

3. What will be the output of the following code snippet?

```
public class EnumTest {  
    enum Day {  
        MONDAY, TUESDAY, WEDNESDAY, THURSDAY, FRIDAY,  
        SATURDAY, SUNDAY  
    }  
  
    public static void main(String[] args){  
        for (Day day:Day.values()){  
            System.out.print(day + " ");  
        }  
    }  
}
```

- a. MONDAY, TUESDAY, WEDNESDAY, THURSDAY, FRIDAY, SATURDAY, SUNDAY
- b. MONDAY TUESDAY WEDNESDAY THURSDAY FRIDAY SATURDAY SUNDAY
- c. Compilation error.
- d. MONDAY TUESDAY WEDNESDAY THURSDAY FRIDAY SATURDAY

4. What will be the output of the following code snippet?

```
import java.util.Arrays;  
import java.util.List;  
import java.util.stream.Collectors;  
public class StreamTest{  
    public static void main(String[] args){  
        List<String> items = Arrays.asList("apple", "banana", "cherry", "date");  
        List<String> result = items.stream()  
            .filter(s -> !s.startsWith("a"))  
            .collect(Collectors.toList());  
        System.out.println(result);  
    }  
}
```

- a. [apple, banana]
- b. [apple, cherry]
- c. [banana, cherry, date]
- d. [apple]

10. What will be the output of the following code snippet?

```
public class StringBuilderTest {  
    public static void main(String args) {  
        StringBuilder sb = new StringBuilder ("Hello");  
        sb.append(" World");  
        sb.insert(6, "Java ");  
        sb.replace(0, 5, "Hi");  
        sb.delete(2, 7);  
        System.out.println(sb.toString());  
    }  
}
```

- a. Hi World
- b. HiJava World
- c. Hi Java World
- d. Hi WorldJava

15. Which of the following declarations does not correctly initialize an integer variable in java?

- a. int e = 1_000_000;
- b. long f = 0b1101_0101_0110_1001L;
- c. int a = 0b1010;
- d. byte d = 0xFF_FF;
- e. long b = 0x1F 4A;
- f. short c = 072;

17. Which of the following statements about the enhanced for loop introduced in java 5 is correct?

- a. The enhanced for loop can only be used with arrays.
- b. The enhanced for loop allows modification of the collection elements
- c. The enhanced for loop does not require the collection to implement the iterable
- d. The enhanced for loop can be used with any Collection type and arrays.

20. Which of the following statements accurately describes the relationships that can be established between classes and objects?

- a. Composition represents a "has-a" relationship where one class defines an instance of another class.
- b. Composition should be preferred over inheritance to promote code reuse and flexibility.
- c. Inheritance represents an "is-a" relationship where one class defines a sub-class of another class.

- d. Both inheritance and composition can be used together to model complex inter-relationships.
- e. Inheritance should be preferred over composition to promote code reuse and flexibility.
- f. Usage (or association) represents a "uses-a" relationship where one class uses methods or instances of another class.

21. What will be the output of the following code snippet?

```
class A{
    Public A(){
        System.out.println("A's constructor");
    }
}
class B extends A{
    Public B(){
        super();
        System.out.println("B's constructor");
    }
}
class C extends B{
    Public C(){
        System.out.println("C's constructor");
    }
}
public class Test{
    Public static void main(String[] args){
        C c = new C();
    }
}
```

- a. A's constructor
C's constructor
B's constructor
- b. A's constructor
B's constructor
C's constructor
- c. B's constructor
A's constructor
C's constructor

25. Which of the following lines of code correctly uses a method from the String class to get the length of a string in Java?

- a. `int length = "Hello World".count();`
- b. `int length = "Hello World".getLength();`
- c. `int length = "Hello World".length();`
- d. `int length = "Hello World".len();`
- e. `int length = "Hello World".size();`

27. ¿Cuál es la función principal de JDK (Java Development Kit)?

- a. Permitir la edición de archivos JHTML y JCSS
- b. Servir como un servidor web para aplicaciones Java
- c. Ninguna opción es correcta
- d. Proporcionar un entorno de ejecución para aplicaciones Java
- e. Ofrecer herramientas necesarias para compilar, depurar y ejecutar aplicaciones Java

31. Which of the following statements about the 'throw' keyword is true?

- a. It is used to define the cleanup code that must be executed.
- b. It is used to manually throw an exception.
- c. It is used to catch exceptions thrown by other methods.
- d. It is used to declare that a method can throw an exception.

