

Compiler Design

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Question 1
Not yet answered
Marked out of 1.00
Flag question

Dead-code elimination in machine code optimization refers to

- ☐ a. Removal of all labels.
- ☐ b. Removal of values that never get used.
- ☐ c. Removal of a module after its use.
- ☒ d. Removal of function which are not involved.

Clear my choice

Question 2
Not yet answered
Marked out of 1.00
Flag question

A _____ for an expression identifies the common sub expressions

- ☐ a. intermediate code
- ☒ b. DAG
- ☐ c. Syntax tree
- ☐ d. triple

Clear my choice

Question 3
Not yet answered
Marked out of 1.00
Flag question

The graph that shows basic blocks and their successor relationship is called:

- ☐ a. Hamiltonian graph
- ☐ b. Control graph
- ☐ c. DAG
- ☒ d. Flow graph

Clear my choice

Question 4
Not yet answered
Marked out of 1.00
Flag question

$x * 2$ can be replaced by $x << 1$ is an example of

- ☐ a. Code Generator
- ☐ b. Algebraic expression simplification
- ☒ c. Strength reduction
- ☐ d. Accessing machine instructions

Clear my choice

Question 5
Not yet answered
Marked out of 1.00
Flag question

Substitution of values for names (whose values are constants) is done in

- ☐ a. Strength reduction
- ☒ b. Constant folding
- ☐ c. Loop optimization
- ☐ d. Local optimization

Clear my choice

Question 6
Not yet answered
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Flag question

An Expression e is said to be available at a point p if and only if

- ☐ a. Every path contains evaluation of e not followed by any definition of e's operands
- ☐ b. Every path contains evaluation of e not followed by any definition of e's operator
- ☒ c. Every path contains evaluation of e followed by any definition of e's operands
- ☐ d. Every path contains evaluation of e followed by any definition of e's operator

Clear my choice

Question 7
Not yet answered
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Flag question

Consider the grammar rule $E \rightarrow E_1 - E_2$ for arithmetic expressions. The code generated is targeted to a CPU having a single register. The subtraction operation requires the first operand to be in the register. If E_1 and E_2 do not have any common subexpression, in order to get the shortest possible code

- ☐ a. Evaluation of E_1 and E_2 should necessarily be interleaved
- ☐ b. E_1 should be evaluated first
- ☐ c. Order of evaluation of E_1 and E_2 is of no consequence
- ☒ d. E_2 should be evaluated first

Clear my choice

Question 8
Not yet answered
Marked out of

Ud chaining is used to identify

- ☐ a. Undefined variables
- ☐ b. Induction variables

Quiz navigation

MATTA GOWTHAM 121810310063

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1.00

🚩 Flag question

- ☐ b. Induction variables
- ☒ c. Common sub expressions
- ☐ d. None

Clear my choice

Question 9

Not yet answered

Marked out of 1.00

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Code generator uses ____ function to determine the status of available registers and the location of name values.

- ☐ a. cinReg
- ☒ b. getReg
- ☐ c. setReg
- ☐ d. pfReg

Clear my choice

Question 10

Not yet answered

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Which of the following is false?

- ☐ a. Any instruction that is the target of a conditional or unconditional jump is a leader.
- ☐ b. The first three-address instruction in the intermediate code is a leader.
- ☐ c. Any instruction that immediately follows a conditional or unconditional jump is a leader.
- ☒ d. A basic block is a sequence of instructions having one entry point and more than two exit points.

Clear my choice

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