Experiment - 1

Verification of truth's table of Basic gate & Universal gates
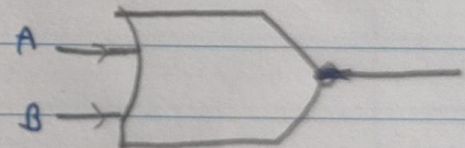
AND gate

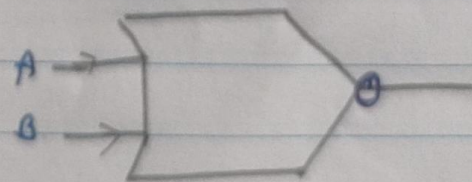| A | B | $Y = A * B$ |
|---|---|---|
| 0 | 0 | 0 |
| 0 | 1 | 0 |
| 1 | 0 | 0 |
| 1 | 1 | 1 |
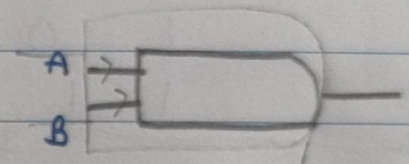


OR gate

| A | B | $Y = A + B$ |
|---|---|---|
| 0 | 0 | 0 |
| 0 | 1 | 1 |
| 1 | 0 | 1 |
| 1 | 1 | 1 |



NOR gate

| A | B | $Y = \overline{A + B}$ |
|---|---|---|
| 0 | 0 | 1 |
| 0 | 1 | 0 |
| 1 | 0 | 0 |
| 1 | 1 | 0 |

# NAND gate

| A | B | $Y = \overline{A * B}$ |
|---|---|---|
| 0 | 0 | 1 |
| 0 | 1 | 1 |
| 1 | 0 | 1 |
| 1 | 1 | 0 |
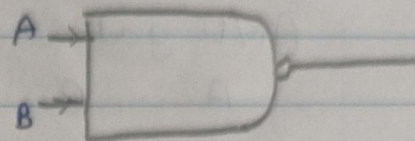
# Not gate

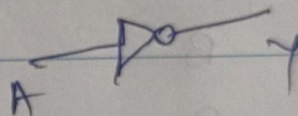| A | $Y = \overline{A}$ |
|---|---|
| 0 | 1 |
| 1 | 0 |

Practical related questions

1) What is logic gate?

→ A logic gate is a fundamental building block of digital circuits
It processes binary inputs based on logical operation

2) Whate is the number of not gate in ic 7404

→ The IC 7404 contains six No7 gate

3) State the function of pin 7 & 14 of logic gate IC

→ In a logic gate IC such as 7404, pin 7 is GND (grounded
& pin 14 is VCC (common reference voltage connecter)