## CS 2SC3 and SE 2S03 Fall 2009

# Quiz 6 Answer Key

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23 October 2009

# Question 1

In OCaml, a for loop of the form

```
for i = m to n do
  B
done
```

is always equivalent to the while loop of the form

```
let i = ref m in
while !i <= n do
  B ;
  i := !i + 1
done
```

no matter what `B` is. Is this statement true or false?

A. True.

B. False.

# Question 2

Only a loop that terminates can have an invariant. Is this statement true or false?

A. True.

B. **False.**

# Question 3

Exceptions are a mechanism to

A. Change the normal flow of control in a program.

B. Handle errors.

C. Handle undefined applications of a function.

D. **All of the above.**

# Question 4

In OCaml, which of the following data structures is immutable?

A. A list.

B. A reference.

C. A record with mutable fields.

D. An array.

E. None of the above.

# Question 5

In OCaml, a type of records with one field of type $t$ is essentially equivalent to the type

A. $t$. (if the field is immutable)

B. $t$ `list`.

C. $t$ `array`.

D. $t$ `ref`. (if the field is mutable)

E. $t * t$.