32. What will be the output of the following code snippet?

```
import java.util.Arrays;
import java.util.List;
import java.util.stream.Collectors;
public class StreamTest {
    public static void main(String[] args) {
        List<String> items = Arrays.asList("apple", "banana", "cherry", "date");
        List<String> result = items.stream()
            .filter(s -> s.startsWith("a"))
            .collect(Collectors.toList());
        System.out.println(result);
    }
}
```

- a. [apple, cherry]
- b. [apple, banana]
- c. [apple]
- d. [banana, cherry]

34. When a byte is added to a char in Java, what is the result type?

- a. int
- b. short
- c. char
- d. You cannot add a byte to a char.
- e. byte

37. Which of the following lines of code correctly concatenates two Strings in Java?

- a. String result = "Hello".merge(" ", "World");
- b. String result = "Hello" + " " + "World";
- c. String result = "Hello".append(" ").append("World");
- d. String result = new StringBuilder("Hello").add(" ").add("World").toString();
- e. String result = concat("Hello", " ", "World");

38. What will be the result of the following bitwise OR operation?

```
int x = 9;
int y = 4;
int result = x | y;
System.out.println(result);
```

- a. 13
- b. 5
- c. 12
- d. 1

39. What will be the output of the following code snippet?

```
public class ScopeTest {
    private int value = 10;
    public void modifyValue() {
        value = 30;
        int value = 20;
        System.out.println(this.value);
    }
    public static void main(String[] args) {
        ScopeTest test = new ScopeTest();
        test.modifyValue();
    }
}
```

- a. 10
- b. Compilation error.
- c. 30

d. 20

40. What will be the result of the following code execution?

```
public class ArrayTest {  
    public static void main(String[] args) {  
        int[][] matrix = {  
            {1, 2, 3},  
            {4, 5, 6},  
            {7, 8, 9}  
        };  
  
        int sum = 0;  
        for (int i = 0; i < matrix.length; i++) {  
            sum += matrix[i][i];  
        }  
  
        System.out.println(sum);  
    }  
}
```

a. 15

b. 24

c. 12

d. 18

41. What will be the output?

```
class Animal {  
    public void makeSound() {  
        System.out.println("Some sound");  
    }  
}
```

```
class Dog extends Animal {  
    @Override  
    public void makeSound() {  
        System.out.println("Bark");  
    }  
}
```

```
public class Test {
```

```
public static void main(String[] args) {  
    Animal myDog = new Dog();  
    myDog.makeSound();  
}  
}
```

- a. Bark
- b. Runtime error
- c. No output
- d. Compilation error

44. What is the primary purpose of the 'javac' command in Java?

- a. To package Java classes into JAR files.
- b. To execute Java applications.
- c. To compile Java source files into bytecode.
- d. To monitor and manage Java applications.

45. What will be the output of the following code snippet?

```
public class ScopeTest {  
    private int value = 10;  
  
    public void setValue(int value) {  
        this.value = value;  
    }  
  
    public void printValue() {  
        System.out.println(value);  
    }  
  
    public static void main(String[] args) {  
        ScopeTest test = new ScopeTest();  
        test.setValue(40);  
        test.printValue();  
    }  
}
```

- a. 10
- b. 20
- c. 30
- d. 40

46. What will be the result of the following boolean expression?

```
boolean x = true;
boolean y = false;
boolean result = x && y || x;
System.out.println(result);
```

- a. Compilation error.
- b. Runtime error.
- c. false
- d. true

47. What will be the output of the following code snippet?

```
int x=6;
int y=3;
int z=x&y | x;
System.out.println(z);
```

- a. 3
- b. 7
- c. 9
- d. 6

49. Which of the following statements about ArrayList is true?

- a. ArrayList elements are stored in a tree structure
- b. ArrayList can store primitive types directly
- c. ArrayList allows duplicate elements
- d. ArrayList does not maintain the insertion order of elements

50. What will be the output of the following code snippet?

```
public class StaticNonStaticBlockTest {
    static {
        System.out.println("Static block");
    }

    {
        System.out.println("Instance block");
    }

    public StaticNonStaticBlockTest() {
        System.out.println("Constructor");
    }
}
```



```
public static void staticMethod() {  
    System.out.println("Static method");  
}
```

```
public static void main(String[] args) {  
    StaticNonStaticBlockTest.staticMethod();  
    new StaticNonStaticBlockTest();  
}
```

a. Compilation error.

b. Static block

Static method

Instance block

Constructor

c. Static method

Static block

Instance block

Constructor

d. Static block

Instance block