1. What is the output of following program:-

```
public class Airplane
{
static int start = 2;
final int end;
public Airplane(int x)
{
x = 4;
end = x;
}
public void fly(int distance) {
System.out.print(end-start+" ");
System.out.print(distance);
}
public static void main(String... start) {
new Airplane(10).fly(5);
}
}
```

A.2 5

B.8 5

C.6 5

2.What is the output of the following code snippet?

```
String tree = "pine";
int count = 0;
if (tree.equals("pine")) {
int height = 55;
count = count + 1;
```

```
}
System.out.print(height + count);
```

A. 1

B. 55

C. 56

D. It does not compile.

3.Given that a Math class exists in both the java.lang and pocket.complex packages, what is the result of compiling the following class?

```
1: package pocket;
2: import pocket.complex.*;
3: import java.util.*;
4: public class Calculator {
5:    public static void main(String[] args) {
6:          System.out.print(Math.floor(5));
7:    }
8: }
```

A. The code does not compile because of line 2.

B. The code does not compile because of line 3.

C. The code does not compile because of line 6.

D. The code compiles without issue.

4.What is the output of the following?

```
public static void main(String... args) {
String chair, table = "metal";
chair = chair + table;
System.out.println(chair);
}
```

A.metal

B.metalmetal

C.nullmetal

D.The code does not compile.

5.How many of the following methods compile?

```
public String convert(int value) {
return value.toString();
}
public String convert(Integer value) {
return value.toString();
}
public String convert(Object value) {
return value.toString();
}
```

A. None

B. One

C. Two

D. Three

6.What is the result of running this code?

```
public class Values {
integer a = Integer.valueOf("1");
public static void main(String[] nums) {
integer a = Integer.valueOf("2");
integer b = Integer.valueOf("3");
System.out.println(a + b);
}
```

```
}
```

A. 4

B. 5

C. The code does not compile.

D. The code compiles but throws an exception at runtime.

7.Which of the following is a wrapper class?

A. int

B. Int

C. Integer

D. Object

8.How many instance initializers are in this code?

```
1: public class Bowling {
2:    { System.out.println(); }
3:    public Bowling () {
4:    System.out.println();
5:    }
6:    static { System.out.println(); }
7:    { System.out.println(); }
8: }
```

A. None

B. One

C. Two

D. Three

9.What is the first line in the following code to not compile?

```
public static void main(String[] args) {
int Integer = 0; // k1
Integer int = 0; // k2
Integer ++;      // k3
int++;     // k4
}
```

A. k1

B. k2

C. k3

D. k4

10.Which of the following can fill in the blanks to make this code compile?

```
__________d = new ___________(1_000_000_.00);
```

A. double, double

B. double, Double

C. Double, double

D. None of the above

11.Given the following code, fill in the blank to have the code print bounce.

```
public class TennisBall {
public TennisBall() {
System.out.println("bounce");
}
public static void main(String[] slam) {
_____________________________________
}
```

```
}
```

A.TennisBall;

B.TennisBall();

C.new TennisBall;

D.new TennisBall();

12.Which of the following can fill in the blanks to make this code compile?

```
--------------d = new ------------(1_000_000.00);
```

A. double, double

B. double, Double

C. Double, double

D. None of the above

13.What does the following output?

```
1: public class InitOrder {
2:    public String first = "instance";
3:    public InitOrder() {
4:    first = "constructor";
5:    }
6:    { first = "block"; }
7:    public void print() {
8:    System.out.println(first);
9:    }
10:   public static void main(String... args) {
11:   new InitOrder().print();
12:   }
```

```
13: }
```

A. block

B. constructor

C. instance

D. The code does not compile.

14.Which is the most common way to fill in the blank to implement this method?

```
public class Penguin {
private double beakLength;
public static void setBeakLength(Penguin p, int b)
{
-------------------------------------
}
}
```

A. p.beakLength = b;

B. p['beakLength'] = b;

C. p[beakLength] = b;

D. None of the above

15.Fill in the blanks to indicate whether a primitive or wrapper class can be assigned without the compiler using the autoboxing feature.

```
----------first = Integer.parseInt("5");
----------second = Integer.valueOf("5");
```

A. int, int

B. int, Integer

C. Integer, int

D. Integer, Integer

16.What is the output of the following?

```
package beach;
public class Sand {
public Sand() {
System.out.print("a");
}
public void Sand() {
System.out.print("b");
}
public void run() {
new Sand(); Sand();
}
public static void main(String... args) {
new Sand().run();
}
}
```

A.a

B.ab

C.aab

D.None of the above

17.What is the output of the following code snippet?

```
int x = 10, y = 5;
boolean w = true, z = false;
x = w ? y++ : y--;
w = !z;
System.out.print((x+y)+" "+(w ? 5 : 10));
```

A.The code does not compile.

