TEST-1

Q 1: Imagine you define the MyInterface interface as shown in the following code snippet:

```
package com.kogent;
interface MyInterface {
 //complete the code here
 final int mynum = 70;
}
```

Which of the following options will lead to compilation error?

A. public final void myMethod(); B. protected void myMethod();

C. public void myMethod(); D. private abstract void myMethod();

Q 2: Imagine you are a software developer and write the following program:

```
package com.kogent;
public class VarargsExample {
 public static void displayNames(String... names) {
 for (String mynames:names) {
 System.out.print(mynames + " ");
 }
 }
 public static void main(String args[]) {
 displayNames("Alex","Richard","John");
 }
}
```

What will be the output after compiling and executing the preceding program?

A. The program leads to compilation error.

B. The program compiles successfully and displays "Alex Richard John" as output.

C. The program compiles successfully and leads to runtime exception.

D. The program compiles successfully but does not display anything as output

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3: Imagine while preparing for your SCJP examination, you created the following program:

```
package com.kogent;
class Ques7 {
 int eval(int[]...vars) {
 int sum=0, b, c;
 for(b = 0; b<vars.length; b++) {
 for(c=0;c<vars[b].length; c++) {
 sum += vars[b][c];
 }
 }
 return(sum);
 }
public static void main(String args[]) {
 Ques7 varargs = new Ques7();
 int sum =0;
 sum = varargs.eval(new int[]{10,20,30,40}, new int[]{40,50,60});
 System.out.println("The sum of the numbers is:" + sum);
 }
}
```

What will happen during compilation and execution of your program?

A. The program will compile and display “The sum of the numbers is: 250”as output.

B. The program will compile and display 25 as output.

C. The program will not compile due to invalid declaration of integer variable arguments.

D. The program will generate the runtime exception.

4: Imagine you write the following program:

```
package com.kogent;
enum Students{Suchita, Deepak, Vikash, Charu, Mahtab}
class Ques10 {
 public static void main(String args[]) {
 Students student;
 student = Students.Vikash;
 switch(student) {
 case Suchita: System.out.println("My name is Suchita");
 break;
 case Deepak: System.out.println("My name is Deepak");
 break;
 case Vikash: System.out.println("My name is Vikash");
 break;
 case Charu: System.out.println("My name is Charu");
 break;
 case Mahtab: System.out.println("My name is Mahtab");
 break;
 }
 }
}
```

What will be the output after the preceding program is compiled and executed?

A. The program will compile successfully and execute by displaying the output, My name is Vikash.

B. The program will lead to compilation error as the enum Students is declared outside the class.

C. The program will compile successfully and execute by displaying the output, My name is Deepak.

D. The program will lead to runtime error.

5: Imagine you write the following program:

```
package com.kogent;
class Ques11 {
 public static void main(String args[]) {
 byte b = 12;
 int y = b;
 b = b + 10;
 System.out.println(b);
 }
}
```

What will be the output after the preceding program is compiled and executed?

A. The program will compile, execute, and display 22 as output.

B. The program will lead to compile time error as explicit casting is required in the line, b = b + 10.

C. The program will compile, execute, and display 12 as output.

D. The program will lead to compile time error as explicit casting is required in the line, int y =bQ

6: Imagine you write the following lines of code:

```
package com.kogent;
class Ques12 {
 public static void main(String args[]) {
 int x = 201;
 myMethod(x++);
 System.out.println(x);
 }
 static void myMethod(int x) {
 x %= 10;
 System.out.println(x);
```

```
 }
}
```

What will be output of the above program after compilation and execution?

A. The program will compile successfully and execute displaying 1 and 202 as output.

B. The program will compile successfully and execute displaying 2 and 202 as output.

C. The program will compile successfully and execute displaying 1 and 201 as output.

D. The program will compile successfully and execute displaying 1 and 1 as output.

Q 7: Consider the following various array declarations:

```
int [] ar1, arr2[];
int[][] arr3;
int[] arr4[], arr5[];
```

Which of the following options are true?

A.arr2 = arr3;

B.arr2 = arr4;

C.arr1 = arr2;

D.arr4 = arr1;

8: Imagine you write the following lines of code in your program:

```
package com.kogent;
class QuesSuper
{
 public int mynum=0;
 public QuesSuper(String str) {
 mynum=10;
 }
}
public class QuesSub extends QuesSuper {
 public QuesSub(String str) {
```

```
 mynum=20;
 }
 public static void main(String args[]) {
 QuesSub sub= new QuesSub("Suchita");
 System.out.println(sub.mynum);
 }
}
```

What will be the output after the preceding program is compiled and executed?

