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