

Honor Pledge

On my honor, I have neither given nor received any unauthorized aid on this quiz.

By typing your first and last name in the space provided below you are electronically signing to indicate that:

- (1) You are the person who is taking this quiz.
- (2) You read and understood the Honor Pledge and you agree to be bound by it.

Write your answer below:

Xinhao Luo

Clear

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Questions 1 and 2 below refer to the Pascal-like program:

```
x : integer := 1

procedure print_routine(i : integer)
  write_integer(i+x)

procedure A(n : integer, P : procedure)
  if n < 100
    B(n+1, P)
  else
    P(n)

procedure B(m : integer, P : procedure)
  x : integer := 0
  A(m, P)

/* begin of main */
A(0, print_routine)
/* end of main */
```

Question 1. (2pts) What gets printed under *dynamic scoping with shallow binding*? Enter just one number on a single line in the first line of the text area below with no whitespace.

Write your answer below:

Press TAB to indent. Press ESC to advance from answer area.

100

Clear

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Question 2. (2pts) What gets printed under *dynamic scoping with deep binding*? Enter just one number on a single line in the first line of the text area below with no whitespace.

Write your answer below:

Press TAB to indent. Press ESC to advance from answer area.

101

Clear

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Question 3. (2pts) What does `f` compute? Note: you may assume that `lis` has at least one element and that all its elements are numbers.
(define (f lis) (foldl (lambda (x y) (if (> x y) x y)) lis (car lis)))

Select one:

- ☒ maximum element in lis
- ☐ minimum element in lis

Clear

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Question 4. (2pts) Consider the lambda term $(\lambda x.x) ((\lambda x.x) (\lambda z.(\lambda x.x) z))$. There are this many reducible expressions in this term:

Select one:

- ☐ 0
- ☐ 1
- ☒ 3
- ☐ 2

Clear

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Question 5. (2pts) Consider the lambda term $x ((\lambda y.y) z)$. The expression is in WHNF:

Select one:

- ☐ false
- ☒ true

Clear

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Extra credit question. (1pt) Consider the problem of figuring out whether two trees (lists in Scheme) have the same *fringe*, that is, the same leaves, in the same order, regardless of structure. E.g., `((1 2) 3)` and `(1 (2 3))` have the same fringe.What is a straight-forward way to solve this problem?
Important note: Answers longer than 3 words will not be considered!

Write your answer below:

Press TAB to indent. Press ESC to advance from answer area.

flattern then compare

Clear

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By clicking "Submit" you are confirming that you have read, understand, and agree to follow the Academic Integrity Policy.

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Note: This version of your assignment will be graded by the instructor/TAs and the score recorded in the gradebook.

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11 / 11	Autograding Total (With Hidden Points)
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Test 5 Question 4 submission	Show Details
Test 6 Question 5 submission	Show Details
Test 7 Question 6 submission	Show Details
2 / 2	HIDDEN: Test 8 Question 1
2 / 2	HIDDEN: Test 9 Question 2
2 / 2	HIDDEN: Test 10 Question 3
2 / 2	HIDDEN: Test 11 Question 4
2 / 2	HIDDEN: Test 12 Question 5
1 / 1	HIDDEN: Test 13 Question 6
Test 14 Check Honor Pledge	Show Details
Test 15 Check Time Limit	Show Details