**CS 1302 – Test 5 Expectations**

You can begin the test 10 minutes before the scheduled class time. When you enter the room, leave all books, phones,smart watches, *etc* at the front of the room.

The topics covered and the corresponding point values on the test are shown below. There are 105 points on the test, so the maximum is 105.

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| **Topic** | **Points** |
| Ch 9 – Maps | 75 |
| Ch 10 – Recursion | 30 |

As usual, you can use any type of abbreviations that are “obvious”. For example, “TM<Str, Emp>” for “TreeMap<String, Employee>”. You will be provided a copy of the JCF classes as shown on page 2 of this document.

**Ch 9 Expectations**

1. Know how to create and use: *HashMap* and *TreeMap* and these *Map* methods: *clear, containsKey, get, keySet, put, remove, size, values*.
2. Write code to implement one-to-many using a *Map*.

**Ch 10 Expectations**

1. Write code to solve simple problems recursively (we considered four categories in the notes)
2. Write code to implement recursive binary search for an array of primitives.
3. Write code to implement recursive binary search for an array of objects that implement *Comparable*.

**Test Makeup**

1. (55 points) – Study: (a) Ch. 9, Sec 5, (b) HW 8
2. (10 points) – Study: Ch. 9, Exercises in Sections 2.1 & 7.1
3. (10 points) – Study: Ch. 9, Exercises in Sections 2.1 & 7.1
4. (10 points) – Study Ch 10: (a) examples in Sections 4.1-4.5, (b) Sec 4.6, Exercises 3-5, (c) examples in Sections 5.2-5.3, (d) examples in Sections 6.1-6.3, (e) Sec 6.4, Exercise 11, (f) examples in Sections 7.1-7.3, (g) Sec 7.4, Exercises 12-13 (h) HW 9
5. (10 points) – Study Ch 10: (a) examples in Sections 4.1-4.5, (b) Sec 4.6, Exercises 3-5, (c) examples in Sections 5.2-5.3, (d) examples in Sections 6.1-6.3, (e) Sec 6.4, Exercise 11, (f) examples in Sections 7.1-7.3, (g) Sec 7.4, Exercises 12-13 (h) HW 9
6. (10 points) – Study: Ch 10, (a) Section 8, (b) the lecture, where we discussed implementing binary search on a class that implemented *Comparable.*

