# 15 Lecture - CS501

## Important Mcqs

1. **Which of the following best describes logic design?**
   A) The process of creating digital circuits using logic gates
   B) The process of creating analog circuits using operational amplifiers
   C) The process of designing software algorithms
   D) The process of designing mechanical systems
   Answer: A) The process of creating digital circuits using logic gates

   **Which of the following is not a control signal used in SRC?**
   A) Memory request signal
   B) CPU request signal
   C) Interrupt signal
   D) Power supply signal
   Answer: D) Power supply signal

   **What is the purpose of control signals in SRC?**
   A) To manage system resources
   B) To provide power to the system
   C) To communicate with external devices
   D) To create user interfaces
   Answer: A) To manage system resources

   **What is the basic building block of digital logic circuits?**
   A) Resistors
   B) Capacitors
   C) Transistors
   D) Inductors
   Answer: C) Transistors

   **Which of the following is a type of logic gate?**
   A) AND gate
   B) OR gate
   C) NOT gate
   D) All of the above
   Answer: D) All of the above

   **Which of the following is an example of a combinatorial logic circuit?**
   A) Flip-flop
   B) Counter
   C) Decoder
   D) None of the above
   Answer: C) Decoder

   **Which of the following is an example of a sequential logic circuit?**
   A) Adder

B) Multiplexer
C) Flip-flop
D) Comparator
Answer: C) Flip-flop

**Which of the following is a characteristic of synchronous circuits?**
A) They have no clock signal
B) They have a feedback path
C) They have a stable state
D) They have no race conditions
Answer: C) They have a stable state

**What is the purpose of a clock signal in synchronous circuits?**
A) To provide power to the circuit
B) To synchronize the operation of the circuit
C) To create an output signal
D) To generate a control signal
Answer: B) To synchronize the operation of the circuit

**Which of the following is an example of a control signal used in SRC?**
A) Voltage signal
B) Data signal
C) Clock signal
D) Interrupt signal
Answer: D) Interrupt signal