Core Java Assessment 2018 (Conceptual)

Name: _____

General Instructions:

- There are a total of **25** questions with **1 mark each**.
- **Tick (✓)** the correct answer.
- Maximum time allowed is 30 minutes.
- Only **ONE** of the choices is correct.

1. What will be the output of the following program?

```
class Super {
      public int i = 0;
      public Super(String text) {
            i = 1;
      }
}
class Sub extends Super {
      public Sub(String text) {
            super(text);
            i = 2;
      }
      public static void main(String args[]) {
            Sub sub = new Sub("Hello");
            System.out.println(sub.i);
      }
}
```

A. 0
B. 1
C. 2
D. Compiles and runs printing "Hello"

2. Which is the valid declarations within an interface definition?

A. public double methoda();
B. public final double methoda();
C. static void methoda(double d1);
D. protected void methoda(double d1);

3. You want subclasses in any package to have access to members of a superclass. Which is the most restrictive access that accomplishes this objective?

A. public
B. private
C. protected
D. transient

4. Which three piece of codes are equivalent to line 2?

```
public interface Foo {
      int a = 6; /* Line 2 */
}
```

I. final int a = 6;
II. public int a = 6;
III. static int a = 6;
IV. abstract int a = 6;
V. volatile int a = 6;

A. I, II and III.
B. II, III and V
C. III, IV and V
D. I, IV and V

5. Which of the following is the most restrictive access modifier that will allow members of one class to have access to members of another class within in the same package?

A. abstract
B. protected
C. default access
D. synchronized

6. Which of the following statements are incorrect?

A. Two or more methods with same name can be differentiated on the basis of their parameters data type.
B. Two or more method having same name can be differentiated on basis of number of parameters.
C. Any already defined method in java?s library can be defined again in the program with different data type of parameters.
D. If a method is returning a value the calling statement must have a variable to store that value.

7. Which is the one that does not extend the java.lang.Number package?

A. Float
B. Boolean
C. Long
D. none of these

8. Which class can never be a extended in java?

A. abstract class
B. parent class
C. Final class
D. none of these

9. Which of the following is used to fully abstract a class from its implementation?

A. Objects
B. Classes
C. Interfaces
D. All of the above

10. Consider the following scenario: Real champ Private Limited deals in manufacturing variety of chocolates. This organization manufactures three varieties of chocolates -

- Fruit Chocolates
- Rum Chocolates
- Milk Chocolates

A software system needs to be built. Which of the following options identifies the Classes and Objects?

A. Class: Real Champ Private Limited Objects: Chocolate
B. Class: Chocolate Objects: Fruit Chocolates, Rum Chocolates, Milk Chocolates
C. Class: Chocolate Objects: Milk Chocolates
D. Class: Fruit Chocolates Objects: Rum Chocolates

11. 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.

12. What will be the output of the following program?

```
public class Person {
      public void talk(){
            System.out.print("I am a Person ");
      }
}
public class Student extends Person {
      public void talk() {
            System.out.print("I am a Student ");
      }
}
public class Test {
      public static void main(String args[]) {
            Person p = new Student();
            p.talk();
      }
}
```

A. I am a Person
B. I am a Student
C. I am a Person I am a Student
D. I am a Student I am a Person

13. What will be the output of the following program?

```
class Person {
      public int number;
}
public class Test {
      public void doIt(int i , Person p) {
            i = 5;
            p.number = 8;
      }
      public static void main(String args[]) {
            int x = 0;
            Person p = new Person();
            new Test().doIt(x, p);
            System.out.println(x + " " + p.number);
      }
}
```

A. 0 8
B. 5 0
C. 0 0
D. 5 8

14. What will be the output of the following program?

```
class A {
      final public int GetResult(int a, int b) {
            return 0;
      }
}
class B extends A {
      public int GetResult(int a, int b) {
            return 1;
      }
}
public class Test {
      public static void main(String args[]) {
            B b = new B();
            System.out.println("x = " + b.GetResult(0, 1));
      }
}
```

A. x = 0
B. x = 1
C. Compilation fails
D. An exception is thrown at runtime

15. What will be the output of the following program?

```
class Test {
      public static void main(String [] args) {
            Test p = new Test();
            p.start();
      }
      void start() {
            boolean b1 = false;
            boolean b2 = fix(b1);
         System.out.println(b1 + " " + b2);
      }
      boolean fix(boolean b1) {
            b1 = true;
            return b1;
      }
}
```

A. true true
B. false true
C. true false
D. false false

16. What will be the output of the following program?

```
class PassS {
      public static void main(String [] args) {
            PassS p = new PassS();
            p.start();
      }
      void start() {
            String s1 = "slip";
            String s2 = fix(s1);
            System.out.println(s1 + " " + s2);
      }
      String fix(String s1){
            s1 = s1 + "stream";
            System.out.print(s1 + " ");
            return "stream";
      }
}
```

A. slip stream
B. slipstream stream
C. stream slip stream
D. slipstream slip stream

17. Does a class inherit the constructors of its superclass?

A. Always
B. Never
C. Sometimes, depending on certain criteria

18. How many instances of an abstract class can be created?

A. 1
B. infinite
C. 10
D. 0

19. Which of the following statement is correct?

A. A constructor is called at the time of declaration of an object.
B. A constructor is called at the time of use of an object.
C. A constructor is called at the time of declaration of a class.
D. A constructor is called at the time of use of a class.

20. Which of the following is correct about function overloading?

    A. The types of arguments are different
    B. The order of argument is different
    C. The number of argument is same
    D. Both A and B

21. Can we overload static methods?

    A. Always
    B. Never
    C. Sometimes, depending on certain criteria

22. What will be the output of the following program?

```
class CalculateArea {
      void area(int length){
            System.out.print(length*2);
       }
      void area(int length , int width) {
            System.out.println(length*width);
       }

      public static void main(String args[]){
            CalculateArea obj=new CalculateArea();
            obj.area(10);
            obj.area(20,20);
      }
}
```

    A. 20 200
    B. 20 400
    C. 10 200
    D. Compilation error occurs

23. Which of the following is false for package access modifier?

    A. The class which has a public modifier can be accessed from all the classes from the particular package and also from different packages
    B. The class which has private as the modifier cannot be accessed by any class even within the package
    C. Both A and B
    D. The class which has the default modifier cannot be accessed by all the classes of that particular package

24. What is the process by which we can control what parts of a program can access the members of a class?

A. Polymorphism
B. Abstraction
C. Encapsulation
D. Recursion

25. What will be the output of the following program?

```
abstract class A {
      int i;
      abstract void display();
}
class B extends A {
      int j;
      void display() {
            System.out.print(j + " ");
      }
}

class Main {
      public static void main(String args[]) {
            B obj1 = new B();
            obj1.j = 2;
            obj1.display();
            A obj2 = new B();
            obj2.i = 2;
            obj2.display();
      }
}
```

A. 2 0
B. 0 2
C. Compile-time error
D. Run-time error