A. The program will compile successfully and 20 will be displayed as output.

B. The program will lead to compile time error.

C. The program will compile successfully and 10 will be displayed as output.

D. The program will compile successfully and 0 will be displayed as output

---

Q 9: Which among the following are valid declarations?

A.int num1, num2, num3; num1 = num2= num3= 10;

B.int num1, num2, num3 =10;

C.int num1= 10 = num2 =num3

D.int num1 = 10= num2= num3;

10: Imagine you have declared the Ques20 class by using the following program:

```
package com.kogent;
public class Ques20 {
 public String name;
}
```

Now you realized that to make the name variable as read only for the other classes. Which of the following options are correct to mark the name variable as read only?

A. You can mark the name variable as private.

B. You can mark the name variable as private and provide the public method getName() which will return

its value.

C. You can mark the name variable as protected.

D. You can mark the name variable as static and provide the public static method getName() which will

return its value.

Q 11: Which of the following options are true if you want to access the fields or methods of class B through the

instance of class A, provided that the member has no access specifier?

A. The class B must be a subclass of the class A.

B. The class A and B both must be within the same package.

C. The class B must be a superclass of the class A.

D. The class A and B may not be in the same package but class B must also be a subclass of the class A

12: Which of the following statements are true based on the use of modifiers?

A. Local variables can be declared either static or transient.

B. The visibility of the local variables cannot be specified.

C. By default the variable is accessible within the same class and subclass of the super class.

D. The visibility of the local variables is default.

Q 13: Which of the following are valid declarations of the main () method?

A. static main(String args[]){ } B. public static String main(String args[]) {… }

C. public static void main(String args[]) {….} D. final static void main(String args[]) {….}

14: Imagine you need to handle the records of multiple students and declaring a separate variable and then

assigning the values will become a tedious task. Therefore, you write the following program to

implement the concept of arrays which has simplified your task:

```
package com.kogent;
 public class Ques30 {
 public static void main(String args[]) {
 String[][][] arr = {
 { { "Suchita", "Vikash" , "Deepak"}, { "Charu", null, "Shikha"} },
 { {"Shalini"}, {null} },{{"Hemal"}},
 { { "Santosh", "Manish"}, {} }
 };
 System.out.println(arr[0][1][1]);
 }
}
```

What will be the output after compilation and execution of the preceding program?

A. The program will throw the runtime exception.

B. The program will throw ArrayIndexOutOfBoundsException.

C. The program will display null.

D. The program will compile successfully but it will not display anything.

Q 15: Which of the following is the correct higher to lower order of restrictiveness for access specifiers?

A. public> default(within the package)> protected> private

B. private> default(within the package)> protected> public

C. private> protected> default(within the package)> public

D. protected> default(within the package)> private> public

Q 16: In Java few keywords are reserved which you cannot use while declaring a class member. Which of the

following is not a keyword in Java?

A. switch B. extends C. assert D. String

Q 17: Imagine you need to declare an abstract method, which of the following is the valid declaration of an

abstract method?

A. class Vehicle { abstract void move(); }

B. class Vehicle { abstract void move(); {….} }

C. abstract class Vehicle { abstract void move(); }

D. abstract class Vehicle { abstract void move(); {….} }

Q 18: Imagine you want to clear your concept of nested classes and so you create a program containing nested

and static classes. Consider that you have created the following program:

```
package com.kogent;

public class Ques43 {

 public static void main(String args[]) {

 TestOuter o = new TestOuter();

 TestOuter.TestInner i = o.new TestInner();

 TestOuter.TestStaticInner inner = new TestOuter.TestStaticInner();

 }

}

class TestOuter {

 static int num1 = 100;

 TestOuter() {

 System.out.print("Welcome to the outer class" + “ ”);

 }

 class TestInner {
```

```
TestInner() {
System.out.print(TestOuter.num1 + " ");
}
}
static class TestStaticInner {
static int staticnum = 200;
TestStaticInner() {
System.out.print(staticnum + " ");
}
}
}
```

What will be the output after you compile and execute the preceding program?

