Given the class definitions:

```
class Plant {
    public String brew(String msg) {
        return msg;
    }
}
class Coffee extends Plant {
    public String brew(String msg) {
        return msg.replace('a', 'e');
    }
}
class Arabica extends Coffee {
    public String brew(String msg) {
        return msg.substring(2);
    }
}
```

And the code fragment of the main() method,

```
List<Plant> cup = new ArrayList<Plant>();
cup.add(new Plant());
cup.add(new Coffee());
cup.add(new Arabica());
for (Plant item : cup) {
    System.out.println(item.brew("Java"));
}
```

```
A. Java B. Java C. Java D. Compilation fails Java Jeve Java ve
```

Given:

```
public final class WordPress {
    public void login() {}
}
public class Post {
    public final void write(int words, int pix) {}
    public void uploadMedia() {}
}
public class FrontPage {
    private Post p = new Post();
    private final String subj = "OCA & OCP Prep Tools";
    public void compose() { p.write(1200, 2); }
}
public class StickyPost extends Post {
    public void write(int numberOfWords, int numberOfPix) {}
    public void publish() {}
}
```

Which statement is true?

- **A.** A compilation error occurs in **WordPress**.
- **B.** A compilation error occurs in **Post**.
- **C.** A compilation error occurs in **FrontPage**.
- **D.** A compilation error occurs in **StickyPost**.
- **E.** All classes compile successfully.

Given the code fragment:

```
class Hollywood{
    public static void main(String[] args) {
        String title = "MUMMY STRIKES BACK!";
        System.out.println("Title = " + title.replace("M", "P"));
    }
}
```

- **A.** Title = MUMMY STRIKES BACK!
- **B.** Title = PUPPY STRIKES BACK!
- **C.** A compile time error is produced.
- **D.** A runtime error is produced.
- **E.** Title =
- **F.** Title = PUMMY STRIKES BACK!

Given:

```
class WhiteStarLiner implements Sinkable {
    public void sink() { }
}

abstract class Shipwreck extends WhiteStarLiner { }

class Britannic extends WhiteStarLiner {
    protected void sink(int numberOfMines) { }
}

class Titanic extends WhiteStarLiner implements Sinkable {
    public void hitIceberg() { }
}

interface Sinkable {
    public abstract void sink();
}
```

Which statement is true?

- **A.** Shipwreck does not compile.
- **B.** Britannic does not compile.
- **C.** Titanic does not compile.
- **D.** Sinkable does not compile.
- **E.** All classes compile successfully.

Given:

Bread.java:

```
public class Bread {
    private String eat(String piece) { return "Consume " + piece; }
}
```

Pizza.java:

```
public class Pizza extends Bread {
   public String eat (String slice) { return "Enjoy " + slice; }
}
```

Test.java:

```
public class Test {
    public static void main (String[] args) {
        Bread b1 = new Bread();
        b1.eat("bread.");
        Bread b2 = new Pizza();
        b2.eat("Quattro Stagioni.");
    }
}
```

- **A.** Consume bread. Enjoy Quattro Stagioni.
- **B.** Consume bread. Consume Quattro Stagioni.
- **C.** The Pizza.java file fails to compile.
- **D.** The Test.java file fails to compile.

Given the code:

```
class AccessKey{
    String user;
    String pass;
}
```

and

Which code fragment must be inserted at line 14 to enable the code to compile?

- **A.** AccessKey x; return x;
- **B.** return AccessKey;
- **C.** return new AccessKey();
- **D.** return 0;

Given:

```
public class B implements A {
    public String toString() {
        return "B ";
    }
    public static void main(String[] args) {
        C \text{ myC} = \text{new } C();
        B myB = myC;
        A myA = myB;
        System.out.print(myB);
        System.out.print((C) myB);
        System.out.print(myA);
    }
}
class C extends B {
    public String toString() {
        return "C ";
    }
}
interface A {
    public String toString();
}
```

- **A.** B B B
- **B.** B C B
- **C.** C C B
- D. CCC
- **E.** The code throws a ClassCastException

Given:

```
class A {
    public void runA() {
        System.out.println("ArunA");
    }
}
class B extends A {
    public void runA() {
        System.out.println("BrunA");
    public void runB() {
        System.out.println("BrunB");
    }
}
public class Test {
    public static void main(String[] args) {
        A = new B();
        B b = (B) a;
        b.runB();
        a.runA();
}
```

- A. BrunB
 - BrunA
- **B.** BrunB ArunA
- **C.** Compilation fails
- $\textbf{D.} \quad \text{A ClassCastException is thrown at runtime} \\$

Given the code fragment:

```
int b = 3;
if ( !(b > 3) ) {
    System.out.println("square ");
}{
    System.out.println("circle ");
}
System.out.println("...");
```

