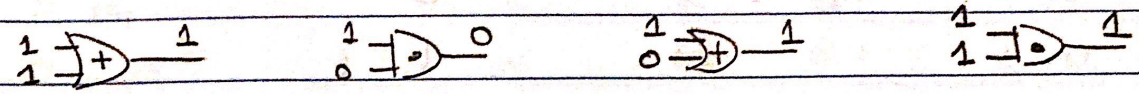
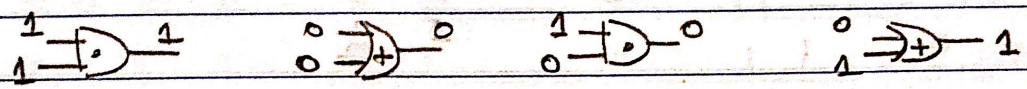
Lab 3

(2) a)



e)



(3) a) 4 variables 8 literals

b) $CD = 1$ $A+CD = 1$ $\overline{A+CD} = 0$

$BE = 0$ $\overline{A+CD} + BE = 0$

c) $F = \overline{A+CD} + BE$

$= \overline{(0+(1\cdot1))} + (0\cdot1)$

$= \overline{1} + 0$

$= 0+0 = 0$

d) $F = \overline{(\bar{A}B)}$

A	B	$\bar{A}$	$\bar{A}B$	$\overline{(\bar{A}B)}$
0	0	1	0	1
0	1	1	1	0
1	0	0	0	1
1	1	0	0	1

e) $F = C(A+\overline{B})$

A	B	C	$\overline{B}$	$A+\overline{B}$	$C(A+\overline{B})$
0	0	0	1	1	0
0	0	1	1	1	1
0	1	0	0	0	0
0	1	1	0	0	0
1	0	0	1	1	0
1	0	1	1	1	1
1	1	0	0	1	0
1	1	1	0	1	1

f) LOCATED IN LAB3.CIRC

(4) b) $A \cdot A = A$ $A \cdot \overline{A} = 0$ $A \cdot 0 = 0$ $A \cdot 1 = A$

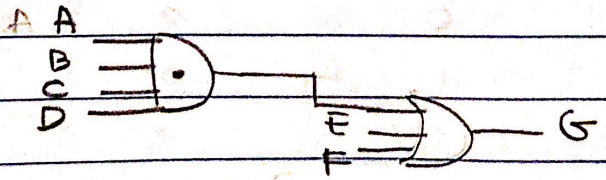
$A + A = A$ $\overline{A} + A = 1$ $A + 0 = A$ $A + 1 = 1$

(5) a) $A + (B+C) = (A+B) + C$

$A \cdot (B \cdot C) = (A \cdot B) \cdot C$

b) $A \cdot B = B \cdot A$ $A + B = B + A$

c)



d) 0000 1101 0010 1111

e)

A	B	C	B+C	A(B+C)	AB	AC	AB+AC
0	0	0	0	0	0	0	0
0	0	1	1	0	0	0	0
0	1	0	1	0	0	0	0
0	1	1	1	0	0	0	0
1	0	0	0	0	0	0	0
1	0	1	1	1	0	1	1
1	1	0	1	1	1	0	1
1	1	1	1	1	1	1	1

f) LOCATED IN LAB3.CIRC

⑥ a)

x	y	$x\overline{y}$	$x\overline{y}+y$	x+y
0	0	0	0	0
0	1	0	1	1
1	0	1	1	1
1	1	0	1	1