LOGIC GATES

AND

Output of AND gate is high is only when both inputs are high. Its operation is denoted by DOT (.) operator.

Logic Symbol-

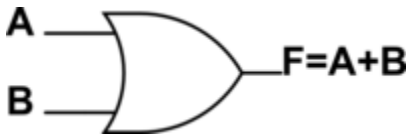
Truth Table

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

OR

Output of OR gate is high when any one of the inputs is high. Its operation is denoted by PLUS (+) operator.

Logic Symbol -



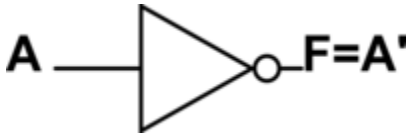
Truth Table

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

NOT

Output of NOT gate is complement of the input.

Logic Symbol -



Truth Table

A	F
0	1
1	0

EX-OR

EX-OR stands for Exclusive OR.Output of EX-OR gate is low when both inputs are same. Its operation is denoted by ENCIRCLED PLUS operator.

Logic Symbol -

Truth Table

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

EX-NOR

Output of EX-NOR gate is complement of EX-OR gate i.e. output is high only when both inputs are high. Its operation is denoted by ENCIRCLED DOT operator.

Logic Symbol-

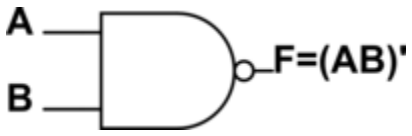
Truth Table

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

NAND

NAND gate is equivalent to AND gate followed NOT gate. Output of NAND gate is complement of AND gate i.e. output is high when any one of the inputs is low.

Logic Symbol -



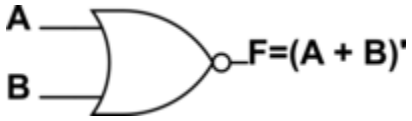
Truth Table

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

NOR

NOR gate is combination of OR and NOT gate. Output of NOR gate is complement of OR gate i.e. output is low when any one of the inputs is high.

Logic Symbol -



Truth Table

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

Source: http://www.knowelectronics.org/logic-gates/