

Signature \_\_\_\_\_

**Quiz 5**  
**CSE 131B**  
**Spring 2006**

Name \_\_\_\_\_

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Student ID \_\_\_\_\_

1. Given the following Oberon code fragment:

**Oberon**

```
FUNCTION foo1( i : REAL; REF j : INTEGER ) : INTEGER;
BEGIN
  (* Some code here you do not have to translate. *)

  RETURN j + 10;
END foo1;

FUNCTION foo2() : INTEGER;
  VAR a : REAL;
  VAR b : INTEGER;

BEGIN
  (* Some code here you do not have to translate. *)

  RETURN foo1( a, b );
END foo2;
```

Write the equivalent translated unoptimized SPARC Assembly language statements emitted by the code generator for foo1() and foo2(). Pass/Return REALs by value in %f registers and pass REALs by reference in %o registers.

foo1()

foo2()



2. Which part of the entire compilation sequence clear through to program execution is responsible for:

a) getting the executable image from disk into memory

b) creating an executable from multiple object files

c) resolving undefined external references with defined global references in other modules

d) ensuring the bss segment is set up and zero-filled

e) translating Oberon source code into assembly target code

f) translating assembly source code into object target code

What question would you most like to see on the Final? (1 pt)