101. Given:

12. import java.util.\*;

13. public class Explorer1 {

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

15. TreeSet<Integer> s = new TreeSet<Integer>();

16. TreeSet<Integer> subs = new TreeSet<Integer>();

17. for(int i = 606; i < 613; i++)

18. if(i%2 == 0) s.add(i);

19. subs = (TreeSet)s.subSet(608, true, 611, true);

20. s.add(609);

21. System.out.println(s + " " + subs);

22. }

23. }

What is the result?

A. Compilation fails.

B. An exception is thrown at runtime.

C. [608, 609, 610, 612] [608, 610]

D. [608, 609, 610, 612] [608, 609, 610]

E. [606, 608, 609, 610, 612] [608, 610]

F. [606, 608, 609, 610, 612] [608, 609, 610]

102. Given:

23. Object [] myObjects = {

24. new Integer(12),

25. new String("foo"),

26. new Integer(5),

27. new Boolean(true)

28. };

29. Arrays.sort(myObjects);

30. for(int i=0; i<myObjects.length; i++) {

31. System.out.print(myObjects[i].toString());

32. System.out.print(" ");

33. }

What is the result?

A. Compilation fails due to an error in line 23.

B. Compilation fails due to an error in line 29.

C. A ClassCastException occurs in line 29.

D. A ClassCastException occurs in line 31.

E. The value of all four objects prints in natural order.

103. 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.

104. Given:

11. Float pi = new Float(3.14f);

12. if (pi > 3) {

13. System.out.print("pi is bigger than 3. ");

14. }

15. else {

16. System.out.print("pi is not bigger than 3. ");

17. }

18. finally {

19. System.out.println("Have a nice day.");

20. }

What is the result?

A. Compilation fails.

B. pi is bigger than 3.

C. An exception occurs at runtime.

D. pi is bigger than 3. Have a nice day.

E. pi is not bigger than 3. Have a nice day.

105. Given:

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

12. try {

13. args = null;

14. args[0] = "test";

15. System.out.println(args[0]);

16. } catch (Exception ex) {

17. System.out.println("Exception");

18. } catch (NullPointerException npe) {

19. System.out.println("NullPointerException");

20. }

21. }

What is the result?

A. test

B. Exception

C. Compilation fails.

D. NullPointerException

106. Given:

22. public void go() {

23. String o = "";

24. z:

25. for(int x = 0; x < 3; x++) {

26. for(int y = 0; y < 2; y++) {

27. if(x==1) break;

28. if(x==2 && y==1) break z;

29. o = o + x + y;

30. }

31. }

32. System.out.println(o);

33. }

What is the result when the go() method is invoked?

A. 00

B. 0001

C. 000120

D. 00012021

E. Compilation fails.

F. An exception is thrown at runtime.

107. Given:

12. public class Test {

13. public enum Dogs {collie, harrier};

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

15. Dogs myDog = Dogs.collie;

16. switch (myDog) {

17. case collie:

18. System.out.print("collie ");

19. case harrier:

20. System.out.print("harrier ");

21. }

22. }

23. }

What is the result?

A. collie

B. harrier

C. Compilation fails.

D. collie harrier

E. An exception is thrown at runtime.

108. Click the Exhibit button. Given:

<br/>

<img src='./scjp/108.png'></img><br/>

31. public void method() {

32. A a = new A();

33. a.method1();

34. }

Which statement is true if a TestException is thrown on line 3 of class B?

A. Line 33 must be called within a try block.

B. The exception thrown by method1 in class A is not required to be caught.

C. The method declared on line 31 must be declared to throw a RuntimeException.

D. On line 5 of class A, the call to method2 of class B does not need to be placed in a try/catch

block.

109. Given:

1. public class Boxer1{

2. Integer i;

3. int x;

4. public Boxer1(int y) {

5. x = i+y;

6. System.out.println(x);

7. }

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

9. new Boxer1(new Integer(4));

10. }

11. }

What is the result?

A. The value "4" is printed at the command line.

B. Compilation fails because of an error in line 5.

C. Compilation fails because of an error in line 9.

D. A NullPointerException occurs at runtime.

E. A NumberFormatException occurs at runtime.

F. An IllegalStateException occurs at runtime.

110. Given:

11. static class A {

12. void process() throws Exception { throw new Exception(); }

13. }

14. static class B extends A {

15. void process() { System.out.println("B"); }

16. }

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

18. new B().process();

19. }

What is the result?

