Set 07 Study Questions

1. In what kind of methods does it make sense to use _this_?

2. What does _this_ refer to?

3. If you do not write any constructors, what values will instance variables of the following primitive types be assigned: `int, double, boolean, char` ?

4. If you do not write any constructors, what values will instance variables that are references by assigned?

5. Under what circumstances will Java provide a default constructor for you automatically?

6. What is a copy constructor? Give an example.

7. What is a Stack (in general, not just in Java)?

8. When you push an entry into the stack does it go on the top or bottom?

9. When you pop an entry from the stack, does it come off the top or bottom?

10. Draw a diagram showing both the Stack and the Heap at the moment this program terminates:

```
public static void main(String[] args) {
      int x = 0;
      String y = new String("xyz");
      String z = y;
      String a = new String(y);
       f(x, y, z, a);
}

public static void f(int j, String k, String m,
String r) {
      System.exit(1);
}
```

11. True/False _ in java, when you pass a reference variable as an argument to a method, it is possible for the method to modify the object to which the variable refers.

12. What does API stand for?

13. If someone showed you a Java class, how can you quickly identify which members were part of the API for that class?

14. If a member is declared as _public_, can it be accessed from inside the same class?

15. If a member is declared as _public_, can it be accessed from another class?

16. If a member is declared as _private_, can it be accessed from inside the same class?

17. If a member is declared as _private_, can it be accessed from another class?

18. What is a _setter_?

19. What is a _getter_?

20. Explain why it is important to limit the number of _public_ members.

21. Name and describe the two visibility specifiers that you should know at this point.

22. True/False _ if you change a class in such a way that the API changes, then other classes which depend on this one will have to be re-coded.

23. True/False _ if you change a class without modifying the API, then other classes which depend on this one will have to be re-coded.

24. What package is the Scanner class located in? What is the fully qualified name of the Scanner class?

25. What is accomplished when you type _import java.awt.Color;_ at the top of a file?

26. What is accomplished when you type _import java.awt.*;_ at the top of a file?

27. Which java package is automatically imported in it_s entirety into every Java program you write?

28. What method of the String class can be used to pick out one particular character in the string?

29. What method of the String class can tell you how many characters are in the String?

30. What method of the String class can be used to compare to Strings for alphabetical order?

31. What method of the String class can select a portion of an existing String?

32. Write a method called _count_. The method should be public and static. It takes one parameter, (a reference to a String). The method will return an *int*. The return value should be equal to the number of

X_s that appear in the String. For example, if the parameter
is: _XaXXXbXXc_ then the return value would be 6.