12 Lecture - CS501

Important Mcqs

1. **Which of the following is NOT an essential component of a CPU design?**
   a) Architecture
   b) Instruction set
   c) Datapath
   d) Compiler
   Answer: d) Compiler

   Which technique is used to improve the performance of a CPU design by executing multiple instructions simultaneously?
   a) Pipelining
   b) Branch prediction
   c) Superscalar execution
   d) Cache memory
   Answer: c) Superscalar execution

   Which component of a CPU design is responsible for fetching instructions from memory?
   a) Datapath
   b) Control unit
   c) Arithmetic logic unit
   d) Register file
   Answer: b) Control unit

   Which of the following is a measure of the speed of a CPU design?
   a) Clock frequency
   b) Instruction set size
   c) Datapath width
   d) Control signal count
   Answer: a) Clock frequency

   Which technique is used to reduce the impact of branch instructions on the performance of a CPU design?
   a) Pipelining
   b) Superscalar execution
   c) Out-of-order execution
   d) Branch prediction
   Answer: d) Branch prediction

   Which component of a CPU design is responsible for performing arithmetic and logical operations?
   a) Datapath
   b) Control unit
   c) Arithmetic logic unit

d) Register file
Answer: c) Arithmetic logic unit

Which type of memory is used to temporarily store data that the CPU needs to access frequently?
a) Cache memory
b) Virtual memory
c) ROM
d) RAM
Answer: a) Cache memory

Which of the following is a measure of the power consumption of a CPU design?
a) Clock frequency
b) Instruction set size
c) Datapath width
d) Power dissipation
Answer: d) Power dissipation

Which technique is used to improve the performance of a CPU design by reordering instructions to reduce pipeline stalls?
a) Pipelining
b) Superscalar execution
c) Out-of-order execution
d) Branch prediction
Answer: c) Out-of-order execution

Which component of a CPU design is responsible for temporarily storing data that the CPU needs to access?
a) Datapath
b) Control unit
c) Arithmetic logic unit
d) Register file
Answer: d) Register file