

## **Topic Related Questions**

### **1. WHAT IS METHOD OVERLOADING?**

**Ans:-** It's when a class has multiple methods with the same name but different parameter types or counts. It helps improve code readability and reusability.

### **2. HOW DO YOU HANDLE DIVIDE-BY-ZERO?**

**Ans:-** Before performing division, check if the denominator is zero using an if statement. If zero, show an error or skip the operation.

### **3. DIFFERENCE BETWEEN == AND .EQUALS()?**

**Ans:-** == Compares memory addresses (reference), while .equals() compares actual content or values (mostly used with objects like Strings).

### **4. WHAT ARE THE BASIC DATA TYPES IN JAVA?**

**Ans:-** Java has 8 primitive types: int, float, double, char, boolean, byte, short, and long.

### **5. HOW IS SCANNER USED FOR INPUT?**

**Ans:-** Scanner reads user input from the console. Example:

```
Scanner sc = new Scanner(System.in); int num = sc.nextInt();
```

### **6. EXPLAIN THE ROLE OF A LOOP.**

**Ans:-** Loops allow code to run repeatedly based on a condition. They're used for tasks like reading input, calculations, or displaying results.

### **7. DIFFERENCE BETWEEN WHILE AND FOR LOOP?**

**Ans:-** While is preferred when the number of iterations isn't known. for is better when the number of times is known beforehand.

### **8. WHAT IS THE JVM?**

**Ans:-** JVM (Java Virtual Machine) is part of the JRE that runs Java bytecode. It makes Java programs executable on any platform.

### **9. HOW IS JAVA PLATFORM-INDEPENDENT?**

**Ans:-** Java code is compiled into bytecode, which runs on the JVM. Since JVMs exist for all major platforms, Java runs anywhere.

### **10. HOW DO YOU DEBUG A JAVA PROGRAM?**

**Ans:-** You can debug by printing variable values (System.out.println), using IDE debugging tools (breakpoints), or stepping through code.