ECE242F, Quiz # 2 — Sample **October 2001**

Name & Student #:

1. What is the value of `s.a[3]` after the final semicolon in this code fragment?

```
typedef struct{
    int a[4];
} array_wrapper_t;

array_wrapper_t s, t;
t.a[3] = 0;
s = t;
t.a[3] = 5;
```

2. What is the complexity, in terms of n, of the following code?

```
int i, j;
for( i=0 ; i<n; i++){
    for( j=0 ; j<10000; j++){
        printf("j*n = %d\n", j*n);
    }
}
```

3. Under what conditions does the Quick Sort algorithm in the on-line notes have worse than $O(n \log n)$ complexity? State what this worst-case complexity is, and briefly (a sentence or two) justify your claim.