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.