A. The program compiles successfully and displays "Welcome to the outer class 100 200" as output.

B. The program compiles successfully and displays "Welcome to the outer class 200 100" as output.

C. The program compiles successfully and displays "Welcome to the outer class 100" as output.

D. The program compiles successfully and displays "Welcome to the outer class 200" as output.

Q 19: Imagine that you are a Java programmer in the ABC Company and create the following program:

```
package com.kogent;
public class Ques45 {
public void myMethod1() {
static int num1=100;
final int num2=200;
System.out.println("The value of first variable is " + num1);
System.out.println("The value of second variable is " + num2);
}
public void myMethod2() {
int arr[] = new int[2];
System.out.println(arr[arr.length-1]);
```

```
}
public static void main(String args[]) {
new Ques45().myMethod1();
new Ques45().myMethod2();
}
}
```

What will be the output after you compile and execute the preceding program?

A. The program will lead to compilation errors as static variables cannot be declared within methods.

B. The program will compile successfully and display “The value of first variable is 100” and “The value of second variable is 200”, as output.

C. The program will compile successfully and lead to the ArrayIndexOutOfBoundsException exception during runtime.

D. The program will lead to compilation errors as the object arr is not initialized.

Q 20: Imagine during your career as a Java developer your mentee creates the following program:

```
package com.kogent;
public class Ques46 {
private static int num1 = 100;
private int num2 = 200;
public static void myMethod1() {
num1 = 300;
num2 = 400;
System.out.println(num1 + “,” + num2);
}
public static void myMethod2() {
num1 = 300;
Ques46.num2 = 400;
}
public void myMethod3(){
```

```
num1 = 300;
num2 = 400;
}
public void myMethod4() {
Ques46.num1 = 300;
num2 = 400;
}
public static void main(String args[]) {
Ques46 q = new Ques46();
q.myMethod1();
}
}
```

Now you need to analyze the preceding program and give a feedback to your mentor with explanation.

Therefore, which of the following statements you can provide as a feedback to your mentee?

A. The program will compile successfully.

B. The program will lead to compilation error as the non-static variables cannot be referenced from a static

context.

C. The program will compile successfully and lead to runtime error.

D. The program will compile successfully and display “300,400” as output.

Q 21: Imagine you are working a Java programmer in the ABC Company and write the following program:

```
package com.kogent;
public class Ques48 {
public static void main(String[] args) {
Vehicle v = new Car();
System.out.print(v.getVehicle().getClass().getName() + " ");
System.out.print(v.getVehicle().getName());
```

```
 }
}
class Vehicle {
 public Vehicle getVehicle() {
 return this;
 }
 public String getName() {
 return "Vehicle";
 }
}
class Car extends Vehicle {
 public Vehicle getVehicle() {
 return this;
 }
 public String getName() {
 return "Car";
 }
}
```

What will be the output after you compile and execute the preceding program?

A. The program will lead to compilation errors as the Car class overloads the getVehicle method by changing its return type.

B. The program will compile successfully and display “com.kogent.Car Car” as output.

C. The program will compile successfully but lead to runtime error.

D. The program will lead to compilation error at Vehicle v = new Car();

Q 22: Imagine while practicing the concept of primitive variables in Java, you came across the following program:

```
package com.kogent;
```

```
public class Ques51 {
 public static void main(String args[]) {
 Ques51 q = new Ques51();
 q.method(30);
 byte b = 3;
 q.method(b);
 }
 public void method(Integer i) {
 System.out.print("Integer value is: " + i + " ");
 }
 public void method(short s) {
 System.out.print("Short value is: " + s + " ");
 }
 public void method(byte t) {
 System.out.print("Byte value is: " + t + " ");
 }
 public void method(int num) {
 System.out.print("Int value is: " + num + " ");
 }
}
```

What will be output of the preceding program?

A. The program will display “Int value is: 30 Byte value is: 3” as output.

B. The program will display “Integer value is: 30 Byte value is: 3” as output.

C. The program will display “Int value is: 30 Short value is: 3” as output.

D. The program will display “Integer value is: 30 Short value is: 3” as output

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23: Imagine you are working in the ABC Company and you are assigned a project with a team. Being a team

leader you need to analyze the programs created by your team members. While analyzing the programs,

you came across the following program:

```
package com.kogent;
public class Ques52 {
 public static void main(String args[]) {
 Ques52 q = new Ques52();
 q.myMethod(10,20);
 q.myMethod(new long[]{});
 q.myMethod(new int[]{10,20});
 }
 void myMethod(short s1, short s2) {
 System.out.println("short");
 }
 void myMethod(int i1, int i2) {
 System.out.println("int");
 }
 void myMethod(int ...args) {
 System.out.println("intargs");
 }
}
```

Which of the following statements are justified in the context of the preceding program?

