

# EE5811: FPGA LAB

## ASSIGNMENT 1

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### Problem

Question 6(a) papers/cbse/cs/2017-1\_Q.6(a)

6.a State the distributive laws of Boolean algebra and verify them using truth table.

### Solution

Distributive Law states that the multiplication of two variables and adding the result with a variable will result in the same value as multiplication of addition of the variable with individual variables. For example:  $A + BC = (A + B)(A + C)$ .

A	B	C	BC	A+BC	A+B	A+C	(A+B). (A+C)
0	0	0	0	0	0	0	0
0	0	1	0	0	0	1	0
0	1	0	0	0	1	0	0
0	1	1	1	1	1	1	1
1	0	0	0	1	1	1	1
1	0	1	0	1	1	1	1
1	1	0	0	1	1	1	1
1	1	1	1	1	1	1	1

A c code has been attached in the repository for verification.