



# Java Standard Edition 6 Programmer Certified Professional Upgrade Exam

Version: 6.0

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### **Question No:1**

Given:

- 1. public class Base {
- 2. public static final String FOO = "foo";
- 3. public static void main(String[] args) {
- 4. Base b = new Base();
- 5. Sub s = new Sub();
- 6. System.out.print(Base.FOO);
- 7. System.out.print(Sub.FOO);
- 8. System.out.print(b.FOO);
- 9. System.out.print(s.FOO);
- 10. System.out.print(((Base)s).FOO);
- 11.}}
- 12. class Sub extends Base {public static final String FOO="bar";}

What is the result?

- A. foofoofoofoo
- B. foobarfoobarbar
- C. foobarfoofoofoo
- **D.** foobarfoobarfoo
- E. barbarbarbarbar
- F. foofoofoobarbar
- G. foofoofoobarfoo

**Answer: D** 

### **Question No: 2**

A company has a business application that provides its users with many different reports:

receivables reports, payables reports, revenue projects, and so on. The company has just purchased some new, state-of-the-art, wireless printers, and a programmer has been assigned the task of enhancing all of the reports to use not only the company's old printers, but the new wireless printers as well. When the programmer starts looking into the application, the programmer discovers that because of the design of the application, it is necessary to make changes to each report to support the new printers. Which two design concepts most likely explain this situation? (Choose two.)

- A. Inheritance
- B. Low cohesion
- **C.** Tight coupling
- **D.** High cohesion
- E. Loose coupling
- F. Object immutability

Answer: B,C

### **Question No:3**

Given:

- 5. class Building { }
- 6. public class Barn extends Building {
- 7. public static void main(String[] args) {
- 8. Building build1 = new Building();
- 9. Barn barn1 = new Barn();
- 10. Barn barn2 = (Barn) build1;
- 11. Object obj1 = (Object) build1;
- 12. String str1 = (String) build1;
- 13. Building build2 = (Building) barn1;
- 14. }
- 15. }

Which is true?

- A. If line 10 is removed, the compilation succeeds.
- **B.** If line 11 is removed, the compilation succeeds.
- **C.** If line 12 is removed, the compilation succeeds.
- **D.** If line 13 is removed, the compilation succeeds.
- **E.** More than one line must be removed for compilation to succeed.

### Answer: C

### **Question No:4**

Given:

```
10. abstract class A {
```

- 11. abstract void a1();
- 12. void a2() { }

13. }

- 14. class B extends A {
- 15. void a1() { }

16. void a2() { }

17. }

```
18. class C extends B { void c1() { } }
```

and:

A x = new B(); C y = new C(); A z = new C();

What are four valid examples of polymorphic method calls? (Choose four.)

**A.** x.a2(); **B.** z.a2(); **C.** z.c1(); **D.** z.a1(); **E.** y.c1(); **F.** x.a1();

Answer: A,B,D,F

#### **Question No: 5**

A company that makes Computer Assisted Design (CAD) software has, within its application, some utility classes that are used to perform 3D rendering tasks. The company's chief scientist has just improved the performance of one of the utility classes' key rendering algorithms, and has assigned a programmer to replace the old algorithm with the new algorithm. When the programmer begins researching the utility classes, she is happy to discover that the algorithm to be replaced exists in only one class. The programmer reviews that class's API, and replaces the old algorithm with the new algorithm, being careful that her changes adhere strictly to the class's API. Once testing has begun, the programmer discovers that other classes that use the class she changed are no longer working properly. What design flaw is most likely the cause of these new bugs?

- A. Inheritance
- B. Tight coupling
- C. Low cohesion
- **D.** High cohesion
- E. Loose coupling
- F. Object immutability

**Answer: B** 

### **Question No: 6**

Given:

11. class Mammal { }

12.

13. class Raccoon extends Mammal {

```
14. Mammal m = new Mammal();
```

15. }

16.

17. class BabyRaccoon extends Mammal { }

Which four statements are true? (Choose four.)

- A. Raccoon is-a Mammal.
- B. Raccoon has-a Mammal.
- **C.** BabyRaccoon is-a Mammal.
- D. BabyRaccoon is-a Raccoon.
- E. BabyRaccoon has-a Mammal.
- F. BabyRaccoon is-a BabyRaccoon.

### Answer: A,B,C,F

### **Question No:7**

Given:

- 2. public class Hi {
- 3. void m1() { }
- 4. protected void() m2 { }
- 5. } 6. class Lois extends Hi {
- 7. // insert code here

8. }

Which four code fragments, inserted independently at line 7, will compile? (Choose four.)

