



No E-Mail submissions will be accepted.

Submission formats and file naming:

File name : Pts\_firstName\_lastName\_lab\_4

File format: pdf or MS Word format

e.g. Pts\_Joe\_Biden\_lab\_4.pdf

## Reading materials

Use the following link and write a one page summary about the movie.

**Computer History: Memory & Storage 1950-1985**

[https://youtu.be/9XJapKLq\\_6k](https://youtu.be/9XJapKLq_6k)

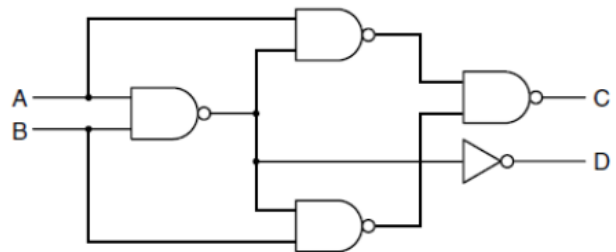
*"The Evolution of Computer Memory & Storage"*

1) Simplify the following logical expressions using Boolean identities table?

a) $A'(A' + B) = A'$	b) $B' + B'A = B'$	c) $(1 + B)' + A = A$
d) $(A + A')' = 0$	e) $(AA')' = 1$	f) $A + B + (AB)' = 1$
g) $A + (A' + B')' = A$	h) $(AB)' + A' = A' + B'$	k) $(A' + B)' + A = A$

2) Using the following circuit obtain C and D. What does this circuit do?

A	B	C	D
0	0	0	0
0	1	1	0
1	0	1	0
1	1	0	1



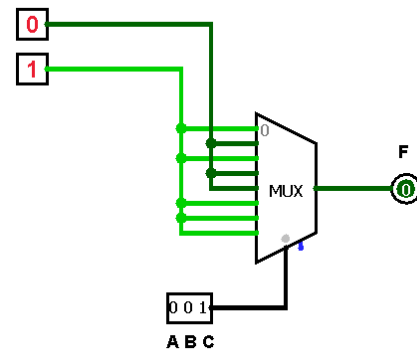
Half adder

sum(res) = C

Cout = D

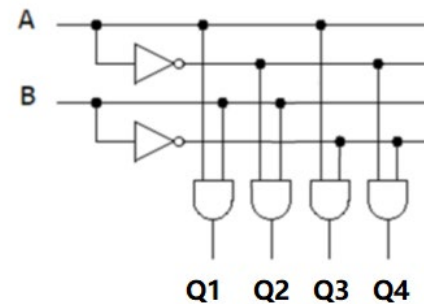
3) Given the following truth table, implement the Boolean function F using a MUX (8X1).

A	B	C	F
0	0	0	1
0	0	1	0
0	1	0	1
0	1	1	0
1	0	0	0
1	0	1	1
1	1	0	1
1	1	1	1



4) Consider the following circuit and obtain Q1, Q2, Q3, and Q4.

A	B	Q1	Q2	Q3	Q4
0	1	0	1	0	0
1	0	0	0	1	0



5) Consider the following circuit and obtain Q and Cout.

A	B	Cin	p	q	Q	Cout
1	1	1	1	1	1	1
1	1	0	1	0	0	0
0	1	0	0	1	1	0
1	0	0	0	0	0	0

