

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