A. public void m1() { }
B. protected void m1() { }
C. private void m1() { }
D. void m2() { }
E. public void m2() { }

F. protected void m2() { }
G. private void m2() { }

Answer: A,B,E,F

#### **Question No:8**

Given that:

Gadget has-a Sprocket and

Gadget has-a Spring and

Gadget is-a Widget and

Widget has-a Sprocket

Which two code fragments represent these relationships? (Choose two.)

```
A. class Widget { Sprocket s; }
class Gadget extends Widget { Spring s; }
B. class Widget { }
class Gadget extends Widget { Spring s1; Sprocket s2; }
C. class Widget { Sprocket s1; Spring s2; }
class Gadget extends Widget { }
D. class Gadget { Spring s; }
class Gadget { Spring s; }
class Gadget { }
E. class Gadget { }
E. class Gadget { Spring s1; Sprocket s1; Spring s2; }
F. class Gadget { Spring s1; Sprocket s1; Spring s2; }
F. class Gadget { Spring s1; Sprocket s2; }
class Widget extends Gadget{ Sprocket s2; }
```

#### Answer: A,C

#### **Question No: 9**

Given the following six method names:

addListener

addMouseListener

setMouseListener

deleteMouseListener

removeMouseListener

registerMouseListener

How many of these method names follow JavaBean Listener naming rules?

A. 1
B. 2
C. 3
D. 4
E. 5

**Answer: B** 

### **Question No: 10**

Click the Exhibit button.

Which three statements are true? (Choose three.)

```
10. interface Foo {
11.
      int bar();
12. }
13.
14. public class Beta {
15.
16.
      class A implements Foo {
17.
        public int bar() { return 1; }
      3
18.
19.
20.
      public int fubar( Foo foo ) { return foo.bar();
21.
22.
      public void testFoo() {
23.
24.
        class A implements Foo {
25.
          public int bar() { return 2; }
26.
        3
27.
28.
        System.out.println( fubar( new A() ) );
29.
      }
30.
31.
      public static void main( String[] argv ) {
32.
        new Beta().testFoo();
33.
      }
34. }
```

A. Compilation fails.

**B.** The code compiles and the output is 2.

C. If lines 16, 17 and 18 were removed, compilation would fail.

D. If lines 24, 25 and 26 were removed, compilation would fail.

E. If lines 16, 17 and 18 were removed, the code would compile and the output would be 2.

F. If lines 24, 25 and 26 were removed, the code would compile and the output would be 1.

### Answer: B,E,F

### **Question No: 11**

Given:

- 1. class Alligator {
- 2. public static void main(String[] args) {
- 3. int  $[]x[] = \{\{1,2\}, \{3,4,5\}, \{6,7,8,9\}\};$
- 4. int [][]y = x;

- 5. System.out.println(y[2][1]);
- 6. }
- 7.}

What is the result?

A. 2
B. 3
C. 4
D. 6
E. 7
F. Compilation fails.

Answer: E

### **Question No : 12**

Given:

- 11. public static void main(String[] args) {
- 12. Object obj = new int[] { 1, 2, 3 };
- 13. int[] someArray = (int[])obj;
- 14. for (int i : someArray) System.out.print(i + " ");

15. }

What is the result?

- **A.** 1 2 3
- **B.** Compilation fails because of an error in line 12.
- **C.** Compilation fails because of an error in line 13.
- **D.** Compilation fails because of an error in line 14.
- E. A ClassCastException is thrown at runtime.

**Answer: A** 

### **Question No: 13**

Given:

11. public interface A { public void m1(); }

12.

- 13. class B implements A { }
- 14. class C implements A { public void m1() { } }
- 15. class D implements A { public void m1(int x) { } }
- 16. abstract class E implements A { }
- 17. abstract class F implements A { public void m1() { } }
- 18. abstract class G implements A { public void m1(int x) { } }

What is the result?

- A. Compilation succeeds.
- **B.** Exactly one class does NOT compile.
- C. Exactly two classes do NOT compile.
- D. Exactly four classes do NOT compile.
- E. Exactly three classes do NOT compile.

Answer: C

### **Question No: 14**

Given:

- 21. abstract class C1 {
- 22. public C1() { System.out.print(1); }

23. }

24. class C2 extends C1 {

```
25. public C2() { System.out.print(2); }
```

26. }

- 27. class C3 extends C2 {
- 28. public C3() { System.out.println(3); }

29. }

- 30. public class Ctest {
- 31. public static void main(String[] a) { new C3(); }

32. }

What is the result?

### **A.** 3

- **B.** 23
- **C.** 32
- **D.** 123
- **E.** 321
- F. Compilation fails.
- **G.** An exception is thrown at runtime.