B.10 10

C.11 5

D.12 5

18.What is the value of 12 + 6 * 3 % (1 + 1) in Java?

A.0

B.12

C.14

D.None of the above

19.Which of the following is not a possible result of executing the following application?

```
public class ConditionallyLogical {
public static void main(String... data) {
if(data.length>=1 && (data[0].equals("sound") || data[0].equals
("logic")) && data.length<2)
{
System.out.print(data[0]);
}
}
}
```

A.Nothing is printed.

B.sound is printed.

C.The application throws an exception at runtime.

D.logic is printed.

20.What is the output of the following application?

```
public class CountEntries {
public static int getResult(int threshold) {
return threshold > 5 ? 1 : 0;
}

public static final void main(String[] days)
{
System.out.print(getResult(5)+getResult(1)+getResult(0)+getResult(2)+"
");
}
}
```

A.0

B.1

C.0000

D.1000

21.What is the output of the following application?

```
package yoyo;
public class TestGame {
public String runTest(boolean spinner, boolean roller) {
if(spinner = roller) return "up";
else return roller ? "down" : "middle";
}
public static final void main(String pieces[]) {
final TestGame tester = new TestGame();
System.out.println(tester.runTest(false,true));
}
}
```

A. up

B. middle

C. down

D. The code does not compile.

22.Fill in the blanks: The----------access modifier allows access to everything the----------access modifier does and more.

A. package-private, protected

B. protected, public

C. protected, package-private

D. private, package-private

23.What is the command to call one constructor from another constructor in the same class?

A.super()

B.this()

C.that()

D.construct()

24.What is the output of the following application?

```
package stocks;
public class Bond {
private static int price = 5;
public boolean sell() {
if(price<10) {
price++;
return true;
}
else if(price>=10) {
```

```
return false;
}
}
public static void main(String[] cash) {
new Bond().sell();
new Bond().sell();
new Bond().sell();
System.out.print(price);
}
}
```

A.5

B.6

C.8

D.The code does not compile.

25.What is true about the following program?

```
package figures;
public class Dolls {
public void nested() { nested(2,true); } // g1
public int nested(int level, boolean height) { return nested(level); }
public int nested(int level) { return level+1; }; // g2
public static void main(String[] outOfTheBox) {
System.out.print(new Dolls().nested());
}
}
```

A.It compiles successfully and prints 3 at runtime.

B.It does not compile because of line g1.

C.It does not compile because of line g2.

D.It does not compile for some other reason.

26.Fill in the blank: Java uses----------to send data into a method.

A.pass-by-null

B.pass-by-value

C.both pass-by-value and pass-by-reference

D.pass-by-reference

27.Which of the following is a valid JavaBean method signature?

A. public void getArrow()

B. public void setBow()

C. public void setRange(int range)

D. public String addTarget(String target)

28.Which of the following statements about calling this() in a constructor is not true?

A.If this() is used, it must be the first line of the constructor.

B.If super() and this() are both used in the same constructor, super() must appear on the line immediately after this().

C.If arguments are provided to this(), then there must be a constructor in the class able to take those arguments.

D.If the no-argument this() is called, then the class must explicitly implement the no-argument constructor.

29.Which of the following can fill in the blank to make the class compile?

```
package ai;

public class Robot {

---------compute() { return 10; }

}
```

A.public int

B.Long

C.void

D.private String

30.Fill in the blank: A --------- variable is always available to all instances of the class.

A. public

B. local

C. static

D. instance

31.Which line of code, inserted at line p1, causes the application to print 5?

```
package games;
public class Jump {
private int rope = 1;
protected boolean outside;
public Jump() {
// p1
outside = true;
}
public Jump(int rope) {
this.rope = outside ? rope : rope+1;
}
public static void main(String[] bounce) {
System.out.print(new Jump().rope);
}
}
```

A. this(4);

B. new Jump(4);

C. this(5);

D. rope = 4;

32. Given the following class, what should be inserted into the two blanks to ensure the class data is properly encapsulated?

```
package storage;
public class Box {
public String stuff;
-----------String------() {
return stuff;
}
public void setStuff(String stuff) {
this.stuff = stuff;
}
}
```

A.public and getStuff

B.private and isStuff

C.public and setStuff

D.None of the above

33.Which statement about a no-argument constructor is true?

