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