**Assignments-Encapsulation**

**1.Suppose a class has public visibility. In this class we define a protected method. Which of the following statements is correct?**

A.This method is only accessible from inside the class itself and from inside all subclasses.

B.In a class, you cannot declare methods with a lower visibility than the visibility of the class in which it is defined.

C.From within protected methods you do not have access to public methods.

D.This method is accessible from within the class itself and from within all classes defined in the same package as the class itself.

Correct Answer:

**2. Choose all the lines which if inserted independently instead of "//insert code here" will allow the following code to compile:**

**public class Test{**

**public static void main(String args[]){**

**add();**

**add(1);**

**add(1, 2);**

**}**

**// insert code here**

**}**

A.void add(Integer... args){}

B.static void add(int... args, int y){}

C.static void add(intargs...){}

D.static void add(int[]... args){}

E.static void add(int...args){}

Answer :

## 3.

## What is the result of compiling and running the following code?

**class Base{**

**private Base(){**

**System.out.print("Base");**

**}**

**}**

**public class test extends Base{**

**public test(){**

**System.out.print("Derived");**

**}**

**public static void main(String[] args){**

**new test();**

**}**

**}**

A.BaseDerived

B.Derived

C.Exception is thrown at runtime

D.Compilation Error

Answer :

## 4.

## What is the result of compiling and running the following code?

**public class Tester{**

**staticintx = 4;**

**public Tester(){**

**System.out.print(this.x); // line 1**

**Tester();**

**}**

**public static void Tester(){// line 2**

**System.out.print(this.x); // line 3**

**}**

**public static void main(String... args){// line 4**

**new Tester();**

**}**

**}**

A.Compile error at line 1 (static x must be only accessed inside static methods)

B.Compile error at line 2 (constructors can't be static)

C.Compile error at line 3 (static methods can't invoke this)

D.Compile error at line 4 (invalid argument type for method main )

E.44

Correct answer:

## 5.

## What is the result of compiling and running the following code?

**public class Tester{**

**staticintx = 4;**

**inty = 9;**

**public Tester(){**

**System.out.print(this.x); // line 1**

**printVariables();**

**}**

**public static voidprintVariables(){**

**System.out.print(x); // line 2**

**System.out.print(y); // line 3**

**}**

**public static void main(String... args) { // line 4**

**new Tester();**

**}**

**}**

A.Compile error at line 1 (static x must be only accessed inside static methods)

B.Compile error at line 3 (static methods can't make reference to non-static variables)

C.Compile error at line 4 (invalid argument type for method main)

D.49

E.Compile error at line 2 (must access x by writing Tester.x)

Correct Answer:

## 6. Which is true?

A."X extends Y" is correct if and only if X is a class and Y is an interface

B."X extends Y" is correct if and only if X is an interface and Y is a class

C."X extends Y" is correct if X and Y are either both classes or both interfaces

D."X extends Y" is correct for all combinations of X and Y being classes and/or interfaces

Answer :

## 7.

## Which of the following is true? 1. A class can extend more than one class. 2. A class can extend only one class but many interfaces. 3. An interface can extend many interfaces. 4. An interface can implement many interfaces. 5. A class can extend one class and implement many interfaces.

A.1 and 2

B.2 and 4

C.3 and 5

D.3 and 4

E.2 and 5

Answer :

## 8.What is output of the program?

**class Test{**

**public void display(intx, doubley){**

**System.out.println(x+y);**

**}**

**public double display(intp, doubleq){**

**return (p+q);**

**}**

**public static void main(String args[]){**

**Test test = newTest();**

**test.display(4, 5.0);**

**System.out.println(test.display(4, 5.0));**

**}**

**}**

A.9.0 9.0

B.9 9

C.Compilation Error

D.None of these

Answer :

## 9. Consider the following two classes declared and defined in two different packages, what can be added in class B to form what considered a correct access to class A from main() method of class B?

**packagesubPackage;**

**public class A { }**

**packageanotherPackage;**

**// line 1**

**public class B{**

**public static void main(String[] args){**

**// line 2**

**}**

**}**

## 1. At line1 add noting; At line2 add: new A(); 2. At line 1 add: import package.\*; at line 2 add : new subPackage.A(); 3. At line 1 add: import subPackage.\*; at line 2 add : new A(); 4. At line 1 add: import subPackage.A; at line 2 add : new A();

A.1 and 2

B.2 and 4

C.3 and 4

D.1 and 3

Answer :

## 10. Which statements are most accurate regarding the following classes?

**class A{**

**privateinti;**

**protectedintj;**

**}**

**class B extends A{**

**privateintk;**

**protectedintm;**

**}**

A.An object of B contains data fields i, j, k, m.

B.An object of B contains data fields j, k, m.

C.An object of B contains data fields j, m.

D.An object of B contains data fields k, m.

Answer :

## 11.

## A method within a class is only accessible by classes that are defined within the same package as the class of the method. Which one of the following is used to enforce such restriction?

A.Declare the method with the keyword public.

B.Declare the method with the keyword private.

C.Declare the method with the keyword protected.

D.Do not declare the method with any accessibility modifiers.

E.Declare the method with the keyword public and private.

Answer :

## 12.What is the result of compiling and running this program?

**class Mammal{**

**void eat(Mammal m){**

**System.out.println("Mammal eats food");**

**}**

**}**

**class Cattle extends Mammal{**

**void eat(Cattle c){**

**System.out.println("Cattle eats hay");**

**}**

**}**

**class Horse extends Cattle{**

**void eat(Horse h){**

**System.out.println("Horse eats hay");**

**}**

**}**

**public class Test{**

**public static void main(String[] args){**

**Mammal h = newHorse();**

**Cattle c = newHorse();**

**c.eat(h);**

**}**

**}**

A.prints "Mammal eats food"

B.prints "Cattle eats hay"

C.prints "Horse eats hay"

D.Class cast Exception at runtime.

E.None of these

Answer :