A.The Java compiler will always insert a default no-argument constructor if you do not define a no-argument constructor in your class.

B.In order for a class to call super() in one of its constructors, its parent class must explicitly implement a no-argument constructor.

C.If a class extends another class that has only one constructor that takes a value, then the child class must explicitly declare at least one constructor.

D.A class may contain more than one no-argument constructor.

33.What is the best way to call the following method from another class in the same package, assuming the class using the method does not have any static imports?

```
package useful;
public class MathHelper {
public static int roundValue(double d) {
// Implementation omitted
}
}
```

A.MathHelper:roundValue(5.92)

B.MathHelper.roundValue(3.1)

C.roundValue(4.1)

D.useful.MathHelper.roundValue(65.3)

34.How many final modifiers would need to be removed for this application to compile?

```
package end;
public final class Games {
public final static int finish(final int score) {
final int win = 3;
final int result = score++ < 5 ? 2 : win; return result+=win;
}
public static void main(final String[] v) {
System.out.print(finish(Integer.parseInt(v[0])));
}
}
```

A. None

B. One

C. Two

D. The code will not compile regardless of the number of final modifiers that are removed.

35.Fill in the blanks:----------is used to call a constructor in the parent class, while----------is used to reference a member of the parent class.

A. super and this()

B. super and super()

C. super() and this

D. super() and super

36.Given the following method signature, which classes can call it?

void run(String government)

A. Classes in other packages

B. Classes in the same package

C. Subclasses in a different package

D. All classes

37.Which statement(s) about the following class would help to properly encapsulate the data in the class?

```
package shield;
public class Protect {
private String material;
protected int strength;
public int getStrength() {
return strength;
}
public void setStrength(int strength) {
```

```
this.strength = strength;
}
}
```

I. Change the access modifier of strength to private.

II. Add a getter method for material.

III. Add a setter method for material.

A. I

B. II and III

C. I, II, and III

D. None, the data in the class is already encapsulated.

38.Which of the following lines of code can be inserted in the line below that would allow the class to compile?

```
package farm;
public class Coop {
public final int static getNumberOfChickens() {
// INSERT CODE HERE
}
}
```

A. return 3.0;

B. return 5L;

C. return 10;

D. None of the above.

39.What is a possible output of the following application?

```
package wrap;
public class Gift {
private final Object contents;
protected Object getContents() {
return contents;
}
protected void setContents(Object contents) {
this.contents = contents;
}
public void showPresent() {
System.out.print("Your gift: "+contents);
}
public static void main(String[] treats) {
Gift gift = new Gift();
gift.setContents(gift);
gift.showPresent();
}
}
```

A.Your gift: wrap.Gift@29ca2745

B.Your gift: Your gift:

C.It does not compile.

D.It compiles but throws an exception at runtime.

40.Given the following two classes, each in a different package, which line inserted below allows the second class to compile?

```
package clothes;
public class Store {
public static String getClothes() { return "dress"; }
}
package wardrobe;
// INSERT CODE HERE
public class Closet { public void borrow() {
System.out.print("Borrowing clothes: "+getClothes());
}
}
```

A.static import clothes.Store.getClothes;

B.import clothes.Store.*;

C.import static clothes.Store.getClothes;

D.import static clothes.Store;

41.What access modifier is used to mark class members package-private?

A.private

B.default

C.protected

D.None of the above

42.How many lines of the following program contain compilation errors?

```
package sky;
public class Stars {
private int inThe = 4;
public void Stars() {
```

```
super();
}
public Stars(int inThe) {
this.inThe = this.inThe;
}
public static void main(String[] endless) {
System.out.print(new sky.Stars(2).inThe);
}
}
```

A.None

B.One

C.Two

D.Three

43.Given the following method declaration, which line can be inserted to make the code compile?

```
public short calculateDistance(double lat1, double lon1, double lat2,
double lon2) {
// INSERT CODE HERE
}
```

A. return new Integer(3);

B. return new Byte((byte)6);

C. return 5L;

D. return new Short(4).longValue();

44.Which of the following statements about overloaded methods are true?