### **Answer: D**

# **Question No: 15**

Given:

- 1. public class A {
- 2. public void doit() {

3. }

- 4. public String doit() {
- 5. return "a";

6. }

7. public double doit(int x) {

- 8. return 1.0;
- 9. }

10. }

What is the result?

- **A.** An exception is thrown at runtime.
- **B.** Compilation fails because of an error in line 7.
- **C.** Compilation fails because of an error in line 4.
- D. Compilation succeeds and no runtime errors with class A occur.

### Answer: C

# **Question No: 16**

Given:

- 1. public class Plant {
- 2. private String name;
- 3. public Plant(String name) { this.name = name; }
- 4. public String getName() { return name; }

5. }

- 1. public class Tree extends Plant {
- 2. public void growFruit() { }
- 3. public void dropLeaves() { }

4. }

Which statement is true?

- A. The code will compile without changes.
- **B.** The code will compile if public Tree() { Plant(); } is added to the Tree class.

**C.** The code will compile if public Plant() { Tree(); } is added to the Plant class.

D. The code will compile if public Plant() { this("fern"); } is added to the Plant class.

E. The code will compile if public Plant() { Plant("fern"); } is added to the Plant class.

**Answer: D** 

### **Question No: 17**

Given:

- 11. String test = "Test A. Test B. Test C.";
- 12. // insert code here
- 13. String[] result = test.split(regex);

Which regular expression, inserted at line 12, correctly splits test into "Test A", "Test B", and "Test C"?

A. String regex = "";
B. String regex = " ";
C. String regex = ".\*";
D. String regex = "\\s";
E. String regex = "\\.\s\*";
F. String regex = "\\w[ \.] +";

Answer: E

# **Question No: 18**

Given that the current directory is empty, and that the user has read and write privileges to the current directory, and the following:

- 1. import java.io.\*;
- 2. public class Maker {
- 3. public static void main(String[] args) {

4. File dir = new File("dir");

- 5. File f = new File(dir, "f");
- 6. }

7.}

Which statement is true?

- A. Compilation fails.
- **B.** Nothing is added to the file system.
- **C.** Only a new file is created on the file system.
- D. Only a new directory is created on the file system.
- E. Both a new file and a new directory are created on the file system.

#### **Answer: B**

#### **Question No: 19**

Given:

- 22. StringBuilder sb1 = new StringBuilder("123");
- 23. String s1 = "123";
- 24. // insert code here
- 25. System.out.println(sb1 + " " + s1);

Which code fragment, inserted at line 24, outputs "123abc 123abc"?

- A. sb1.append("abc"); s1.append("abc");
  B. sb1.append("abc"); s1.concat("abc");
  C. sb1.concat("abc"); s1.append("abc");
  D. sb1.concat("abc"); s1.concat("abc");
  E. sb1.append("abc"); s1 = s1.concat("abc");
  F. sb1.concat("abc"); s1 = s1.concat("abc");
  G. sb1.append("abc"); s1 = s1 + s1.concat("abc");
- **H.** sb1.concat("abc"); s1 = s1 + s1.concat("abc");

#### Answer: E

#### **Question No : 20**

Given:

- 5. import java.util.Date;
- 6. import java.text.DateFormat;
- 21. DateFormat df
- 22. Date date = new Date();
- 23. // insert code here
- 24. String s = df.format(date);

Which code fragment, inserted at line 23, allows the code to compile?

A. df = new DateFormat();
B. df = Date.getFormat();
C. df = date.getFormat();
D. df = DateFormat.getFormat();
E. df = DateFormat.getInstance();

#### Answer: E

#### **Question No: 21**

Given:

11. public class Yikes {

12.

13. public static void go(Long n) {System.out.print("Long ");}

14. public static void go(Short n) {System.out.print("Short ");}

15. public static void go(int n) {System.out.print("int ");}

16. public static void main(String [] args) {

17. short y = 6;

18. long z = 7;

19. go(y);

20. go(z); 21. }

22. }

What is the result?

- A. int Long
- B. Short Long
- C. Compilation fails.
- **D.** An exception is thrown at runtime.

# **Answer: A**

# Question No : 22

Given that c is a reference to a valid java.io.Console object, which two code fragments read a line of text from the console? (Choose two.)

**A.** String s = c.readLine();

- **B.** char[] c = c.readLine();
- **C.** String s = c.readConsole();
- **D.** char[] c = c.readConsole();
- **E.** String s = c.readLine("%s", "name ");
- F. char[] c = c.readLine("%s", "name ");

### Answer: A,E

### Question No : 23

A developer is creating a class Book, that needs to access class Paper. The Paper class is deployed in a JAR named myLib.jar. Which three, taken independently, will allow the developer to use the Paper class while compiling the Book class? (Choose three.)

