### 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