Q What is diff b/w universal gate & basic gate

Q Explain AND gate, NOR gate, NOT gate with logic diagram & truth table.

Ans.1 Basic logic Gates are used in operation in digital systems. Types of Basic logic Gates are:-

- OR Gate
- NOT Gate
- AND Gate
- XOR Gate

Through these gates we can perfor all basic arithmetic functions like addition, multiplication, etc can be realized.
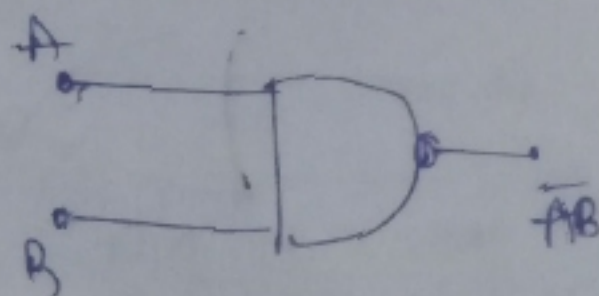
e.x OR gate

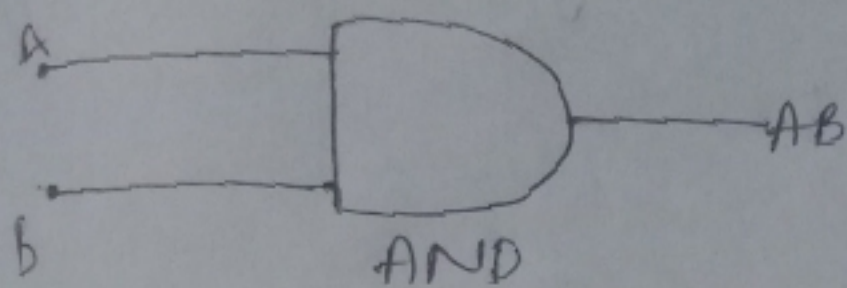| Input		Output
A	B	A or B
0	0	0
0	1	1
1	0	1
1	1	1

Universal Gate:

It is a gate which includes NAND gate and NOR gate as though. from these gates all other gate can be realized

Example NAND Gate

Input		Output
A	B	$\overline{AB}$
0	0	1
0	1	1
1	0	1
1	1	0

Ans 2

AND Gate :-

Input		Output
A	B	AB
0	0	0
0	1	0
1	0	0
1	1	1

AND gate is electronic circuit, it takes 2 input. A dot (•) is used to show the AND operation i.e. (A•B) It gives a high output (i.e. 1) only if all the input are high

NOT Gate
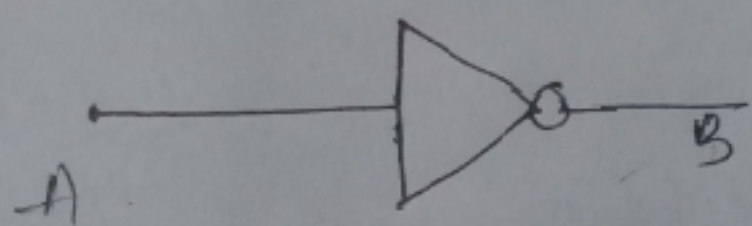
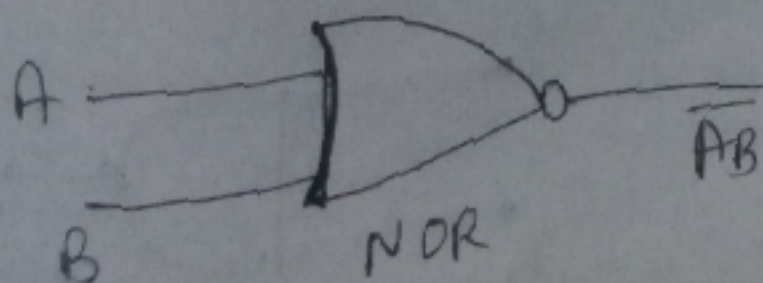| Input	Output
A	$\bar{A}$
0	1
1	0

This gate is also known as inverter. If the input variable is A, the inverted output is known as NOT A. or A' or $\bar{A}$.

NOR Gate

Input		Output
A	B	$\overline{A+B}$
0	0	1
0	1	0
1	0	0
1	1	0

This is a NOT-OR gate which is equal to an OR gate followed by a NOT gate.

The outputs of all NOR gates are low if any of the inputs are high.