CIS 2107. Quiz 1b Solutions. Name:

The quiz is out of 20 points.

1. **2 points** What’s printed by the following code?

```java
public class WhatsPrinted2 {
    public static void func(int A[]) {
        int B[] = new int[A.length];
        B[0] = A[0];
        for (int i = 1; i < A.length; i++)
            B[i] = A[i - 1] - 1;
        A = B;
    }
    public static void main(String args[]) {
        int A[] = {10, 20, 30, 40, 50};
        func(A);
        System.out.println(A[3]);
    }
}
```

1. __40__

2. **1 point** What command would we type to delete a folder called stuff?

**Solution:** `rmdir stuff` or `rm -fr stuff`

3. **1 point** What would we type in the unix shell in order to run a program called date, but reading its input from a file called dates.txt instead of the keyboard?

**Solution:** `date < dates.txt`

4. **2 points** We’ve described the storage hierarchy of a computer as a kind of a pyramid. What two things are true the farther down pyramid you go?

**Solution:** The farther down the pyramid, the slower the storage becomes, but the less expensive it is, and we have more of it.

5. **2 points** What’s the primary job of the linker?

**Solution:** Among other things, the linker combines our object files with the objects found in libraries that we’ve used in our programs to form an executable.

6. **12 points** Write a function which is passed two C strings: `s` (for `source`) and `d` (for `destination`), and an integer `nc` (for `num characters`). The function copies at most `nc` characters from `s` into `d`. (Hint: don’t forget to copy the null character)
Solution:

It’s not clear from the wording of the question whether or not `nc` should include the null character. For the purposes of the quiz either interpretation is fine.

One possibility:

```c
void my_strcpy(char d[], char s[], int nc) {
    int i;
    int end=min(nc, strlen(s));
    for (i=0; i<end; i++)
        d[i]=s[i];
    d[i]='$\0$';
}

int min(int a, int b) {
    if (a<b)
        return a;
    return b;
}
```