1. **What is the output of this program?**
   ```
   public class Test1{
      public static void main(String args[]) {
         double a, b;
         a = 3.0;
         b = 4.0;
      double c = Math.sqrt(a * a + b * b);
      System.out.println(c);
      }
   }
   ```
   - ○ 25.0
   - ○ Compilation Error
   - ◉ 5.0
   - ○ 7.0

2. **What is the range of short data type in Java?**
   - ○ -128 to 127
   - ◉ -32768 to 32767
   - ○ -2147483648 to 2147483647
   - ○ None of the mentioned

3. **What is the range of byte data type in Java?**
   - ◉ -128 to 127
   - ○ -32768 to 32767
   - ○ -2147483648 to 2147483647
   - ○ None of the mentioned

4. **Which of the following is not a primitive data type in Java?**
   - ○ int
   - ○ float
   - ○ boolean
   - ◉ String

5. **What is the size of the "char" data type in Java?**
   - ○ 8
   - ◉ 16

○ 32

○ 64

6. **Which of the following data types is used to represent true/false values in Java?**

   ◉ **boolean**

   ○ char

   ○ int

   ○ byte

7. **What is the scope of a local variable in Java?**

   ○ It is accessible throughout the entire program

   ◉ **It is accessible only within the method where it is declared**

   ○ It is accessible within the class where it is declared

   ○ It is accessible within the package where it is declared

8. **In Java, which keyword is used to make a constant variable?**

   ◉ **final**

   ○ const

   ○ constant

   ○ static

9.

   Which operator is used to perform explicit type casting in Java?

   ◉ **( )**

   ○ *

   ○ %

   ○ &

10. **What will be the value of** `result` **after the following code snippet?**

```
int a = 5;
int b = 7;
boolean result = a > 3 && b < 10;
```

   ◉ **true**

   ○ false

   ○ compilation error

○ runtime error

11. What is the value of x after the following code snippet?

```
class Operator {
  public static void main(String[] args) {
    int x = 8;
    x >>= 2;
    System.out.println(x);
  }
}
```

◉ 2

○ 5

○ 22

○ 4

12.

Which of the following variables can be accessed using the class name without creating an instance of the class?

○ Local variable

◉ static variable

○ Method parameters

○ instance variable

13.

What happens to local variables once the method or block in which they are declared completes execution?

○ They are accessible from any other method

◉ They are destroyed and their memory is released

○ They are converted into instance variables

○ They become static variable

14. what will be the output of the code

```
public class ScopeDemo {
  int y = 5;
  public static void main(String[] args) {
    ScopeDemo sd = new ScopeDemo();
    int x = 10;
    System.out.println(y + x);
  }
}
```

```
}
```

- ○ runtime error
- ○ 15
- ○ 10
- ◉ compilation error

15. **What is the scope of a variable declared within a** `for` **loop in Java?**

- ○ Local to the method or block containing the loop
- ◉ Local to the loop body only
- ○ Local to the entire class
- ○ Global across all classes in the package

16. **what is the return type of a method that does not return any value?**

- ◉ void
- ○ null
- ○ enum
- ○ int

17. **In Java, a method is:**

- ○ A variable that stores data
- ◉ A reusable block of code that performs a specific task
- ○ A way to declare a class
- ○ . A type of loop construct

18. **What is the output when you execute the following code?**
```
class test{
  public static void main(String[] args) {
    int i = 100;
    switch(i){
      case 100: System.out.println(i);
      case 200: System.out.println(i);
      case 300: System.out.println(i);
    }
  }
}
```

- ○ Nothing is printed

○ Compile time error

◉ The values 100, 100, 100 printed

○ Only 100 is printed

19. .What will be the output of the below code?
```
public static void main(String args[]) {
   int i = 10;
   if(i) {
      System.out.println("Hello");
   }
   else {
      System.out.println("Bye");
   }
}
```
○ Hello

○ runtime error

○ Bye

◉ compilation error: cannot convert from int to boolean

20. What will be the output of the below program?
```
public class Demo {
   public static void main(String[] args) {
      int num1 = 25;
      int num2 = 34;
      if (num1 / 3 >= num2 / 4) {
         num1 = num1 + 1;
      } else {
         num2 = num2 + 1;
      }
      System.out.println(num1 + "," + num2);
   }
}
```
○ 25,35

○ 25,34

◉ 26,34

○ 26,36

21. What will be the output of the below program?
```
public class Demo {
```

```java
    public static void main(String[] args) {
        int k = 1;
        switch (k) {
        default:
            System.out.println("Hello");
        case 1:
            System.out.println("Welcome");
        case 2:
            System.out.println("To");
        case 3:
            System.out.println("Infosys");
            break;
        }
    }
}
```

- ○ Hello
- ○ Welcome
- ● Welcome To Infosys
- ○ Compilation error as default must be the last case in the switch block

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

```java
public class Demo {
    public static void main(String[] args) {
        int k = 1;
        switch (k) {
        default:
            System.out.println("Have");
        case 'a':
            System.out.println("A");
        case 'b':
            System.out.println("Good Day");
        }
    }
}
```

- ○ Have A
- ○ Compilation error due to datatype mismatch
- ○ Have
- ● Have A Good Day

23.

What will be the output of following program?

```
public class Test12{
public static void main(String agrs[]){
    for(int i=1, j=1; i<5 ; i++, j++)
       System.out.print(i+""+j);
  }
}
```

○ Error

○ 12345

○ 1122334455

◉ 11223344

24. Consider the given code snippet and select the correct answer.

```
public class Test13{
public static void main(String agrs[]){
for(int i=1, j=1; i<5 ; i++, j++)
   System.out.print(i+j);
}}
```

○ 12345

◉ 2468

○ Error

○ 11223344

25. In a `for` loop, which part is responsible for initializing the loop variable?

◉ Initialization block

○ Condition block

○ Increment block

○ Loop body