

Name:  
cs30x\_\_\_\_  
Score:

**Quiz 2**  
**CSE 30**  
**Fall 2000**

#1. a) Fill in the blanks for the appropriate logical equivalence for the following compare/branch:

```
mov 48, %12
sub %12, 6, %12

cmp %12, 43
bg label
nop
```

if ( \_\_\_\_\_ is \_\_\_\_\_ ) then  
goto label

b) Is the branch taken in the code snippet above? (Circle the correct answer.)      YES      NO

#2. What is the value (in hex) of %o1 after each set of instructions:

a)      set 0x87654321, %o1  
        sll %o1, 16, %o1

Value in %o1 at this point is 0x\_\_\_\_\_

b)      set 0x87654321, %o1  
        sra %o1, 8, %o1

Value in %o1 at this point is 0x\_\_\_\_\_

c)      set 0x87651234, %o1  
        set 0x12348765, %o2  
        and %o1, %o2, %o1

Value in %o1 at this point is 0x\_\_\_\_\_

d)      set 0x87651234, %o1  
        set 0x12348765, %o2  
        xor %o1, %o2, %o1

Value in %o1 at this point is 0x\_\_\_\_\_

#3. Fill in the SPARC assembly instructions to perform the following statements. **Do not optimize.**

C

SPARC assembly

```
for ( x = 10; x <= 20; ++x ) {  
    statement1;  
    statement2;  
}
```

```
    ____ ____, %10    ! x mapped to %10  
____ ____  
____  
loop:  
    /* statement1 */  
    /* statement2 */  
____ ____  
test:  
____ ____ , ____  
____ ____  
____
```