- A. square
- **B.** circle
- **C.** square circle
- **D.** Compilation fails

Given the code fragments:

```
interface Surveillable {}
class Target implements Surveillable {}
class PrimeSuspect extends Target {}
class Mission {
   public static void main(String[] args) {
       List objectives = new ArrayList();
        Surveillable s1 = new Target();
        Surveillable s2 = new PrimeSuspect();
                                              // line n1
        Target t1 = new PrimeSuspect();
       objectives.add(s1);
        objectives.add(s2);
        objectives.add(t1);
                                                     // line n2
        for (Object item : objectives) {
            System.out.println(item.getClass().getName());
        }
    }
```

- **A.** Target
 - PrimeSuspect
 - PrimeSuspect
- **B.** Surveillable
 - Surveillable
 - **Target**
- **C.** Compilation fails at line n1
- **D.** Compilation fails at line n2

Given the code fragment:

```
public class Test {
    public static void main(String[] args) {
        int[] array = {1,2,3};
        for ( missing_code ) {
        }
    }
}
```

Which three are valid replacements for *missing_code* so that the program will compile and run?

```
A. int i : array
B. int i = 0; i < 1; i++</li>
C. ;;
D. ; i < 1; i++</li>
E. ; i < 1;</li>
```

Given the definition of the following class:

```
class LongDistanceVoIP {
    double tariff;
    LongDistanceVoIP(double tariff) {
        this.tariff = tariff;
    }
    public void makeCall(int time) {
        int minutes = time;
                                                                // line n1
        class CallingChicago {
            double charge = 0;
            public void calcCost() {
                                                                // line n2
                charge = minutes * tariff;
                System.out.println("It'll set me back for " + charge + " cents.");
            }
        }
                                                                // line n3
        new CallingChicago().calcCost();
    }
```

and this code fragment:

```
LongDistanceVoIP ld = new LongDistanceVoIP(1.1);
ld.makeCall(10);
```

- **A.** It'll set me back for 11.0 cents.
- **B.** A compilation error occurs at line n1.
- **C.** A compilation error occurs at line n2.
- **D.** A compilation error occurs at line n3.

Given:

```
class Puzzler {
    int tally = 0;
   public void doStuff(int val) {
        if (val % 2 == 0) {
            break;
        } else {
            for (int i = 0; i < val; i++) {
                tally += i;
            }
        }
    }
   public static void main(String[] args) {
        Puzzler obj = new Puzzler();
        System.out.println("Left " + obj.tally);
        obj.doStuff(4);
        System.out.println("Middle " + obj.tally);
        obj.doStuff(5);
        System.out.println("Right " + obj.tally);
    }
```

What is the result?

A. Left 0 B. Left 0 C. Left 0 D. Right 6 E. Compilation fails Middle 0 Middle 0 Middle 3 Right 5 Right 10

Given:

```
public class Test{
    public static void main(String[] args) {
        int x = 10;
        int y = 20;
        int z = y += x/5;
        System.out.print(x + " : " + y + " : " + z);
    }
}
```

What is the result?

A. 10:22:20B. 10:22:22C. 10:22:6D. 10:30:6

Given:

```
public class LetterFromJane {
    public static void main(String[] args) {
        StringBuilder letter = new StringBuilder("Dear John");
        int indx = 0;
        try {
            for (indx = 0; indx < 10; indx++) {
                switch (letter.charAt(indx)) {
                    case 'a':
                    case 'e':
                    case 'o':
                         String uc = Character.toString(letter.charAt(indx))
                                             .toUpperCase();
                         letter.replace(indx, indx + 1, uc);
                 }
            }
        } catch (Exception e) {
            System.out.println("Goodbye.");
        }
        System.out.println(letter);
}
```

- A. DEAr JOhn
- **B.** Dear John
- **C.** Goodbye. DEAr JOhn
- **D.** Goodbye.

Given:

ExamTaker.java:

```
public class ExamTaker {
    private String fName;
    private String lName;
    private static int count;

    public ExamTaker(String first, String last) {
        fName = first;
        lName = last;
        ++count;
    }

    static {
        count = 0;
    }

    public static int getCount() {
        return count;
    }
}
```

Test.java:

```
public class Test {
   public static void main(String[] args) {
        ExamTaker et1 = new ExamTaker("Alice", "Adams");
        ExamTaker et2 = new ExamTaker("Bob", "Barry");
        ExamTaker et3 = new ExamTaker("Chuck", "Collins");
        ExamTaker et4 = new ExamTaker("Doug", "Dowson");
        et4 = null;
        et3 = et2;
        System.out.println(ExamTaker.getCount());
}
```

What is the result?

A. 0

B. 2

C. 3

D. 4

E. 5