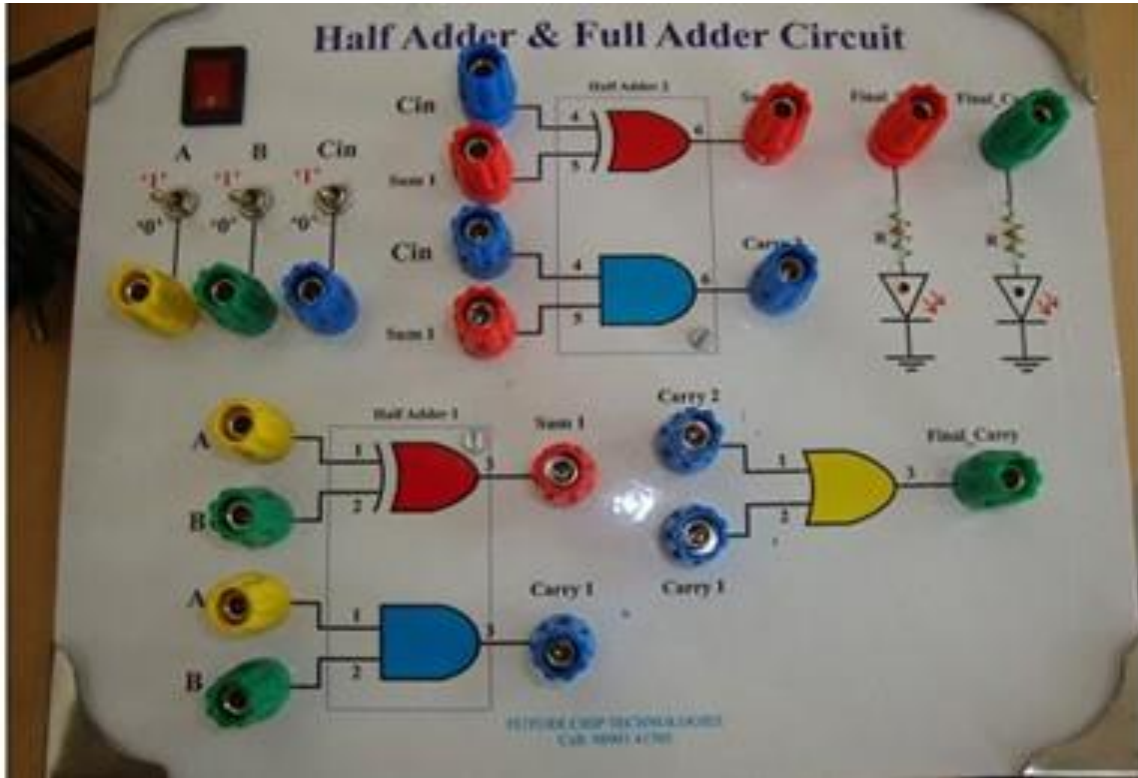
7 SEGMENT DISPLAY

UNIT-3

ROM

PLD