A. The JAR file is located at \$JAVA\_HOME/jre/classes/myLib.jar.

**B.** The JAR file is located at \$JAVA\_HOME/jre/lib/ext/myLib.jar..

**C.** The JAR file is located at /foo/myLib.jar and a classpath environment variable is set that includes /foo/myLib.jar/Paper.class.

**D.** The JAR file is located at /foo/myLib.jar and a classpath environment variable is set that includes /foo/myLib.jar.

**E.** The JAR file is located at /foo/myLib.jar and the Book class is compiled using javac -cp /foo/myLib.jar/Paper Book.java.

**F.** The JAR file is located at /foo/myLib.jar and the Book class is compiled using javac -d /foo/myLib.jar Book.java

**G.** The JAR file is located at /foo/myLib.jar and the Book class is compiled using javac - classpath /foo/myLib.jar Book.java

### Answer: B,D,G

### **Question No: 24**

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 directory /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 jarfile /home/bob/downloads/Games.jar (with a correct manifest)

#### Answer: C

#### **Question No : 25**

Given:

- 15. public class Yippee {
- 16. public static void main(String [] args) {
- 17. for(int x = 1; x < args.length; x++) {
- 18. System.out.print(args[x] + " ");

19. }

- 20. }
- 21. }

and two separate command line invocations:

java Yippee

java Yippee 1 2 3 4

What is the result?

A. No output is produced.
1 2 3
B. No output is produced.
2 3 4
C. No output is produced.
1 2 3 4
D. An exception is thrown at runtime.
1 2 3
E. An exception is thrown at runtime.
2 3 4
F. An exception is thrown at runtime.
1 2 3 4

#### **Answer: B**

### **Question No : 26**

Given:

- 11. public class Commander {
- 12. public static void main(String[] args) {
- 13. String myProp = /\* insert code here \*/
- 14. System.out.println(myProp);

15. }

16. }

and the command line:

java -Dprop.custom=gobstopper Commander

Which two, placed on line 13, will produce the output gobstopper? (Choose two.)

- A. System.load("prop.custom");
- **B.** System.getenv("prop.custom");
- C. System.property("prop.custom");
- **D.** System.getProperty("prop.custom");
- E. System.getProperties().getProperty("prop.custom");

### Answer: D,E

### **Question No: 27**

Given:

1. public class Donkey {

- 2. public static void main(String[] args) {
- 3. boolean assertsOn = false;
- 4. assert (assertsOn) : assertsOn = true;
- 5. if(assertsOn) {
- 6. System.out.println("assert is on");

7.}

- 8. }
- 9. }

If class Donkey is invoked twice, the first time without assertions enabled, and the second time with assertions enabled, what are the results?

A. no output
B. no output
assert is on
C. assert is on
D. no output
An AssertionError is thrown.
E. assert is on
An AssertionError is thrown.

# Answer: D

### **Question No: 28**

Given:

- 10. interface Foo {}
- 11. class Alpha implements Foo {}
- 12. class Beta extends Alpha {}
- 13. class Delta extends Beta {
- 14. public static void main( String[] args ) {

15. Beta x = new Beta();

16. // insert code here

17. }

18. }

Which code, inserted at line 16, will cause a java.lang.ClassCastException?

A. Alpha a = x; B. Foo f = (Delta)x; C. Foo f = (Alpha)x; D. Beta b = (Beta)(Alpha)x;

### **Answer: B**

# **Question No: 29**

Given:

- 11. public void testIfA() {
- 12. if (testIfB("True")) {
- 13. System.out.println("True");
- 14. } else {
- 15. System.out.println("Not true");
- 16. }
- 17. }
- 18. public Boolean testIfB(String str) {
- 19. return Boolean.valueOf(str);

20. }

What is the result when method testIfA is invoked?

A. True

- B. Not true
- **C.** An exception is thrown at runtime.
- **D.** Compilation fails because of an error at line 12.
- **E.** Compilation fails because of an error at line 19.

### Answer: A

### Question No: 30

Which can appropriately be thrown by a programmer using Java SE technology to create a desktop application?

- A. ClassCastException
- B. NullPointerException
- C. NoClassDefFoundError
- **D.** NumberFormatException
- E. ArrayIndexOutOfBoundsException

### **Answer: D**

### **Question No: 31**

Given:

- 1. public class Breaker2 {
- 2. static String o = "";
- 3. public static void main(String[] args) {

4. z:

- 5. for(int x = 2; x < 7; x++) {
- 6. if(x==3) continue;
- 7. if(x==5) break z;
- 8. o = o + x;