

8 Lecture - CS501

Important Mcqs

1. **What is the Instruction Set Architecture (ISA) of the FALCON-A?**

- a) 64-bit CISC architecture
- b) 16-bit RISC architecture
- c) 32-bit RISC architecture
- d) 8-bit CISC architecture

Answer: c) 32-bit RISC architecture

What is the benefit of a fixed-length instruction format in the FALCON-A ISA?

- a) Increased code density
- b) Faster instruction decoding and execution
- c) Better support for branching and looping
- d) All of the above

Answer: b) Faster instruction decoding and execution

What types of memory access instructions are supported by the FALCON-A ISA?

- a) Load and store only
- b) Load, store, and atomic operations
- c) Load, store, and jump instructions
- d) Branch, jump, and atomic operations

Answer: b) Load, store, and atomic operations

What types of arithmetic and logical instructions are supported by the FALCON-A ISA?

- a) Addition and subtraction only
- b) Addition, subtraction, multiplication, and division
- c) Bitwise operations only
- d) All of the above

Answer: d) All of the above

What is the primary advantage of the FALCON-A ISA for embedded systems?

- a) High performance
- b) Low power consumption
- c) Large code density
- d) Easy programming model

Answer: b) Low power consumption

What is the purpose of the power-saving modes in the FALCON-A ISA?

- a) To increase performance
- b) To reduce power consumption
- c) To improve code density
- d) To simplify programming

Answer: b) To reduce power consumption

How many bits are in the instruction format of the FALCON-A ISA?

- a) 8 bits

- b) 16 bits
- c) 32 bits
- d) 64 bits

Answer: c) 32 bits

What is the difference between RISC and CISC architectures?

- a) RISC has a smaller instruction set than CISC
- b) RISC has a fixed-length instruction format, while CISC has variable-length
- c) RISC supports fewer instructions than CISC
- d) RISC is designed for low-power applications, while CISC is designed for high-performance applications

Answer: b) RISC has a fixed-length instruction format, while CISC has variable-length

What is the benefit of a smaller instruction set in the FALCON-A ISA?

- a) Reduced power consumption
- b) Increased code density
- c) Improved performance
- d) All of the above

Answer: b) Increased code density

What type of devices are the FALCON-A ISA and architecture suitable for?

- a) High-performance servers
- b) Mobile and battery-powered devices
- c) Supercomputers
- d) Desktop computers

Answer: b) Mobile and battery-powered devices