

JAVA Programming Language Homework X: Total Review

ID:

Name:

1. Given the following Java code:

```
11.    public interface Status {  
12.    /* insert code here */ int MY_VALUE = 10;  
13.    }
```

Which three are valid on line 12? (Choose three)

- A. final
- B. static
- C. native
- D. public
- E. private
- F. abstract
- G. protected

ANS:

2. Given the following Java code:

```
1.    public class ItemTest {  
2.        private final int id;  
3.        public ItemTest( int id ) { this.id = id; }  
4.        public void updateId( int newId ) { id = newId; }  
5.  
6.        public static void main(String[] args) {  
7.            ItemTest fa = new ItemTest(42);  
8.            fa.updateId(69);  
9.            System.out.println(fa.id);  
10.        }  
11.    }
```

What is the result?

- A. Compilation fails
- B. An exception is thrown at runtime
- C. The attribute id in the Item object remains unchanged
- D. The attribute id in the Item object is modified to the new value
- E. A new Item object is created with the preferred value in the id attribute

ANS:

3. A programmer needs to create a logging method that can accept an arbitrary number of arguments. For example, it may be called in these ways:

```
logIt("log message1");  
logIt("log message2", "log message3");  
logIt("log message4", "log message5", "log message6");
```

Which declaration satisfies this requirement?

- A. `public void logIt(String * msgs)`
- B. `public void logIt(String [] msgs)`
- C. `public void logIt(String... msgs)`
- D. `public void logIt(String msg1, String msg2, String msg3)`

ANS:

4. Given the following Java code:

```
1. class Converter {  
2.     public static void main ( String [ ] args ) {  
3.         Integer i = args[0] ;  
4.         int j = 12 ;  
5.         Sysem.out.println ( "It is " + (j= =i) + " that j= = i . " ) ;  
6.     }  
7. }
```

What is the result when the programmer attempts to compile the code and run it with the command `Java Converter 12` ?

- A. It is true that `j==i`
- B. It is false that `j==i`
- C. An exception is thrown at runtime
- D. Compilation fails because of an error in line 3

ANS:

5. Given the following Java code:

```
1.     public class Test {
2.         static public void main( String[] args ) {
3.             for ( int x = 1; x < args.length; x++ ) {
4.                 System.out.print( args [ x ] + " " );
5.             }
6.         }
7.     }
```

If the command line invocation `"java Test a b c"`, what is the result?

- A. a b
- B. b c
- C. a b c
- D. Compilation fails
- E. An exception is thrown at runtime

ANS:

6. A unix user named Bob wants to replace his chess program with a new one, but he is not sure where the old one is installed. Bob is currently able to run a Java chess program starting from his home directly/`home/bob` using the command :

```
java - classpath /test:/home/bob/downloads/*.jar games.Chess
```

Bob's CLASSPATH is set(at login time) to :

```
/usr /lib:/home/bob/classes:/opt/java/lib:/opt/java/lib/*.jar
```

What is a possible location for the Chess.class file?

- A. /test/Chess.class
- B. /home/bob/Chess.class
- C. /test/games/Chess.class
- D. /usr/lib/games/Chess.class
- E. /home/bob/games/Chess.class
- F. Inside jarfile /opt/java/lib/Games.jar(With a correct manifest)
- G. Inside harfile /home/bob/downloads/Games.jar(with a correct manifest)

ANS:

7. Given the following Java code:

```
1. enum Example { ONE, TWO, THREE }
```

What is the result?

- A. The expressions (ONE ==ONE) and ONE.equals(ONE) are both guaranteed to be true.
- B. The expressions (ONE < TWO) is guaranteed to be true and ONE.compareTo(TWO) is guaranteed to be less than one.
- C. The Example value cannot be used in a raw java.util.HashMap.;instead, the programmer must use a java.util.EnumMap.
- D. The Example value can be used in a java.util.SortedSet, but the set will NOT be sorted because enumerated Type do not implement java.lang.Comparable.

ANS:

8. foo and bar public references available to many other threads, foo refers to a Thread and bar is an Objcet. The thread foo is currently executing bar.wait(). Form another thread, what provides the way to ensure that foo will stop executing wait()?(Choose two)

- A. foo.notify();
- B. bar.notify();
- C. foo.notifyAll();
- D. Thread.notify();
- E. bar.notifyAll();

ANS:

9. Given the following Java code:

```
1. class MyThread extends Thread {
2.     public void run() {
3.         m1();
4.     }
5.     MyThread(String threadName){
6.         super(threadName);
7.     }
8.     public synchronized void m1() {
9.         System.out.println(Thread.currentThread().getName());
10.    }
11.    public static void main(String[] args) {
12.        MyThread a = new MyThread( "A" );
13.        MyThread b = new MyThread( "B" );
14.        a.setPriority( Thread.MIN_PRIORITY);
15.        b.setPriority( Thread.MAX_PRIORITY);
16.        a.start();
17.        Thread.yield();
18.        b.start();
19.    }
20. }
```

Which of the following statements regarding the following code is true?

- A. Thread B will get more CPU time than Thread A
- B. Thread will start running before Thread A
- C. If line 17 is removed, Thread B will get more CPU time than Thread A

- D. If line 17 is removed, Thread B will start running before Thread A
E. None of the above

ANS:

10. Given the following Java code:

```
1.     public class Threads1 {
2.         int x = 0;
3.         public class Runner implements Runnable {
4.             public void run () {
5.                 int current = 0;
6.                 for (int i = 0; i < 4; i++) {
7.                     current = x;
8.                     System.out.print(current + ", ");
9.                     x = current + 2;
10.                }
11.            }
12.        }
13.
14.        public static void main ( String[] args ) {
15.            new Threads1().go();
16.        }
17.
18.        public void go() {
19.            Runnable r1 =new Runner ();
20.            new Thread(r1).start ();
21.            new Thread(r1).start ();
22.        }
23.    }
```

Which two are possible results? (choose two)

- A. 0,2,4,4,6,8,10,6,
B. 0,2,4,6,8,10,2,4,
C. 0,2,4,6,8,10,12,14
D. 0,0,2,2,4,4,6,6,8,8,10,10,12,12,14,14,
E. 0,2,4,6,8,10,12,14,0,2,4,6,8,10,12,14,