

# Midterm Key

CSE220: 2020 Fall Semester

## Question 1

(1) Illegal

Hints: `scanf("%d", &a);`

(2) Illegal

Hints: `p` is uninitialized. The correct way to do this is,

`int variable;`

`int *p = &variable;`

`*p = 7;`

(3) Illegal

Hints: `a = p` is illegal as `a` is the pointer of an array.

(4) Illegal

Hints: The size of `a` is 4, so the last element is `a[3]`.

(5) Illegal

Hints: Attempting to modify a string literal causes undefined behavior.

(6) Legal

## Question 2

```
int find_max(int *a, int n) {  
    int max = *a;  
    for(int i = 1; i < n; i++) {  
        if (*(a+i) > max) {  
            max = *(a+i);  
        }  
    }  
}
```

```
        return max;
    }
```

### Question 3

- (1)  $b = \{5, 3, 1\}$
- (2)  $b = \{10, 5, -5, -10\}$
- (3)  $b = \{10, 8, 6, 4, 2\}$

### Question 4

```
void strlow(char a[], int n) {
    for (int i = 0; i < n; i++) {
        if (a[i] >= 65 & a[i] <= 90) {
            a[i] = a[i] + 32;
        }
    }
}
```

### Question 5

```
int squared_euclidean(int a[], int b[], int n) {
    int d=0;
    for (int i = 0; i < n; i++) {
        d += (a[i] - b[i]) * (a[i] - b[i]);
    }
    return d;
}
```

### Question 6

- (1) 14
- (2) 19
- (3) 11
- (4) 16
- (5) -6
- (6) 1

## Question 7

- (1) 1000000
- (2) 2.000000
- (3) 0.2500000
- (4) 0.062500
- (5) 8.000000
- (6) 0.250000