

6 Lecture - CS302

Important Mcqs

1. **What is the basic function of an AND gate?**

- a. Produces a high output if any input is high
- b. Inverts the input signal
- c. Produces a high output if all inputs are high
- d. Produces a low output if all inputs are high

Answer: c. Produces a high output if all inputs are high.

2. **What is the basic function of a NOT gate?**

- a. Produces a high output if all inputs are high
- b. Inverts the input signal
- c. Produces a high output if any input is high
- d. Produces a low output if all inputs are high

Answer: b. Inverts the input signal.

3. **What is the operational characteristic that determines the time it takes for a logic gate's output to respond to a change in its input?**

- a. Propagation delay
- b. Input voltage level
- c. Output voltage level
- d. Logic function

Answer: a. Propagation delay.

4. **What is a logic gate circuit?**

- a. A combination of input and output devices
- b. A combination of logic gates that perform a specific logical operation
- c. An electronic circuit that converts analog signals to digital signals
- d. An electronic circuit that amplifies signals

Answer: b. A combination of logic gates that perform a specific logical operation.

5. **What is the basic function of an OR gate?**

- a. Produces a high output if all inputs are high
- b. Produces a low output if all inputs are high
- c. Produces a high output if any input is high
- d. Inverts the input signal

Answer: c. Produces a high output if any input is high.

6. **Which of the following is not a basic type of logic gate?**

- a. XOR gate

- b. NOT gate
- c. ADD gate
- d. AND gate

Answer: c. ADD gate.

7. **What is the operational characteristic that determines the voltage levels for a logic gate's input and output signals?**
- a. Propagation delay
 - b. Input voltage level
 - c. Output voltage level
 - d. Logic function

Answer: b. Input voltage level.

8. **What is a sequential logic circuit?**
- a. A logic gate circuit that performs a specific logical operation
 - b. A circuit that produces an output based on the current state and input signals
 - c. A circuit that has only one input and one output
 - d. A circuit that uses analog signals

Answer: b. A circuit that produces an output based on the current state and input signals.

9. **What is the basic function of a NAND gate?**
- a. Produces a low output if all inputs are high
 - b. Inverts the input signal
 - c. Produces a high output if any input is high
 - d. Produces a high output if all inputs are high

Answer: a. Produces a low output if all inputs are high.

10. **What is the operational characteristic that determines the voltage levels for a logic gate's output signal?**
- a. Propagation delay
 - b. Input voltage level
 - c. Output voltage level
 - d. Logic function

Answer: c. Output voltage level.