

21 Lecture - CS501

Important Mcqs

1. **What is Instruction Level Parallelism (ILP)?**

- a) The ability to execute multiple threads in parallel
- b) The ability to execute multiple instructions in parallel
- c) The ability to execute multiple processes in parallel
- d) The ability to execute multiple programs in parallel

Solution: b) The ability to execute multiple instructions in parallel

What are the benefits of ILP?

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

Solution: a) Improved performance

Which of the following is a challenge of ILP?

- a) Data dependencies between instructions
- b) Limited availability of resources
- c) Slow clock speed
- d) None of the above

Solution: a) Data dependencies between instructions

Which of the following techniques can be used to overcome the challenges of ILP?

- a) Instruction scheduling
- b) Register renaming
- c) Speculative execution
- d) All of the above

Solution: d) All of the above

What is superscalar processing?

- a) A technique for exploiting ILP
- b) A technique for exploiting TLP
- c) A technique for reducing power consumption
- d) A technique for reducing memory latency

Solution: a) A technique for exploiting ILP

What is dynamic scheduling in the context of ILP?

- a) A technique for predicting branch outcomes
- b) A technique for issuing and executing instructions out of order
- c) A technique for reducing data dependencies between instructions
- d) A technique for reducing memory latency

Solution: b) A technique for issuing and executing instructions out of order

What is speculation in the context of ILP?

- a) A technique for predicting branch outcomes

- b) A technique for issuing and executing instructions out of order
- c) A technique for reducing data dependencies between instructions
- d) A technique for reducing memory latency

Solution: a) A technique for predicting branch outcomes

How does pipelining relate to ILP?

- a) Pipelining is a technique for exploiting TLP
- b) Pipelining is a technique for exploiting ILP
- c) Pipelining is a technique for reducing power consumption
- d) Pipelining is a technique for reducing memory latency

Solution: b) Pipelining is a technique for exploiting ILP

Which of the following is not a technique used to overcome the challenges of ILP?

- a) Instruction scheduling
- b) Register renaming
- c) Static branch prediction
- d) Speculative execution

Solution: c) Static branch prediction

What is the role of the compiler in ILP?

- a) To optimize code to reduce data dependencies between instructions
- b) To optimize code to exploit available parallelism
- c) To generate machine code for the processor
- d) All of the above

Solution: d) All of the above