Java Interview Questions & Answers (1–60)

1. What is Java?
Answer: Java is a high-level, object-oriented, platform-independent programming language.

2. Why is Java platform independent?
Answer: Because Java code is compiled into bytecode which runs on JVM on any platform.

3. What are the features of Java?
Answer: Simple, Object-Oriented, Platform Independent, Secure, Robust, Multithreaded.

4. What is JVM?
Answer: JVM executes Java bytecode and provides runtime environment.

5. What is JRE?
Answer: JRE contains JVM and libraries required to run Java applications.

6. What is JDK?
Answer: JDK contains JRE and development tools to create Java programs.

7. What is bytecode?
Answer: Intermediate code generated by Java compiler (.class file).

8. What is OOP?
Answer: A programming paradigm based on objects and classes.

9. What are OOP principles?
Answer: Encapsulation, Inheritance, Polymorphism, Abstraction.

10. What is a class?
Answer: A blueprint for creating objects.

11. What is an object?
Answer: An instance of a class.

12. What is encapsulation?
Answer: Binding data and methods into a single unit.

13. What is inheritance?
Answer: Acquiring properties of one class into another.

14. What is polymorphism?
Answer: Ability to perform a task in multiple ways.

15. What is abstraction?
Answer: Hiding implementation details and showing essential features.

16. What are variables in Java?
Answer: Containers used to store data values.

17. What are data types in Java?
Answer: They specify the type of data a variable can hold.

18. How many data types in Java?
Answer: Two: Primitive and Reference.

19. What are primitive data types?
Answer: Basic predefined data types.

20. List primitive data types.
Answer: byte, short, int, long, float, double, char, boolean.

21. What is reference data type?
Answer: Stores address of objects like class, array, interface.

22. What is size of int?
Answer: 32 bits.

23. What is size of char?
Answer: 16 bits.

24. Difference between float and double?
Answer: double has more precision than float.

25. What is type casting?
Answer: Converting one data type into another.

26. What is implicit casting?
Answer: Automatic conversion by compiler.

27. What is explicit casting?
Answer: Manual conversion by programmer.

28. What is static keyword?
Answer: Used to define class-level members.

29. What is final keyword?
Answer: Used to restrict modification.

30. What is main method?
Answer: Entry point of Java program.

31. Why main method is static?
Answer: So JVM can call it without object.

32. Why main method is void?
Answer: It does not return value to JVM.

33. What is method?
Answer: A block of code that performs a task.

34. What is constructor?
Answer: Used to initialize objects.

35. Difference between constructor and method?
Answer: Constructor initializes object; method performs operation.

36. What are data types in Java?
Answer: They define the type of value a variable can store.

37. Types of data types?
Answer: Primitive and Reference.

38. What are Primitive Data Types?
Answer: Predefined data types for simple values.

39. List primitive data types.
Answer: byte, short, int, long, float, double, char, boolean.

40. Classification of primitive data types?

Answer: Numeric and Non-Numeric.

41. Size of byte, short, int, long?
Answer: 8, 16, 32, 64 bits respectively.

42. Size of float and double?
Answer: 32 bits and 64 bits.

43. Size of char?
Answer: 16 bits.

44. What is Reference Data Type?
Answer: Stores object references.

45. Static vs Dynamic typed language?
Answer: Static: type compulsory; Dynamic: type optional.

46. Is Java statically typed?
Answer: Yes.

47. Examples of statically typed languages?
Answer: Java, C, C++, C#.

48. Examples of dynamically typed languages?
Answer: Python, JavaScript.

49. What are comments?
Answer: Used to improve readability; ignored by compiler.

50. Types of comments?
Answer: Single-line, Multi-line, Documentation.

51. What is documentation comment?
Answer: Used to generate API docs.

52. What happens if no class is written?
Answer: Compiler creates implicit class (Java 21+).

53. Role of Java compiler?
Answer: Converts source code to bytecode.

54. What is JVM?
Answer: Executes bytecode.

55. What is main method?
Answer: Starting point of program.

56. Why main method return type void?
Answer: No value returned.

57. What if main return type is not void?
Answer: Compilation error.

58. Types of methods in Java?
Answer: Static and Non-static.

59. What is static method?
Answer: Called without object.

60. What is non-static method?
Answer: Requires object to call.