I. Overloaded methods must have the same name.

II. Overloaded methods must have the same return type.

III. Overloaded methods must have a different list of parameters.

A. I

B. I and II

C. I and III

D. I, II, and III

45.How many lines of code would need to be removed for the following class to compile?

```
package work;
public class Week {
private static final String monday;
String tuesday;
final static wednesday = 3;
final protected int thursday = 4;
}
```

A. One

B. Two

C. Three

D. The code will not compile regardless of the number of lines removed.

46.What is the output of the following application?

```
package pet;
public class Puppy {
public static int wag = 5; // q1
public void Puppy(int wag) { // q2
```

```
this.wag = wag;
}
public static void main(String[] tail) {
System.out.print(new Puppy(2).wag); // q3
}
}
```

A. 2

B. It does not compile because of line q1.

C. It does not compile because of line q2.

D. It does not compile because of line q3.

48.Fill in the blanks: The--------------access modifier allows access to everything the------------- access modifier does and more.

A. public, private

B. private, package-private

C. package-private, protected

D. private, public

49.What is the output of the following application?

```
package ship;
public class Phone {
private int size;
public Phone(int size) {this.size=size;}
public static void sendHome(Phone p, int newSize) {
p = new Phone(newSize);
p.size = 4;
}
public static final void main(String... params) {
```

```
final Phone phone = new Phone(3);
sendHome(phone,7);
System.out.print(phone.size);
}
}
```

A.3

B.4

C.7

D.The code does not compile.

50.Given the following class, which line of code when inserted below would prevent the class from compiling?

```
public class Drink {
public static void water() {}
public void get() {
// INSERT CODE HERE
}
}
```

A.water();

B.this.Drink.water();

C.this.water();

D.Drink.water();

51.Given the following method declaration signature, which of the following is a valid call of this method?

```
public void call(int count, String me, String... data)
```

A.call(9,"me",10,"Al")

B.call(5)

C.call(2,"home","sweet")

D.call("answering","service")

52.Which statement about a static variable is true?

A.The value of a static variable must be set when the variable is declared or in a static initialization block.

B.It is not possible to read static final variables outside the class in which they are defined.

C.It is not possible to reference static methods using static imports.

D.A static variable is always available in all instances of the class.

53.Which of the following is not a true statement?

A.The first line of every constructor is a call to the parent constructor via the super() command.

B.A class does not have to have a constructor explicitly defined.

C.A constructor may pass arguments to the parent constructor.

D.A final instance variable whose value is not set when they are declared or in an initialization block should be set by the constructor.

54.How many final modifiers would need to be removed for this application to compile?

```
package park;

public class Tree {

public final static long numberOfTrees;

public final double height;

static {}

{

final int initHeight = 2;

height = initHeight;

}
```

```
static {
numberOfTrees = 100;
height = 4;
}
}
```

A.None

B.One

C.Two

D.The code will not compile regardless of the number of final modifiers removed.

55.What is the output of the following application?

```
package jungle;
public class RainForest extends Forest {
public RainForest(long treeCount) {
this.treeCount = treeCount+1;
}
public static void main(String[] birds){
System.out.print(new RainForest(5).treeCount);
}
}
class Forest {
public long treeCount;
public Forest(long treeCount) {
this.treeCount = treeCount+2;
}
}
```

A.5

B.6

C.8

D.The code does not compile.

56.What is the output of the following application?

```
public class ChooseWisely {
public ChooseWisely() { super(); }
public int choose(int choice) { return 5; }
public int choose(short choice) { return 2; }
public int choose(long choice) { return 11; }
public static void main(String[] path) {
System.out.print(new ChooseWisely().choose((byte)2+1));
}
}
```

A.5

B.2

C.11

D.The code does not compile.

57.What is the output of the following application?

```
package sports;
public class Football {
public static Long getScore(Long timeRemaining) {
return 2*timeRemaining; // m1
}
public static void main(String[] refs) {
final int startTime = 4;
System.out.print(getScore(startTime)); // m2
```

```
}
}
```

A.8

B.The code does not compile because of line m1.

C.The code does not compile because of line m2.

D.The code compiles but throws an exception at runtime.

58.Assume there is a class Bouncer with a protected variable. Methods in which class can access this variable?

A.Only subclasses of Bouncer

B.Any subclass of Bouncer or any class in the same package as Bouncer

C.Only classes in the same package as Bouncer

D.Any superclass of Bouncer

59.How many lines of the following program contain compilation errors?

```
package theater;
class Cinema {
private String name;
public Cinema(String name) {this.name = name;}
}
public class Movie extends Cinema {
public Movie(String movie) {}
public static void main(String[] showing) {
System.out.print(new Movie("Another Trilogy").name);
}
}
```

A.None

B.One

C.Two

D.Three

60.Which modifier can be applied to an abstract interface method?

