

Signature \_\_\_\_\_

Name \_\_\_\_\_

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

cs30x \_\_\_\_\_

Score: \_\_\_\_\_

**Quiz 1**  
**CSE 30**  
**Fall 2006**

#1. Show the representation of  $-293_{10}$  in the following representation schemes (assume 16-bit words):

a) sign magnitude

b) one's-complement

c) two's complement

#2. Convert  $362_{10}$  into (assume 16-bit words):

a) binary

b) octal

c) hexadecimal

#3. Fill in the Condition Code bits for the following addition instructions (8-bit two's-complement numbers):

```
  10110110
+ 11001010
-----
```

```
  00101010
+ 01011001
-----
```

```
  N   Z   V   C
-----
|   |   |   |
-----
```

```
  N   Z   V   C
-----
|   |   |   |
-----
```

(over)

**#4. Powers of 2**

$$128K = 2^{\text{---}}$$

$$2^{24} = \text{_____} \quad (\text{in terms of K, M, G, etc.})$$

**#5. List the order of the stages of the compilation process discussed in class:**

A - ld (Linkage Editor)

B - exe/a.out (Executable image)

C - ccomp (C Compiler)

D - as (Assembler)

E - cpp (C Preprocessor)

% cc/gcc file.c --> \_\_\_\_\_ --> \_\_\_\_\_ --> \_\_\_\_\_ --> \_\_\_\_\_ --> \_\_\_\_\_