

2 Lecture - CS501

Important Mcqs

1. **What is Instruction Set Architecture (ISA)?**

- a) A type of computer memory
- b) A set of instructions for hardware design
- c) A software application
- d) A programming language

Answer: b) A set of instructions for hardware design

Which component of a computer system is responsible for executing instructions?

- a) Hard disk drive
- b) Central Processing Unit (CPU)
- c) Random Access Memory (RAM)
- d) Graphics Processing Unit (GPU)

Answer: b) Central Processing Unit (CPU)

What does the term "instruction encoding" refer to in ISA?

- a) The process of translating machine code into assembly code
- b) The process of translating assembly code into machine code
- c) The process of defining the set of instructions available to a processor
- d) The process of mapping memory locations to register addresses

Answer: b) The process of translating assembly code into machine code

Which of the following is NOT a component of ISA?

- a) Registers
- b) I/O operations
- c) Compiler
- d) Memory organization

Answer: c) Compiler

What is the purpose of a register in ISA?

- a) To store instructions
- b) To store data
- c) To store program counter
- d) To store keyboard input

Answer: b) To store data

Which type of instruction sets can perform arithmetic operations directly on memory?

- a) Stack-based
- b) Register-based
- c) Complex Instruction Set Computing (CISC)
- d) Reduced Instruction Set Computing (RISC)

Answer: c) Complex Instruction Set Computing (CISC)

Which type of instruction sets have simpler instructions and fewer addressing modes?

- a) Stack-based

- b) Register-based
- c) Complex Instruction Set Computing (CISC)
- d) Reduced Instruction Set Computing (RISC)

Answer: d) Reduced Instruction Set Computing (RISC)

Which of the following is NOT a characteristic of a good ISA?

- a) Consistent instruction encoding
- b) Large number of addressing modes
- c) Orthogonality
- d) Simplicity

Answer: b) Large number of addressing modes

Which type of instruction sets rely on a last-in, first-out (LIFO) stack?

- a) Stack-based
- b) Register-based
- c) Complex Instruction Set Computing (CISC)
- d) Reduced Instruction Set Computing (RISC)

Answer: a) Stack-based

Which of the following components of ISA defines the set of instructions that a processor can execute?

- a) Instruction encoding
- b) Memory organization
- c) Registers
- d) I/O operations

Answer: a) Instruction encoding