A. B

B. The code runs with no output.

C. Compilation fails because of an error in line 12.

D. Compilation fails because of an error in line 15.

E. Compilation fails because of an error in line 18.

111. Given:

1. public class Venus {

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

3. int [] x = {1,2,3};

4. int y[] = {4,5,6};

5. new Venus().go(x,y);

6. }

7. void go(int[]... z) {

8. for(int[] a : z)

9. System.out.print(a[0]);

10. }

11. }

What is the result?

A. 1

B. 12

C. 14

D. 123

E. Compilation fails.

F. An exception is thrown at runtime.

112. Given:

10. public class Foo {

11. static int[] a;

12. static { a[0]=2; }

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

14. }

Which exception or error will be thrown when a programmer attempts to run this code?

A. java.lang.StackOverflowError

B. java.lang.IllegalStateException

C. java.lang.ExceptionInInitializerError

D. java.lang.ArrayIndexOutOfBoundsException

113. Given:

11. class X { public void foo() { System.out.print("X "); } }

12.

13. public class SubB extends X {

14. public void foo() throws RuntimeException {

15. super.foo();

16. if (true) throw new RuntimeException();

17. System.out.print("B ");

18. }

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

20. new SubB().foo();

21. }

22. }

What is the result?

A. X, followed by an Exception.

B. No output, and an Exception is thrown.

C. Compilation fails due to an error on line 14.

D. Compilation fails due to an error on line 16.

E. Compilation fails due to an error on line 17.

F. X, followed by an Exception, followed by B.

120. Which Man class properly represents the relationship "Man has a best friend who is a Dog"?

A. class Man extends Dog { }

B. class Man implements Dog { }

C. class Man { private BestFriend dog; }

D. class Man { private Dog bestFriend; }

E. class Man { private Dog<bestFriend>; }

F. class Man { private BestFriend<dog>; }

121. 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

122. 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() { }

123. Given:

10: public class Hello {

11: String title;

12: int value;

13: public Hello() {

14: title += " World";

15: }

16: public Hello(int value) {

17: this.value = value;

18: title = "Hello";

19: Hello();

20: }

21: }

and:

30: Hello c = new Hello(5);

31: System.out.println(c.title);

What is the result?

A. Hello

B. Hello World

C. Compilation fails.

D. Hello World 5

E. The code runs with no output.

F. An exception is thrown at runtime.

124. Given:

3. class Employee {

4. String name; double baseSalary;

5. Employee(String name, double baseSalary) {

6. this.name = name;

7. this.baseSalary = baseSalary;

8. }

9. }

10. public class SalesPerson extends Employee {

11. double commission;

12. public SalesPerson(String name, double baseSalary, double commission) {

13. // insert code here

14. }

15. }

Which two code fragments, inserted independently at line 13, will compile? (Choose two.)

A. super(name, baseSalary);

B. this.commission = commission;

C. super();

this.commission = commission;

D. this.commission = commission;

super();

E. super(name, baseSalary);

this.commission = commission;

F. this.commission = commission;

super(name, baseSalary);

G. super(name, baseSalary, commission);

125. A team of programmers is reviewing a proposed API for a new utility class. After some discussion,

they realize that they can reduce the number of methods in the API without losing any

functionality. If they implement the new design, which two OO principles will they be promoting?

A. Looser coupling

B. Tighter coupling

C. Lower cohesion

D. Higher cohesion

E. Weaker encapsulation

F. Stronger encapsulation

126. Given:

1. class ClassA {

2. public int numberOfInstances;

3. protected ClassA(int numberOfInstances) {

4. this.numberOfInstances = numberOfInstances;

5. }

6. }

7. public class ExtendedA extends ClassA {

8. private ExtendedA(int numberOfInstances) {

9. super(numberOfInstances);

10. }

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

12. ExtendedA ext = new ExtendedA(420);

13. System.out.print(ext.numberOfInstances);

14. }

15. }

Which statement is true?

