1. What is the output of the following program ?

```java
class A{
    public A(){
        System.out.println("A");
    }
    public void Print(){
        System.out.println("B");
    }
}
class B extends A{
    public B(){
        System.out.println("C");
    }
    public void Print(){
        System.out.println("D");
    }
}
public class Program {
    public static void main(String[] args) {
        B b = new B();
        b.Print();
    }
}
```

a. ABC

b. CB

c. CD

d. ACD

2. What is the output of the following program ?

```
class A{
    public void Print(){
        System.out.print("A");
    }
}
class B extends A{
    public B(){
        System.out.print("B");
    }
    public  void Print(){
        System.out.print("C");
    }
}
public class Program {
    public static void main(String[] args) {
        A a = new B();
        a.Print();
        System.out.println();
    }
}
```

a.   BC

b.   AC

c.   BA

d.   Runtime error .

3. What is the output of the following program ?

```
class A{
    public static void Print(){
        System.out.print("A");
    }
}
class B extends A{
    public B(){
        System.out.print("B");
    }
    public static void Print(){
        System.out.print("C");
    }
}
public class Program {
    public static void main(String[] args) {
        A a = new B();
        a.Print();
        System.out.println();
    }
}
```

a.   AB

b.   BA

c.   AC

d.   BC

4. What is the output of the following program ?

```java
class A{
    public static void Print(){
        System.out.print("1");
    }
}
class B extends A{
    public B(){
        System.out.print("3");
    }
    public static void Print(){
        System.out.print("2");
    }
}
public class Program {
    public static void main(String[] args) {
        B b = new B();
        b.Print();
        System.out.println();
    }
}
```

a.   13

b.   12

c.   23

d.   32

5. What is the output of the following program ?

```java
interface I{
    void Print();
}
class A implements I{
    public A(){    System.out.print("1");    }
    public  void Print(){        System.out.print("2");    }
}
class B implements I{
    public B(){    System.out.print("3");    }
    public  void Print(){    System.out.print("4");    }
}
public class Program {
    public static void main(String[] args) {
        I i = new A();
        i.Print();
        i = new B();
        i.Print();
        System.out.println();
    }
}
```

a.   1324

b.   1234

c.   2314

d.   Compile-time error.

6. What is the output of the following program ?

```java
class A {
    int x = 1;
    public A(){  x = 2;  }
    public  void Print(){    System.out.print(x);    }
    class B{
        int y = 3;
        public void Print(){   System.out.print(y * x);    }
    }
}
public class Program {
    public static void main(String[] args) {
        A a = new A();
        A.B b = a.new B();
        b.Print();
    }
}
```

a.   6
b.   2
c.   1
d.   3

7. What is the output of the following program ?

```java
class A {
    static int z = 3;
    public A(){  z = 1;  }
    public  void Print(){    System.out.print(z);    }
    static class B{
        int x = 2;
        public void Print(){    System.out.print(x * z);    }
    }
}
public class Program {
    public static void main(String[] args) {
        A.B b = new A.B();
        b.Print();
        System.out.println();
    }
}
```

a.   6

b.   2

c.   1

d.   3

8. What is the output of the following program ?

```java
class A {
    static int a = 1;
    static {
        a = 3 ;
    }
    public A(){  a = 1;  }
    public  void Print(){   System.out.print(a*a);   }
    static class B{
        int x = 3;
        public void Print(){   System.out.print(x + a);   }
    }
}
public class Program {
    public static void main(String[] args) {
        A.B b = new A.B();
        b.Print();
        System.out.println();
    }
}
```

a.   9

b.   3

c.   4

d.   6

9. What is the output of the following program ?

```java
import java.util.*;
public class Program {
    public static void main(String[] args) {
        int s = 0;
        List  arr = new ArrayList();
        arr.add(1);
        arr.add(3);
        arr.add(2);
        for(int i:arr){
            s+=i;
        }
        System.out.println("s="+s);
    }
}
```

a.   s=6
b.   s=0
c.   s=3
d.   Compile-time error

10. What is the output of the following program ?

```java
import java.util.*;
public class Program {
    public static void main(String[] args) {
        int s = 0;
        List<Integer> arr = new ArrayList();
        arr.add(4);
        arr.add(2);
        arr.add(5);
        for(int i:arr){
            s+=i;
        }
        System.out.println(s/arr.size());
    }
}
```

a. 0
b. 11
c. 3.33
d. 3

11. Which is the characteristics of the Java Language ?

a. Support the object oriented .

b. Dynamic linking for Web Application.

c. Low performance for the computing.

d. The weak security .

12. What is the Java Platform ?

a. A platform is the hardware or software environment was developed by any programming language

b. A software environment in which a program runs on the local machine

c. A platform is the hardware or software environment in which a program runs

d.All of the orthers

13. Choose a correct statement about array in Java :

a. An array is a container object that holds a fixed number of values of a single type.

b. The length of an array is established when the array is added elements.

c. Each item in an array is called an element, and each element is accessed by its numerical index started from 1.

d. None of the others

14. Which of the following statements related to Object is true?

    1. Objects are key to understanding object-oriented technology

    2. Objects have three characteristics: state, behavior, and actions

    3. An object stores its state in fields and exposes its behavior through methods

a. 1 & 2

b. 2 & 3

c. 1 & 3

d. 1, 2 & 3

15. Which of the following statements related to Software Objects is true?

    1. Modularity

    2. Information-hiding

    3. Code re-use in the same program.

    4. Pluggability and debugging easier.

a. 1, 2 & 4

b. 2, 3 & 4

c. 1, 2 & 3

d. 1, 2, 3 & 4

16. For the following statements:

1. An interface is a group of related methods with empty bodies

2. Object-oriented programming allows classes to inherit commonly used state and behavior from other classes

Choose the correct answer :

a. 1 & 2 are false

b. 1 & 2 are true

c. 1 is true, 2 is false

d. 1 is false, 2 is true

17. What is a Package?

a. A package is a namespace that organizes a set of related objects and classes

b. A package is a namespace that organizes a set of related classes and interfaces

c. A package is a folder that organizes a set of related classes.

d. A package is a namespace that organizes a set of related interfaces

18. Which of the following statements related to encapsulation is true?

1. Class consists of data (fields or properties) and methods

2. Data of a class should be hidden from the outside.

3. All behaviors should be accessed only via methods.

4. A method shouldn't have a boundary condition

a. 1, 2 & 4

b. 2, 3 & 4

c. 1, 2 & 3

d. 1, 2, 3 & 4

19. Which of the following statements related to the final keyword is true?

1. Final class is the class can not have sub-class

2. Final data is a variable that can modify the value.

3. The final method is a method can not be overridden.

a. 1, 2 & 3

b. 2 & 3

c. 1 & 2

d. 1 & 3

20. Which of the following statements are true?

1. Object variable is the variable of each object

2. The class variable is the variable is shared in all objects of the class. It is stored separately and declared with the modifier static

3. Class variables are stored in the same memories with the object variables.

a. 1, 2 & 3

b. 2 & 3

c. 1 & 2

d. 1 & 3