

1. Which of the following is not a primitive data type in Java?
 - a) int
 - b) float
 - c) String
 - d) char
2. What is the size of a `byte` in Java?
 - a) 4 bits
 - b) 8 bits
 - c) 16 bits
 - d) 32 bits
3. What is the default value of a `boolean` variable in Java?
 - a) true
 - b) false
 - c) 0
 - d) null
4. Which data type should be preferred for storing currency values precisely?
 - a) float
 - b) double
 - c) int
 - d) BigDecimal
5. Which of these can store the largest value?
 - a) int
 - b) float
 - c) double
 - d) long
6. Which of the following data types does **not** allow decimals?
 - a) int
 - b) float
 - c) double
 - d) all allow decimals
7. What is the result type of this expression: `5 + 2.0`?
 - a) int
 - b) float
 - c) double
 - d) long
8. Which data type should be used to store a single character?
 - a) String
 - b) char
 - c) byte
 - d) character
9. Which of these values can a `char` store in Java?
 - a) Only alphabetic letters
 - b) Only numbers
 - c) A single Unicode character
 - d) A string of characters
10. Which of the following is a valid declaration of a `short` variable?
 - a) `short s = 100000;`

- b) `short s = 'A';`
- c) `short s = 3.14;`
- d) `short s = "10";`

11. Which keyword is used to define a constant value?
- a) `static`
 - b) `const`
 - c) `final`
 - d) `define`
12. Which is the correct literal for a long value?
- a) `100L`
 - b) `100l`
 - c) Both a and b
 - d) Just `100`
13. What will be the type of the result of `5 / 2` in Java?
- a) `float`
 - b) `double`
 - c) `int`
 - d) `long`
14. What happens when you assign a double value to an int variable directly?
- a) It gets automatically converted
 - b) Compilation error
 - c) Rounded off
 - d) Value becomes null
15. How many bytes does a `double` take in memory?
- a) 2
 - b) 4
 - c) 8
 - d) 16
16. Which is larger in range: `int` or `float`? a) `int`
- b) `float`
 - c) both are same
 - d) depends on the number
17. Which of the following data types can cause a **loss of precision** during conversion?
- a) `int` to `long`
 - b) `double` to `float`
 - c) `long` to `float`
 - d) `float` to `double`
18. Which of these will cause a **compile-time error**? a) `byte b = 128;`
- b) `int i = 1000;`
 - c) `char c = 'A';`
 - d) `float f = 12.3f;`
19. What will be the result of this expression: `'A' + 1`? a) B
- b) A1
 - c) 66
 - d) Error

20. Which of these is **not** true for Java primitive data types?
- a) They are not objects
 - b) They are stored by value
 - c) They all start with uppercase letters
 - d) They have fixed sizes
21. Which of the following data types is **signed**? a) byte
- b) char
 - c) short
 - d) All except char
22. Which value is valid for a `byte` variable?
- a) 200
 - b) -130
 - c) 0
 - d) 300
23. What is the range of a Java `short`? a) -128 to 127
- b) -32,768 to 32,767
 - c) -2^{31} to $2^{31} - 1$
 - d) 0 to 65535
24. Which is the **smallest** floating-point data type in Java?
- a) float
 - b) double
 - c) decimal
 - d) real
25. Which of the following is **true** about a `String`? a) It is a primitive type
- b) It can be null
 - c) It holds only one character
 - d) It is stored by value
26. Which is a correct way to declare a float value?
- a) `float f = 1.2;`
 - b) `float f = "1.2f";`
 - c) `float f = 1.2f;`
 - d) `float f = (float)"1.2";`
27. What will be the output of: `System.out.println(10/0);`
- a) Infinity
 - b) 0
 - c) `ArithmeticException`
 - d) `Compilation Error`
28. Which of the following is **not allowed**? a) `double d = 12.3;`
- b) `int i = 'A';`
 - c) `char c = 65;`
 - d) `boolean b = 0;`
29. In which situation is **type casting** required?
- a) `int` to `byte`
 - b) `long` to `int`
 - c) `double` to `int`
 - d) All of the above

30. What is the size of a `char` in Java?

- a) 8 bits
- b) 16 bits
- c) 32 bits
- d) Platform-dependent