A. 420 is the output.

B. An exception is thrown at runtime.

C. All constructors must be declared public.

D. Constructors CANNOT use the private modifier.

E. Constructors CANNOT use the protected modifier.

127. 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.

128. Given:

1. public class TestOne {

2. public static void main (String[] args) throws Exception {

3. Thread.sleep(3000);

4. System.out.println("sleep");

5. }

6. }

What is the result?

A. Compilation fails.

B. An exception is thrown at runtime.

C. The code executes normally and prints "sleep".

D. The code executes normally, but nothing is printed.

129. Given

1. public class Threads4 {

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

3. new Threads4().go();

4. }

5. public void go() {

6. Runnable r = new Runnable() {

7. public void run() {

8. System.out.print("foo");

9. }

10. };

11. Thread t = new Thread(r);

12. t.start();

13. t.start();

14. }

15. }

What is the result?

A. Compilation fails.

B. An exception is thrown at runtime.

C. The code executes normally and prints "foo".

D. The code executes normally, but nothing is printed.

130. Which two statements are true? (Choose two.)

A. It is possible for more than two threads to deadlock at once.

B. The JVM implementation guarantees that multiple threads cannot enter into a deadlocked state.

C. Deadlocked threads release once their sleep() method's sleep duration has expired.

D. Deadlocking can occur only when the wait(), notify(), and notifyAll() methods are used

incorrectly.

E. It is possible for a single-threaded application to deadlock if synchronized blocks are used

incorrectly.

F. If a piece of code is capable of deadlocking, you cannot eliminate the possibility of deadlocking

by inserting invocations of Thread.yield().

131. Given:

1. public class Threads3 implements Runnable {

2. public void run() {

3. System.out.print("running");

4. }

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

6. Thread t = new Thread(new Threads3());

7. t.run();

8. t.run();

9. t.start();

10. }

11. }

What is the result?

A. Compilation fails.

B. An exception is thrown at runtime.

C. The code executes and prints "running".

D. The code executes and prints "runningrunning".

E. The code executes and prints "runningrunningrunning".

132. Given classes defined in two different files:

1. package util;

2. public class BitUtils {

3. public static void process(byte[] b) { /\* more code here \*/ }

4. }

1. package app;

2. public class SomeApp {

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

4. byte[] bytes = new byte[256];

5. // insert code here

6. }

7. }

What is required at line 5 in class SomeApp to use the process method of BitUtils?

A. process(bytes);

B. BitUtils.process(bytes);

C. util.BitUtils.process(bytes);

D. SomeApp cannot use methods in BitUtils.

E. import util.BitUtils.\*; process(bytes);

133. 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

134. Given:

11. class Snoochy {

12. Boochy booch;

13. public Snoochy() { booch = new Boochy(this); }

14. }

15.

16. class Boochy {

17. Snoochy snooch;

18. public Boochy(Snoochy s) { snooch = s; }

19. } And the statements:

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

22. Snoochy snoog = new Snoochy();

23. snoog = null;

24. // more code here

25. }

Which statement is true about the objects referenced by snoog, snooch, and booch immediately

after line 23 executes?

A. None of these objects are eligible for garbage collection.

B. Only the object referenced by booch is eligible for garbage collection.

C. Only the object referenced by snoog is eligible for garbage collection.

D. Only the object referenced by snooch is eligible for garbage collection.

E. The objects referenced by snooch and booch are eligible for garbage collection.

135. Given:

3. public class Batman {

4. int squares = 81;

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

6. new Batman().go();

7. }

8. void go() {

9. incr(++squares);

10. System.out.println(squares);

11. }

12. void incr(int squares) { squares += 10; }

13. }

What is the result?

A. 81

B. 82

C. 91

D. 92

E. Compilation fails.

F. An exception is thrown at runtime.

136. Given classes defined in two different files:

1. package util;

2. public class BitUtils {

3. private static void process(byte[] b) {}

4. }

1. package app;

2. public class SomeApp {

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

4. byte[] bytes = new byte[256];

5. // insert code here

6. }

7. }

What is required at line 5 in class SomeApp to use the process method of BitUtils?