A. protected

B. static

C. final

D. public

61.What is the output of the following application?

```
package radio;
public class Song {
public void playMusic() {
System.out.print("Play!");
}
private static int playMusic() {
System.out.print("Music!");
}
public static void main(String[] tracks) {
new Song().playMusic();
}
}
```

A. Play!

B. Music!

C. The code does not compile.

D. The code compiles but the answer cannot be determined until runtime.

62.Given the class declaration below, which value cannot be inserted into the blank line that would allow the code to compile?

```
package mammal;
interface Pet {}
public class Canine implements Pet {
public----------getDoggy() {
return this;
}
}
```

A.Class

B.Pet

C.Canine

D.Object

63.Which modifier can be applied to an interface method?

A. protected

B. static

C. private

D. final

64.What is the output of the following application?

```
package track;
interface Run {
default void walk() { System.out.print("Walking and running!");
}
}
interface Jog {
default void walk() { System.out.print("Walking and jogging!");
```

```
}
}
public class Sprint implements Run, Jog
{
public void walk()
{
System.out.print("Sprinting!");
}
public static void main() {
new Sprint().walk();
}
}
```

A. Walking and running!

B. Walking and jogging!

C. Sprinting!

D. The code does not compile.

65.Which of the following statements about interfaces is not true?

A. An interface can extend another interface.

B. An interface can implement another interface.

C. A class can implement two interfaces.

D. A class can extend another class.

66.What is the output of the following application?

```
package transport;
class Ship {
protected int weight = 3;
private int height = 5;
```

```
public int getWeight() { return weight; }
public int getHeight() { return height; }
}
public class Rocket extends Ship {
public int weight = 2;
public int height = 4;
public void printDetails() {
System.out.print(super.getWeight()+","+super.height);
}
public static final void main(String[] fuel) {
new Rocket().printDetails();
}
}
```

A.2,5

B.3,4

C.3,5

D.The code does not compile.

67.Fill in the blanks: Excluding default and static methods, a(n)---------- can contain both abstract and concrete methods, while a(n)----------contains only abstract methods.

A. concrete class, abstract class

B. concrete class, interface

C. interface, abstract class

D. abstract class, interface

68.Which statement about the following class is correct?

```
package shapes;
abstract class Triangle {
```

```
abstract String getDescription();
}
class RightTriangle extends Triangle {
protected String getDescription() { return "rt"; } // g1
}
public abstract class IsoscelesRightTriangle extends RightTriangle{//g2
public String getDescription() {return "irt"; }
public static void main(String[] edges) {
final Triangle shape = new IsoscelesRightTriangle(); // g3
System.out.print(shape.getDescription());
}
}
```

A. The code does not compile due to line g1.

B. The code does not compile due to line g2.

C. The code does not compile due to line g3.

D. The code compiles and runs without issue.

69.Given that Short and Integer extend Number, what type can be used to fill in the blank in the class below to allow it to compile?

```
package band;
interface Horn
{
public Integer play();
}
abstract class Woodwind
{
public Short play()
{
return 3;
```

```
}
}
public final class Sphone extends Woodwind implements Horn {
public------------play()
{
return null;
}
}
```

A. Integer

B. Short

C. Number

D. None of the above

70.Fill in the blanks:

A class-----------an interface, while a class------------ an abstract class.

A. extends, implements

B. extends, extends

C. implements, extends

D. implements, implements

71.What is the output of the following application?

```
package paper;
abstract class Book {
protected static String material = "papyrus";
public Book() {}
public Book(String material) {this.material = material;}
}
```

```
public class Encyclopedia extends Book {
public static String material = "cellulose";
public Encyclopedia() {super();}
public String getMaterial() {return super.material;}
public static void main(String[] pages) {
System.out.print(new Encyclopedia().getMaterial());
}
}
```

A. papyrus

B. cellulose

C. The code does not compile.

D. The code compiles but throws an exception at runtime.

72.Which of the following modifiers can be applied to an abstract method?

A. final

B. private

C. default

D. protected

73.Given Of the following four modifiers, choose the one that is not implicitly applied to all interface variables.

A. final

B. abstract

C. static

D. public

74.What is the output of the following application?

```
package race;
abstract class Car {
static { System.out.print("1"); }
public Car(String name) {
super();
System.out.print("2");
}
{ System.out.print("3"); }
}
public class BlueCar extends Car {
{
System.out.print("4");
}
public BlueCar()
{
super("blue");
System.out.print("5");
}
public static void main(String[] gears) {
new BlueCar();
}
}
```

A. 23451

B. 12354

C. 13245

D. The code does not compile.

74.Fill in the blank: Overloaded and overridden methods always ha .

A. the same parameter list

B. different return types

C. the same method name

D. covariant return types

75.Fill in the blank: A(n)---------- is the first non-abstract subclass that is required to implement all of the inherited abstract methods.

