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Weekly Activity & Quiz Week03 Activity 9/12 Review Test Submission: Week03 Quiz Lisp

Review Test Submission: Week03 Quiz Lisp

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Course	CS 6364.001 - Artificial Intelligence - F15
Test	Week03 Quiz Lisp
Started	9/12/15 10:34 PM
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Due Date	9/12/15 11:59 PM
Status	Completed
Attempt Score	15 out of 15 points
Time Elapsed	3 minutes out of 30 minutes
Results Displayed	All Answers, Submitted Answers, Correct Answers

Question 1

3 out of 3 points

Write the expression X for which you obtain the following evaluation:

```
(equal x (cons (append '((a b)) (list 'b 'a)) (reverse (cons 'a
(list 'b 'c)))))
```

=> T

Selected Answer:  x is ((A B) B A) C B A)

Answers: x is ((A B) B A (C B A))

x is ((A B) (B A) C B A))

 x is ((A B) B A) C B A)

x is (((A B) B A) (C B A))

Question 2

3 out of 3 points

Write a Lisp function DUP? that takes a list and returns true if it contains a duplicate entry (or multiple copies of some entry), and false otherwise. Be sure to handle nested lists properly, e.g.

```
> (dup? '(a b a c d))
```

T

```
>(dup? '(a b (a) c d))
NIL
```

```
>(dup? '((a b) b c (a b)))
T
```

Selected



Answer:

```
(defun dup? (xlist)
  (cond
    ((<= (length xlist) 1) NIL)
    ((member (car xlist) (cdr xlist) :test #'equal) T )
    (T (dup? (cdr xlist)))
  ))
```

Answers:

```
(defun dup? (x)
  (cond
    ((<= (length xlist) 1) NIL)
    ((member (car xlist) (cdr xlist) ) T )
    (T (dup? (cdr xlist)))
  ))
```

```
(defun dup? (xlist)
  (cond
    ((<= (length xlist) 1) NIL)
    ((member (car xlist) (list xlist) ) T )
    (T (dup? (cdr xlist)))
  ))
```

```
(defun dup? (xlist)
  (cond
    ((<= (length xlist) 1) NIL)
    ((member (car xlist) (cdr xlist) ) T )
    (T (dup? (car xlist)))
  ))
```



```
(defun dup? (xlist)
  (cond
    ((<= (length xlist) 1) NIL)
    ((member (car xlist) (cdr xlist) :test #'equal) T )
    (T (dup? (cdr xlist)))
  ))
```

Question 3

3 out of 3 points

Write the expression X for which you obtain the following evaluation:

```
(cons '(d c a) x) => ((D C A) A B (C))
```

Selected Answer:  x is (a b (c))

Answers:  x is (a b (c))

x is ((a b (c)))

x is (a b c)

x is ((d c a) a b (c))

Question 4

3 out of 3 points

Write the expression X for which you obtain the following evaluation:

```
(first x) => (GIRL BOY)
```

and

```
(second x) => MOTHER
```

and

```
(nthcdr 2 x) => ((TEACHERS DRIVERS (COUSINS)))
```

Selected Answer:



x is ((girl boy) mother (teachers drivers (cousins)))

Answers:

x is (girl boy mother (teachers drivers (cousins)))

x is ((girl boy) mother (teachers drivers (cousins)))

x is ((girl boy) (mother) (teachers drivers (cousins)))



x is ((girl boy) mother ((teachers drivers (cousins))))

Question 5

3 out of 3 points


Write the expression X for which you obtain the following evaluation:

```
(my-func x (list x)) => (0 1 2 3 4 5 6 7 7)
```

```
when my-func is defined by:  
(defun my-func (a l)  
  (cond ((= a 0) (cons a l))  
        (T (my-func (- a 1) (cons a l)))))
```

Selected Answer:  x is 7

Answers:

- x is (7)
-  x is 7
- x is (0 1 2 3 4 5 6 7)
- x is 8

Tuesday, October 6, 2015 4:50:48 PM CDT

← OK