Quiz 6 (take-home, hard copy (typed or handwritten) due before the exam on Monday, Oct 20th)

Note: These questions are taken from a famous Java book and you may find the solutions on internet. Please try to answer these questions by yourself to be benefited the most.

1. Given:
   ```java
   class Clidders {
       public final void flipper() { System.out.println("Clidder"); }
   }
   public class Clidlets extends Clidders {
       public void flipper() {
           System.out.println("Flip a Clidlet");
           super.flipper();
       }
       public static void main(String[] args) {
           new Clidlets().flipper();
       }
   }
   ```
   What is the output?
   
   A. Flip a Clidlet  
   B. Flip a Clidder  
   C. Flip a Clidder  
   D. Flip a Clidlet  
   E. Compilation fails.

2. Given:
   ```java
   public abstract interface Frobnicate { public void twiddle(String s); }  
   ```
   Which is a correct class? (Choose all that apply.)
   ```java
   A. public abstract class Frob implements Frobnicate {  
       public abstract void twiddle(String s) { }  
   }
   B. public abstract class Frob implements Frobnicate { }  
   C. public class Frob extends Frobnicate {  
       public void twiddle(Integer i) { }  
   }
   D. public class Frob implements Frobnicate {  
       public void twiddle(Integer i) { }  
   }
   E. public class Frob implements Frobnicate {  
       public void twiddle(String s) { }  
       public void twiddle(Integer s) { }  
   }
   ```
3. Given:
   ```java
   class Top {
       public Top(String s) { System.out.print("B"); }
   }
   public class Bottom2 extends Top {
       public Bottom2(String s) { System.out.print("D"); }
       public static void main(String [] args) {
           new Bottom2("C");
           System.out.println(" ");
       }
   }
   ```
   What is the output?
   A. BD
   B. DB
   C. BDC
   D. DBC
   E. Compilation fails.

4. Given:
   ```java
   class Clidder {
       private final void flipper() { System.out.println("Clidder"); }
   }
   public class Clidlet extends Clidder {
       public final void flipper() { System.out.println("Clidlet"); }
       public static void main(String [] args) {
           new Clidlet().flipper();
       }
   }
   ```
   What is the output?
   A. Clidlet
   B. Clidder
   C. Clidder
      Clidlet
   D. Clidlet
      Clidder
   E. Compilation fails.
5. Using the fragments below, complete the following code so it compiles. Note, you may not have to fill all of the slots.

Code:
```java
class AgedP {
    public AgedP(int x) {
        super;
    }
}
```

```java
public class Kinder extends AgedP {
    public Kinder(int x) {
        super();
    }
}
```

Fragments: Use the following fragments zero or more times:

<table>
<thead>
<tr>
<th>AgedP</th>
<th>super</th>
<th>this</th>
</tr>
</thead>
<tbody>
<tr>
<td>()</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>;</td>
</tr>
</tbody>
</table>

6. Given:
```java
class Plant {
    String getName() { return "plant"; }
    Plant getType() { return this; }
}
```

```java
class Flower extends Plant {
    // insert code here
}
```

```java
class Tulip extends Flower {
}
```

Which statement(s), inserted at line 6, will compile? (Choose all that apply.)

A. Flower getType() { return this; }
B. String getType() { return "this"; }
C. Plant getType() { return this; }
D. Tulip getType() { return new Tulip(); }

7. Given:
```java
class Zing {
    protected Hmpf h;
}
```

```java
class Woop extends Zing {
}
```

```java
class Hmpf {
}
```

Which is true? (Choose all that apply.)

A. Woop is a type of Hmpf and has a reference to a Zing.
B. Zing is a type of Woop and has a reference to a Hmpf.
C. Hmpf is a type of Woop and Woop is a type of Zing.
D. Woop has a reference to a Hmpf and Woop is a type of a Zing.
E. Zing has a reference to a Hmpf and Zing is a type of Woop.
8. Given:
   1. class Programmer {
   2.         Programmer debug() { return this; }
   3.   }
   4. class SCJP extends Programmer {
   5.         // insert code here
   6.   }

Which, inserted at line 5, will compile? (Choose all that apply.)
A. Programmer debug() { return this; }
B. SCJP debug() { return this; }
C. Object debug() { return this; }
D. int debug() { return 1; }
E. int debug(int x) { return 1; }
F. Object debug(int x) { return this; }

9. Given:
   class Uber {
       static int y = 2;
       Uber(int x) { this(); y = y * 2; }
       Uber() { y++; }
   }
   class Minor extends Uber {
       Minor() { super(y); y = y + 3; }
       public static void main(String [] args) {
           new Minor();
           System.out.println(y);
       }
   }

What is the result?
A. 6
B. 7
C. 8
D. 9
E. Compilation fails.

10. Given the following,
    1. class X { void do1() { } }
    2. class Y extends X { void do2() { } }
    3.
    4. class Chrome {
    5.         public static void main(String [] args) {
    6.             X x1 = new X();
    7.             X x2 = new Y();
    8.             Y y1 = new Y();
    9.             // insert code here
    10.         }
    11. }

Which, inserted at line 9, will compile? (Choose all that apply.)
A. x2.do2();
B. (Y)x2.do2();
C. ((Y)x2).do2();
D. None of the above statements will compile.