The topics are subject to slight changes but you can use this template to prepare for the test.

1. (1 point) Community Standard acknowledgment (signature): ________________________________

2. (7 points) **Short answers** with fill in the blanks including TNV, Tree* or Hash*, good/bad hashCode, callback methods.

3. (8 points) **Big Oh time** Compute the running time of code segments as big-Oh in terms of n (tight bound).

4. (8 points) **Be There and Be Square** Similar to the similar question from last semester but a little easier. Row numbers start at 0.

5. (6 points) **Extend and Implement** A question testing concepts of inheritance and/or interface.

6. (10 points) **Common Words** Something similar to an APT you did where you had to process and compare strings.

7. (10 points) **TheBestName** Something similar to TheBestName but different sort criteria.

8. (25 points) **Grades** Complete the class Grades by implementing the following 5 methods (5 points each). You need to know how to implement constructor ("new"), equals, and hashCode. You also need to know how to uses HashSet/TreeSet and HashMap/TreeMap. The 5 parts are independent so you can skip anything you don’t know.

Please clearly mark the question you are continuing on different sheet of paper!