A. abstract class

B. abstraction

C. concrete class

D. interface

76.Fill in the blanks: An interface----------another interface, while a class----------another class.

A. implements, extends

B. extends, extends

C. implements, implements

D. extends, implements

77.Which of the following statements about no-argument constructors is correct?

A.If a parent class does not include a no-argument constructor, a child class cannot declare one.

B.If a parent class does not include a no-argument constructor (nor a default one inserted by the compiler), a child class must contain at least one constructor definition.

C.If a parent class contains a no-argument constructor, a child class must contain a no-argument constructor.

D.If a parent class contains a no-argument constructor, a child class must contain at least one constructor.

78.What is the result of compiling and executing the following application?

```
package mind;
public class Remember {
public static void think() throws Exception { // k1 try
{
throw new Exception();
}
}
public static void main(String... ideas) throws Exception {
think();
}
}
```

A. The code compiles and runs without printing anything.

B. The code compiles but a stack trace is printed at runtime.

C. The code does not compile because of line k1.

D. The code does not compile for another reason.

79.Choose the answer that lists the keywords in the order that they would be used together.

A. catch, try, finally

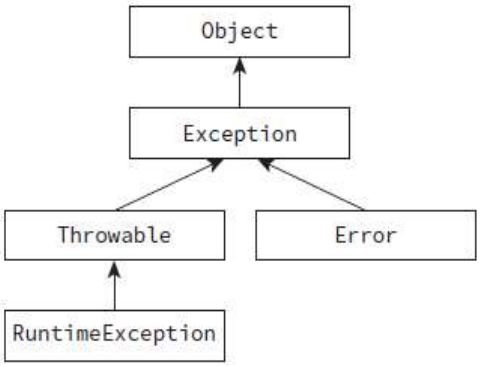
B. try, catch, finally

C. finally, catch, try

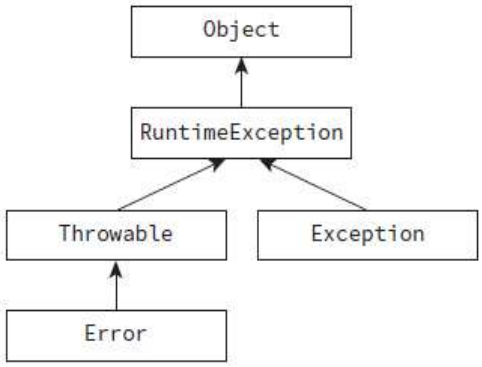
D. try, finally, catch

80.Which of the following diagrams of java.lang classes shows the inheritance model properly?

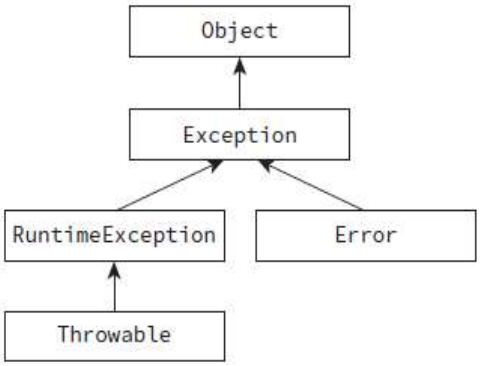
A.



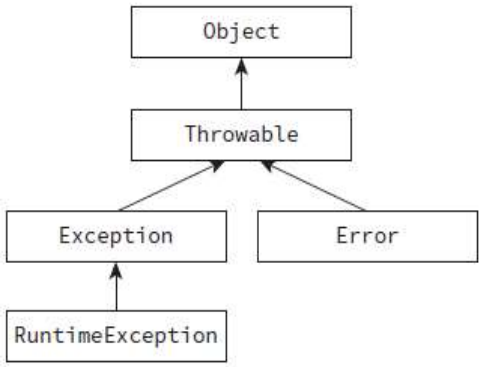
B.



C.



D.



81.Which of the following Throwable types is it recommended not to catch in a Java application?

A.Error

B.CheckedException

C.Exception

D.RuntimeException

82.What is the output of the following application?

```
package game;
public class Baseball {
public static void main(String... teams) {
try {
```

```
int score = 1;
System.out.print(score++);
}
catch (Throwable t) {
System.out.print(score++);
}
finally {
System.out.print(score++);
}
System.out.print(score++);
}
}
```

A.123

B.124

C.12

D.None of the above

83.Which of the following is a checked exception?

