

Name:
cs30x_____
Score:

Quiz 1
CSE 30
Fall 2002

#1. Show the representation of -393_{10} in the following representation schemes (assume 16-bit words):

- a) sign magnitude
- b) one's-complement
- c) two's complement

#2. Convert 444_{10} into (assume 16-bit words):

- a) binary
- b) octal
- c) hexadecimal

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

```
  10110110
+ 11001101
-----
```

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

```
  10110001
+ 10010111
-----
```

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

(over)

#4. Powers of 2

$$128M = 2^{\text{————}}$$

$$2^{13} = \text{————} \quad (\text{in terms of K, M, G, etc.})$$

#5. The SPARC architecture is an example of a _____ architecture. The only two instructions that access memory are _____ and _____. The SPARC architecture is considered a _____-address architecture because most instructions require this number of operands. In addition, most of the instructions access their operands from _____.