SHUBHAM SE-comp-A

ASSIGNMENT - 2

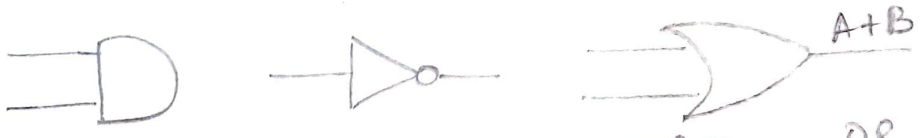
AIM :→ To implement Boolean expression using logic Gates.

SOFTWARE / HARDWARE / IC-REQUIRED : Multism & IC Trainer kit, patch chords, IC 7408 (2input And), IC7432 (2input OR) IC 7404 (2input NOR)

THEORY : Implementation of Expression

$A\bar{B}C + [CD + \bar{A}\bar{B}] + B$

LOGIC DIAGRAM FOR THREE BASIC GATES



INPUT AND INVERTER INPUT OR

Any Boolean function can be represented by using a number of logic gates interconnecting them. Logic Gates implementation or logic representation of Boolean function is very simple and easy form.

The Implementation of Boolean func using logic gates involves connecting one logic gate's output to another Gate's Input and Invoked using AND, NOT, OR etc.

Conclusion :-

Boolean expression Implemented successfully using logic Gate.

$A\bar{B}C + [CD + \bar{A}\bar{B}] + B$

A	B	C	D	$\bar{A}$	$\bar{B}$	$\bar{A}\bar{B}$	CD	$A\bar{B}C$	$A\bar{B}C + [CD + \bar{A}\bar{B}] + B$
0	0	0	0	1	1	1	0	0	1
0	0	0	1	1	1	1	0	0	1
0	0	1	0	1	1	1	0	0	1
0	0	1	1	1	1	1	1	0	1
0	1	0	0	1	0	0	0	0	1
0	1	0	1	1	0	0	0	0	1
0	1	1	0	1	0	0	0	0	1
0	1	1	1	1	0	0	1	0	1
1	0	0	0	0	1	0	0	0	0
1	0	0	1	0	1	0	0	0	0
1	0	1	0	0	1	0	0	1	1
1	0	1	1	0	1	0	1	1	1
1	1	0	0	0	0	0	0	0	1
1	1	0	1	0	0	0	0	0	1
1	1	1	0	0	0	0	0	0	1
1	1	1	1	0	0	0	1	0	1