A. ClassCastException

B. IOException

C. ArrayIndexOutOfBoundsException

D. IllegalArgumentException

84.Fill in the blanks: The----------keyword is used in method declarations, while the----------keyword is used to throw an exception to the surrounding process.

A. throws, throw

B. catch, throw

C. throw, throws

D. throws, catch

85.If a try statement has catch blocks for both Exception and IOException, then which of the following statements is correct?

A.The catch block for Exception must appear before the catch block for IOException.

B.The catch block for IOException must appear before the catch block for Exception.

C.The catch blocks for these two exception types can be declared in any order.

D.A try statement cannot be declared with these two catch block types because they are incompatible.

86.What is the output of the following application?

```
package game;
public class Football {
public static void main(String officials[]) {
try {
System.out.print('A');
throw new RuntimeException("Out of bounds!");
}
catch (ArrayIndexOutOfBoundsException aioobe) {
System.out.print('B');
throw t;
}
finally { System.out.print('C');
}
}
}
```

A. ABC

B. ABC, followed by a stack trace for a RuntimeException

C. AC, followed by a stack trace for a RuntimeException

D. None of the above

87.What is the result of compiling and running the following application?

```
package castles;
public class Fortress {
public void openDrawbridge() throws Exception { // p1 try {
throw new Exception("Circle");
}
catch (Exception e) {
System.out.print("Opening!");
}
finally {
System.out.print("Walls"); // p2
}
}
public static void main(String[] moat) {
new Fortress().openDrawbridge(); // p3
}
}
```

A. The code does not compile because of line p1.

B. The code does not compile because of line p2.

C. The code does not compile because of line p3.

D. The code compiles, but a stack trace is printed at runtime.

88.Which of the following exception types must be handled or declared by the method in which they are thrown?

A. NullPointerException

B. Exception

C. RuntimeException

D. ArithmeticException

89.What is the output of the following application?

```
package game;
public class BasketBall {
public static void main(String[] dribble) {
try
{
System.out.print(1);
throw new ClassCastException();
}
catch (ArrayIndexOutOfBoundsException ex)
{
System.out.print(2);
}
catch (Throwable ex)
{
System.out.print(3);
}
finally
{
System.out.print(4);
}
```

```
System.out.print(5);
}
}
```

A.1345

B.1235

C.The code does not compile.

D.The code compiles but throws an exception at runtime.

90.Given that FileNotFoundException is a subclass of IOException, what is the output of the following application?

```
package office;
import java.io.*;
public class Printer {
public void print()
{
try
{
throw new FileNotFoundException();
}
catch (IOException exception)
{
System.out.print("Z");
}
catch (FileNotFoundException enfe)
{
System.out.print("X");
}
finally
```

```
{
System.out.print("Y");
}
}
public static void main(String... ink)
{
new Printer().print();
}
}
```

A. XY

B. ZY

C. The code does not compile.

D. The code compiles but a stack trace is printed at runtime.

91.Which keywords are required with a try statement?

I.catch

II.finalize

III.finally

A.I only

B.II only

C.I or III, or both

D.None of these statements are required with a try statement.

92.Which statement about the role of exceptions in Java is incorrect?

A.Exceptions are often used when things “go wrong” or deviate from the expected path.

B.An application that throws an exception will terminate.

C.Some exceptions can be avoided programmatically.

D.An application that can properly handle its exception may recover from unexpected problems.

93.What is the output of the following application?

```
package harbor;
class CapsizedException extends Exception {}
class Transport {
public int travel() throws CapsizedException { return 2; };
}
public class Boat {
public int travel() throws Exception { return 4; }; // j1
public static void main(String... distance) throws Exception
{
try
{
System.out.print(new Boat().travel());
}
catch (Exception e) ( System.out.print(8);)
}
}
```

A.4

B.8

C.The code does not compile due to line j1.

D.The code does not compile for another reason.

94.Which import statement is required to be declared in order to use the Exception, RuntimeException, and Throwable classes in an application?

A.import java.exception.*;

B.import java.util.exception.*;

C.import java.lang.*;

D.None of the above

95.Fill in the blanks: A program must handle or declare----------but should never handle---------------.

A.java.lang.Error, unchecked exceptions

B.checked exceptions, java.lang.Error

C.java.lang.Throwable, java.lang.Error

D.unchecked exceptions, java.lang.Exception

96.If an exception matches two or more catch blocks, which catch block is executed?

A.The first one that matches is executed.

B.The last one that matches is executed.

C.All matched blocks are executed.

D.It is not possible to write code like this.