A. The program will compile successfully and display “int intargs intargs” as output.

B. The program will lead to compilation error.

C. The program will compile successfully but lead to runtime exception.

D. The program will display “short intargs intargs” as output

---

24: Imagine you write the following program while understanding the concept of primitive variables:

```
package com.kogent;
public class Ques53 {
 public static void main(String args[]) {
```

```
System.out.println(myMethod(myMethod(new int[]
{10,20}),myMethod(10,20)));
}
static int myMethod(int num1, int num2) {
return 10;
}
static int myMethod(int... args) {
return 20;
}
}
```

What will be output of the preceding program?

A. The program will compile successfully and display 10 as output.

B. The program will lead to compile time error as the myMethod with int[], int[] argument is not defined.

C. The program will compile successfully but lead to runtime exception.

D. The program will compile successfully and display 20 as output.

25: Imagine you are a Java programmer and you have created the following program:

```
package com.kogent;
public class Ques59 {
public static void main(String[] args) {
System.out.println(myMethod(new double[]{10, 20, 30}));
System.out.println(myMethod(new Double[]{10d, 20d, 30d}));
System.out.println(myMethod(10, 20, 30));
System.out.println(myMethod());
}
static double myMethod(double ... args) {
double total = 0;
```

```
for (double temp : args) {
total += temp;
}
return total;
}
static double myMethod(Double ... args) {
double total = 2;
for (double temp : args) {
total *= temp;
} return total;
}
}
```

What will be output of the preceding program?

A. The program will lead to compilation error.

B. The program will compile successfully and display “60.0 12000.0 60.0” as output.

C. The program will compile successfully but lead to runtime error.

D. The program will compile successfully and display “60.0 60.0 12000.0” as output

---

26: Imagine you have created the following program to have a better understanding for enums.

```
package com.kogent;
enum MyEnum {Suchita, Vikash, Deepak };
public class Ques61 {
public static void main(String args[]) {
for (MyEnum en: MyEnum.values())
System.out.print(en + “ “);
}
}
```

What will be the output of the preceding program?

A. The program will compile successfully and print “Suchita Vikash Deepak” as output.

B. The program will lead to compilation error in the line for(MyEnum en: MyEnum.values())

C. The program will compile successful but lead to runtime error.

D. The program will not compile as the enum cannot be declared outside the class.

Q 27: Imagine being a Java programmer you write the following program:

```
package com.kogent;
public class Ques63 {
 String str;
 int i=10;
 static void myMethod() {
 System.out.println("The value of String variable is" + new
 Ques63().str.length());
 }
 public static void main(String args[]) {
 myMethod();
 }
}
```

Which of the following statements are true in the context of the preceding program?

A. The program will lead to compilation error as a non–static variable cannot be accessed from static context.

B. The program will compile successfully but lead to runtime exception.

C. The program will lead to compile time error as the String variable str is not assigned a value.

D. The program will compile successfully and print 4 as output

---

Q 28: Imagine you are a faculty in an institute and you have explained the concept of Inner classes to the students. While practicing the students created the following program and you were asked to analyze the

program:

```
package com.kogent;
public class Ques64 {
 void myMethod(){
 System.out.println("Welcome to the world of programming");
 }
 class MyNest {
 public static void main(String args[]) {
 Ques64 q = new Ques64();
 q.myMethod();
 }
 }
}
```

What will be output of the preceding program?

A. The program will compile successfully and print “Welcome to the world of programming” as output.

B. The program will compile successfully but lead to runtime error.

C. The program will lead to compilation error.

D. The program will compile successfully but no output is displayed

---

Q 29: Imagine while preparing for the SCJP exam you created the following program to understand the concept

of enum:

```
package com.kogent;
public class Ques66 {
 public enum Months { JAN, FEB, MARCH, APRIL, MAY };
 public static void main(String args[]) {
 for(Months m: Months.values());
 Months[] m1 = Months.values();
 System.out.println(m1[4]);
 }
```

}

What will be output of the preceding program?

A. The program will compile successfully and display “APRIL” as output.

B. The program will lead to compilation error.

C. The program will compile successfully but lead to runtime exception.

D. The program will compile successfully and display “MAY” as output.

Q 30: Which of the following names adhere to the JavaBeans standard?

A. getName() B. addLength()

C. deleteId() D. isAuthenticate()