Sample Questions (NB: Actual exam contains 150+)

Section 1: Language Features Up To Java 1.4

NB Questions On Issues Not In The 1.5 Exam Are in Green

Question One

What will happen when the following code is compiled and run?

```
public class Demo {
        public static void main(String[] args) {
                String str = null;
                if(str instanceof Object) {
                        System.out.println("Result 1");
                } else {
                        System.out.println("Result 2");
                }
        }
}
```

(A) ○ The string 'Result 1' will be printed
(B) ○ The string 'Result 2' will be printed
(C) ○ A NullPointerException will be thrown

Question Two

Which of the following exceptions are compiler checked?

(A) ☐ InterruptedException
(B) ☐ NullPointerException
(C) ☐ ArrayIndexOutOfBoundsException
(D) ☐ CloneNotSupportedException

Question Three

A marker interface

(A) ☐ Contains only constant values
(B) ☐ Contains only method declarations
(C) ☐ Is always empty
(D) ☐ Indicates some special property of the class

Question Four

Which of the following are valid declarations?

(A) ☐ boolean b = (boolean)7;
(B) ☐ float f = 32.7;
(C) ☐ String[] sarray = {"abc","def","ghi"};
(D) ☐ int[] iarray = new int[5]{1,2,3,4,5};
(E) ☐ float[][][] farray = new float[4][][];
(F) ☐ char c = "\u0000";

Question Five

What will the following expression return?

```
("abc" == "abc") ? true : false;
```

(A) ○ true
(B) ○ false

Question Six

What exception will be thrown when we create an instance of Outer?

```
class Outer {
        Outer() throws Exception {
                i = new Inner();
        }
        class Inner {
                Inner() throws Exception {
                        synchronized(Outer.this) {
                                wait();
                        }
                }
        }
        private Inner i;
}
```

(A) ○ InterruptedException
(B) ○ NoSuchFieldException
(C) ○ NullPointerException
(D) ○ IllegalMonitorStateException

Question Seven

Which of the alternatives below correctly describes what will happen when this code is compiled?

```
class Base {
        Base(String s) {
                super();
        }
}
class Derived extends Base {
```

```
                        Derived(String s) {
                                super(s);
                        }
                        Derived() {}
                }
```

(A) ○ The code will compile without problems
(B) ○ The code will not compile because Base does not have a base class
(C) ○ The code will not compile because the no-args constructor of Derived is empty
(D) ○ The code will not compile because Base does not have a no-args constructor

Question Eight

Which of the following declarations are valid for top level classes?

(A) ☐ public final class MyClass
(B) ☐ private abstract class MyClass
(C) ☐ synchronized class MyClass
(D) ☐ public class MyClass extends String,Thread
(E) ☐ public class MyClass implements Serializable, Cloneable

Question Nine

Given that the following class is run with:

                                java MyClass fred wilma, barney

What output is produced by the following code?

```
            class MyClass {
                    public static void main(String[] args) {
                            System.out.println(args[0]);
                    }
            }
```

(A) ○ MyClass
(B) ○ fred wilma
(C) ○ fred wilma,
(D) ○ fred
(E) ○ barney

Question Ten

Fields marked as 'volatile' are

(A) ○ Not saved when an object is serialised
(B) ○ Only ever to be accessed by a single thread

(C) ○ Likely to be accessed by multiple threads without synchronization

Question Eleven

The Java Virtual Machine exits when

(A) ○ The main method returns
(B) ○ The last thread completes
(C) ○ The last non-daemon thread completes

Question Twelve

Is the code below a valid implementation of the hashcode method?

```
public int hashCode() {
        return 17;
}
```

(A) ○ Yes
(B) ○ No

Question Thirteen

Are duplicate values allowed in Sets?

(A) ○ Yes
(B) ○ No

Question Fourteen

Which statement about Garbage Collection in Java is correct?

(A) ○ Garbage collection should be optimized for throughput
(B) ○ The '"System.gc()" method triggers garbage collection
(C) ○ Garbage collection begins when the VM starts
(D) ○ The Garbage Collector never needs to interrupt your application
(E) ○ An object which cannot be reached by live references will be garbage collected
(F) ○ None of the above are correct

Question Fifteen

Given that class Derived inherits from class Base what will occur when the code below is executed?

```
Base ref1 = new Base();
Base ref2 = new Derived();

boolean b1 = (ref1.getClass() == ref2.getClass());
boolean b2 = (ref2 instanceof Base);
```

```
        if(b1 && b2) {
                System.out.println("result 1");
        } else {
                System.out.println("result 2");
        }
```

(A) ○ The string "result 1" will be printed because both b1 and b2 are ture
(B) ○ The string "result 2" will be printed because b1 is false
(C) ○ The string "result 2" will be printed because b2 is false
(D) ○ The string "result 2" will be printed because both b1 and b2 are false

Question Sixteen

If you needed a data structure where items were frequently being added and removed at many different positions you would choose:

(A) ○ A Vector
(B) ○ An ArrayList
(C) ○ A LinkedList

Question Seventeen

A class contains both static and instance methods, all of which are synchronized. Which of the following is correct?

(A) ○ The class is thread safe because every thread must acquire a lock before it can call a method
(B) ○ The class will not compile because static methods cannot be synchronized
(C) ○ The class is not thread safe because two different locks are being acquired
(D) ○ The class is not thread safe because every method acquires its own lock
(E) ○ Deadlock will occur if an instance method calls a static method

Question Eighteen

Public classes may be imported from another package by

(A) ☐ Writing an import statement for each class
(B) ☐ Writing a single import statement using the wildcard
(C) ☐ Referring to each class by its fully qualified name

Question Nineteen

Initializer blocks are

(A) ☐ Only for use in anonymous inner classes
(B) ☐ An alternative to writing a no-args constructor

(C) ☐ Run in the order in which they are declared
(D) ☐ Used for both static and instance initialization

Question Twenty

Which of the statements below correctly describe overloaded methods?

(A) ☐ They have the same name
(B) ☐ They may have the same return type
(C) ☐ They may have different return types
(D) ☐ They may differ only in their return type
(E) ☐ They may differ only in the order of their parameters