1. AND Gate:

   - The AND gate produces a high (1) output only when all its inputs are high (1).

   - The output is low (0) if any of the inputs are low (0).

2. OR Gate:

   - The OR gate produces a high (1) output when any of its inputs are high (1).

   - The output is low (0) only when all inputs are low (0).

3. NOT Gate:

   - The NOT gate produces the opposite of its input.

   - If the input is high (1), the output is low (0).

   - If the input is low (0), the output is high (1).

4. XOR (Exclusive OR) Gate:

   - The XOR gate produces a high (1) output when either of its inputs are high (1), but not when both are high (1).

   - The output is low (0) when both inputs are the same (either both low or both high).

5. NAND Gate:

   - The opposite of the AND gate.

   - Outputs 0 only when all inputs are 1.

   - Outputs 1 if any input is 0.

6. NOR Gate:

   - The opposite of the OR gate.

   - Outputs 0 if any input is 1.

   - Outputs 1 only when all inputs are 0.

7. XNOR Gate (Equivalence Gate):

   - The opposite of the XOR gate.

   - Outputs 1 when both inputs are the same (both 0 or both 1).

   - Outputs 0 when only one input is 1.