97.In the following application, the value of list has been omitted. Assuming the code compiles without issue, which one of the following is not a possible output of executing this class?

```
package checkboard;
public class Attendance {
private Boolean[] list = // value omitted
public int printTodaysCount() {
int count=0;
for(int i=0; i<10; i++) {
if(list[i])
++count;
```

```
}
return count;
}
public static void main(String[] roster)
{
new Attendance().printTodaysCount();
}
}
```

A.A stack trace for NullPointerException is printed.

B.A stack trace for ArrayIndexOutOfBoundsException is printed.

C.A stack trace for ClassCastException is printed.

D.None of the above

98.Fill in the blanks: A----------occurs when a program recourses too deeply into an infinite loop, while a(n)----------occurs when a reference to a nonexistent object is acted upon.

A.NoClassDefFoundError, StackOverflowError

B.StackOverflowError, NullPointerException

C.ClassCastException, IllegalArgumentException

D.StackOverflowError, IllegalArgumentException

100.Fill in the blanks: A try statement has----------finally block(s) and---------- catch blocks.

A. zero or one, zero or more

B. one, one or more

C. zero or one, zero or one

D. one or more, zero or one

101.What is the output of the following application?

```
package pond;
abstract class Duck
{
protected int count;
public abstract int getDuckies();
}
public class Ducklings extends Duck {
private int age;
public Ducklings(int age) {
this.age = age;
}
public int getDuckies(){
return this.age/count;
}
public static void main(String[] pondInfo)
{
Duck itQuacks = new Ducklings(5);
System.out.print(itQuacks.getDuckies());
}
}
```

A. 0

B. 5

C. The code does not compile.

D. The code compiles but throws an exception at runtime.

102. Given a try statement, if both the catch block and the finally block each throw an exception, what does the caller see?

A.The exception from the catch block

B.The exception from the finally block

C.Both the exception from the catch block and the exception from the finally block

D.None of the above

103.Which of the following classes will handle all types in a catch block?

A.Exception

B.Error

C.Throwable

D.RuntimeException

104.If a try statement has catch blocks for both ClassCastException and RuntimeException, then which of the following statements is correct?

A.The catch block for ClassCastException must appear before the catch block for RuntimeException.

B.The catch block for RuntimeException must appear before the catch block for ClassCastException.

C.The catch blocks for these two exception types can be declared in any order.

D.A try statement cannot be declared with these two catch block types because they are incompatible.

105.Which of the following is the best scenario to use an exception?

A.The computer caught fire.

B.The code does not compile.

C.A caller passes invalid data to a method.

D.A method finishes sooner than expected.

106.Which statement about the following exception statement is correct?

throw new NullPointerException();

A.The code where this is called must include a try-catch block that handles this exception.

B.The method where this is called must declare a compatible exception.

C.This exception cannot be handled.

D.This exception can be handled with a try-catch block or ignored altogether by the surrounding method.

107.If a try statement has catch blocks for both IllegalArgumentException and ClassCastException, then which of the following statements is correct?

A.The catch block for IllegalArgumentException must appear before the catch block for ClassCastException.

B.The catch block for ClassCastException must appear before the catch block for IllegalArgumentException.

C.The catch blocks for these two exception types can be declared in any order.

D.A try statement cannot be declared with these two catch block types because they are incompatible.

108.What is the output of the following application?

```
package broken;

class Problem implements RuntimeException

{}

public class BiggerProblem extends Problem {

public static void main(String uhOh[]) {

try {

throw new BiggerProblem();

}
```

```
catch (BiggerProblem re) {
System.out.print("Problem?");
}
catch (Problem e) {
System.out.print("Handled");
}
finally {
System.out.print("Fixed!");
}
}
}
```

A.Problem?Fixed!

B.Handled.Fixed!

C.Problem?Handled.Fixed!

D.The code does not compile.

109.Given an application that hosts a website, which of the following would most likely result in a java.lang.Error being thrown?

A.Two users try to register an account at the same time.

B.The application temporarily loses connection to the network.

C.A user enters their password incorrectly.

D.The application runs out of memory.

110.What is the output of the following application?

```
package bed;
public class Sleep {
public static void snore() {
try {
```

```
String sheep[] = new String[3];
System.out.print(sheep[3]);
}
catch (RuntimeException e) {
System.out.print("Awake!");
}
finally {
throw new Exception(); // x1
}
}
public static void main(String... sheep) {
// x2 new Sleep().snore(); // x3
}
}
```

A. Awake!, followed by a stack trace

B. The code does not compile because of line x1.

C. The code does not compile because of line x2.

D. The code does not compile because of line x3.