A. process(bytes);

B. BitUtils.process(bytes);

C. app.BitUtils.process(bytes);

D. util.BitUtils.process(bytes);

E. import util.BitUtils.\*; process(bytes);

F. SomeApp cannot use the process method in BitUtils.

137. 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)

138. Click the Exhibit button.

What is the output of the program shown in the exhibit?

<br/>

<img src='./scjp/138.png'></img><br/>

A. 300-100-100-100-100

B. 300-300-100-100-100

C. 300-300-300-100-100

D. 300-300-300-300-100

139. Given the following directory structure: bigProject |--source | |--Utils.java | |--classes |-- And the

following command line invocation: javac -d classes source/Utils.java Assume the current directory

is bigProject, what is the result?

A. If the compile is successful, Utils.class is added to the source directory.

B. The compiler returns an invalid flag error.

C. If the compile is successful, Utils.class is added to the classes directory.

D. If the compile is successful, Utils.class is added to the bigProject directory.

140. Given:

3. interface Fish { }

4. class Perch implements Fish { }

5. class Walleye extends Perch { }

6. class Bluegill { }

7. public class Fisherman {

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

9. Fish f = new Walleye();

10. Walleye w = new Walleye();

11. Bluegill b = new Bluegill();

12. if(f instanceof Perch) System.out.print("f-p ");

13. if(w instanceof Fish) System.out.print("w-f ");

14. if(b instanceof Fish) System.out.print("b-f ");

15. }

16. }

What is the result?

A. w-f

B. f-p w-f

C. w-f b-f

D. f-p w-f b-f

E. Compilation fails.

F. An exception is thrown at runtime.

141. 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;

9. }

10. System.out.println(o);

11. }

12. }

What is the result?

A. 2

B. 24

C. 234

D. 246

E. 2346

F. Compilation fails.

142. 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.

143. 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.

144. Given:

31. // some code here

32. try {

33. // some code here

34. } catch (SomeException se) {

35. // some code here

36. } finally {

37. // some code here

38. }

Under which three circumstances will the code on line 37 be executed? (Choose three.)

A. The instance gets garbage collected.

B. The code on line 33 throws an exception.

C. The code on line 35 throws an exception.

D. The code on line 31 throws an exception.

E. The code on line 33 executes successfully.

145. Given:

22. public void go() {

23. String o = "";

24. z:

25. for(int x = 0; x < 3; x++) {

26. for(int y = 0; y < 2; y++) {

27. if(x==1) break;

28. if(x==2 && y==1) break z;

29. o = o + x + y;

30. }

31. }

32. System.out.println(o);

33. }

What is the result when the go() method is invoked?

A. 00

B. 0001

C. 000120

D. 00012021

E. Compilation fails.

F. An exception is thrown at runtime.

146. Given:

11. static void test() {

12. try {

13. String x = null;

14. System.out.print(x.toString() + " ");

15. }

16. finally { System.out.print("finally "); }

17. }

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

19. try { test(); }

20. catch (Exception ex) { System.out.print("exception "); }

21. }

What is the result?

A. null

B. finally

C. null finally

D. Compilation fails.

E. finally exception

147. 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;

148. Given:

33. try {

34. // some code here

35. } catch (NullPointerException e1) {

36. System.out.print("a");

37. } catch (Exception e2) {

38. System.out.print("b");

39. } finally {

40. System.out.print("c");

41. }

If some sort of exception is thrown at line 34, which output is possible?

A. a

B. b

C. c

D. ac

E. abc

149. Given:

11. public class Test {

12. public enum Dogs {collie, harrier, shepherd};

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

14. Dogs myDog = Dogs.shepherd;

15. switch (myDog) {

16. case collie:

17. System.out.print("collie ");

18. case default:

19. System.out.print("retriever ");

20. case harrier:

21. System.out.print("harrier ");

22. }

23. }

24. }

What is the result?

A. harrier

B. shepherd

C. retriever

D. Compilation fails.

E. retriever harrier

F. An exception is thrown at runtime.

150. Click the Exhibit button. Given: ClassA a = new ClassA(); a.methodA(); What is the result?

<br/>

<img src='./scjp/150.png'></img><br/>

A. Compilation fails.

B. ClassC is displayed.

C. The code runs with no output.

D. An exception is thrown at runtime.