7 Lecture - CS302

Important Mcqs

1. **Which of the following is not a digital circuit component?**
   a) Resistor
   b) Capacitor
   c) Transistor
   d) Logic gate
   Answer: a) Resistor

2. **What is the primary advantage of digital circuits over analog circuits?**
   a) Higher accuracy
   b) Lower power consumption
   c) Faster processing
   d) All of the above
   Answer: d) All of the above

3. **Which of the following is not a basic logic gate?**
   a) XOR gate
   b) NAND gate
   c) INHIBIT gate
   d) NOT gate
   Answer: c) INHIBIT gate

4. **What is the purpose of a decoder circuit?**
   a) To convert a binary input into one of several possible outputs
   b) To combine multiple inputs into a single output
   c) To provide a logical complement of the input signal
   d) To amplify the input signal
   Answer: a) To convert a binary input into one of several possible outputs

5. **What is the propagation delay of a logic gate?**
   a) The amount of time it takes for a signal to travel through the gate
   b) The amount of time it takes for the gate output to respond to a change in its input
   c) The amount of time it takes for a gate to power up
   d) The amount of time it takes for a gate to power down
   Answer: b) The amount of time it takes for the gate output to respond to a change in its input

6. **Which of the following is not an operational characteristic of digital circuits?**
   a) Output voltage
   b) Timing characteristics
   c) Frequency response
   d) Power consumption
   Answer: c) Frequency response

7. **What is the purpose of a multiplexer circuit?**
   a) To convert a binary input into one of several possible outputs

b) To combine multiple inputs into a single output
c) To provide a logical complement of the input signal
d) To select one of several input signals to pass through to the output
Answer: d) To select one of several input signals to pass through to the output

8. **Which type of logic uses a high voltage to represent a logical "1"?**
a) Positive logic
b) Negative logic
c) Complementary logic
d) None of the above
Answer: a) Positive logic

9. **What is the primary purpose of simulation in digital circuit design?**
a) To test the circuit for reliability
b) To optimize the circuit for power consumption
c) To analyze the circuit's performance under different input conditions
d) To manufacture the circuit components
Answer: c) To analyze the circuit's performance under different input conditions

10. **Which of the following is not a common application of digital circuits?**
a) Computer systems
b) Telecommunications
c) Power generation
d) Consumer electronics
Answer: c) Power generation