

6 Lecture - CS501

Important Mcqs

1. **What does RTL stand for in digital logic circuits?**

- a) Reduced Timing Latency
- b) Register-Transfer Level
- c) Randomized Time Logic
- d) Real-Time Logic

Answer: b) Register-Transfer Level

Which type of logic circuits are used in RTL design?

- a) Combinational and sequential logic circuits
- b) Only combinational logic circuits
- c) Only sequential logic circuits
- d) None of the above

Answer: a) Combinational and sequential logic circuits

What is the purpose of RTL design?

- a) To enable efficient use of hardware resources
- b) To simplify digital system design
- c) To reduce power consumption
- d) All of the above

Answer: d) All of the above

Which of the following is an example of a digital system that uses RTL design?

- a) Graphics card
- b) Sound card
- c) Central Processing Unit (CPU)
- d) All of the above

Answer: c) Central Processing Unit (CPU)

Which level of abstraction does RTL represent in digital system design?

- a) Low-level abstraction
- b) High-level abstraction
- c) Intermediate-level abstraction
- d) None of the above

Answer: b) High-level abstraction

What is the flow of data represented between in RTL design?

- a) Registers
- b) Clock signals
- c) Power signals
- d) None of the above

Answer: a) Registers

What is the difference between combinational and sequential logic circuits?

- a) Combinational circuits have memory, whereas sequential circuits do not.

- b) Sequential circuits have memory, whereas combinational circuits do not.
- c) Both types of circuits have memory.
- d) Both types of circuits do not have memory.

Answer: b) Sequential circuits have memory, whereas combinational circuits do not.

Which digital system design methodology benefits from the use of RTL?

- a) Waterfall model
- b) Agile model
- c) Spiral model
- d) None of the above

Answer: b) Agile model

What is the advantage of using RTL in digital system design?

- a) Faster design process
- b) Higher level of abstraction
- c) Improved design verification and testing
- d) All of the above

Answer: d) All of the above

What is the primary use of RTL design in modern digital system design?

- a) To increase power consumption
- b) To simplify digital system design
- c) To enable efficient use of hardware resources
- d) None of the above

Answer: c) To enable efficient use of hardware resources