

# 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**