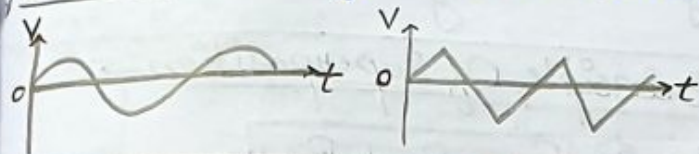


Logic Gates

Analog Signals → Signal which vary continuously with time.

Circuit → Analog electronic Circuit



Digital Signals → Signals having either of the two levels, 0 or 1 are called digital signals.
0 → off, 1 → on.

Gate → Digital signal which either allows or stop the signal

Logic Gates →

Electronic circuit which make logistic decision.

→ Basic building blocks for most digital systems.

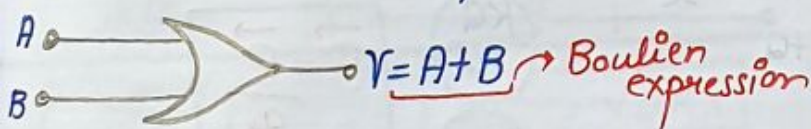
3 Basic Logic Gates →

① AND gate → Bike start, (break, accelerator)

② OR gate → Air bags of car

③ NOT gate → Invert Gate.

① OR Gate → High output, if any of the input is high



Truth Table →

X	Y	O/p
0	0	0
0	1	1
1	0	1
1	1	1

$$1 + x = 1$$

$$1 + y = 1$$

② AND Gate → High output, if both inputs are High



Truth Table →

X	Y	O/p
0	0	0
0	1	0
1	0	0
1	1	1

③ NOT Gate →



X	O/p
0	1
1	0

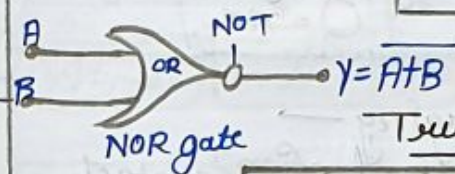
Invert Gate

Combined Gates →

① NOR gate
OR + NOT

② NAND Gate
AND + NOT

① NOR Gate →



Truth Table →

X	Y	OR	NOR
0	0	0	1
0	1	1	0
1	0	1	0
1	1	1	0

② NAND Gate →

Truth table →



X	Y	AND	NAND
0	0	0	1
0	1	0	1
1	0	0	1
1	1	1	0



NEET
SLAYER