











Topic: Primitive Data Types

Direct Questions

1. What is the default value of a **boolean** in Java?
 - a) true
 - b) false 
 - c) 0
 - d) null
2. Which of the following is a valid floating-point literal?
 - a) 10.2d
 - b) 20.3f
 - c) Both a and b 
 - d) 20
3. Which primitive data type has the highest precision?
 - a) float
 - b) double 
 - c) int
 - d) long
4. What is the size of **int** in Java?
 - a) 16 bits
 - b) 32 bits 
 - c) 64 bits
 - d) Platform dependent
5. Which of these is not a primitive data type?
 - a) char
 - b) byte
 - c) String 
 - d) short





Scenario-Based Questions

6. You want to store a large whole number (more than 2 billion). Which type should you use?
 - a) int
 - b) float
 - c) long 
 - d) short
7. If you declare **byte b = 130;**, what happens?
 - a) Compiles fine
 - b) Runtime error

- c) Compilation error 
 - d) Outputs 130
8. **You're handling grades from A to F. Which data type fits best?**
- a) int
 - b) char 
 - c) byte
 - d) String
9. **To save memory in a mobile app, which data type is preferable for age (0–120)?**
- a) int
 - b) byte 
 - c) short
 - d) float
10. **You want to represent gender (M/F). What is most efficient?**
- a) String
 - b) boolean
 - c) char 
 - d) int

Topic: Variables

Direct Questions

1. **Which of these is a correct variable declaration?**
- a) int 1x = 10;
 - b) float number = "10.5";
 - c) double salary = 50000.00; 
 - d) char = 'a';
2. **What is the scope of a local variable?**
- a) Entire class
 - b) Method where it is declared 
 - c) Package
 - d) Public
3. **Which keyword is used to define a constant in Java?**
- a) const
 - b) immutable
 - c) final 
 - d) static
4. **Which variable type is shared among all instances of a class?**
- a) instance variable
 - b) static variable 

- c) local variable
- d) final variable

5. What will happen if a variable is used without initializing?

- a) Compilation error for local ☒
- b) Will default to 0
- c) Runtime error
- d) Infinite loop

◆ Scenario-Based Questions

6. You need a variable that holds employee ID across all objects. What will you use?

- a) instance variable
- b) final variable
- c) static variable ☒
- d) global variable

7. You want a variable that cannot be changed once assigned. Which is best?

- a) static
- b) final ☒
- c) volatile
- d) const

8. You want a variable that is accessible only inside a specific method. What is it?

- a) class variable
- b) static variable
- c) global variable
- d) local variable ☒

9. In a method, you declare `int age = 30;` twice. What happens?

- a) Overrides previous
- b) No issue
- c) Compilation error ☒
- d) Prints twice

10. You want to ensure a variable is shared across all threads and not cached. Which modifier?

- a) synchronized
- b) static
- c) volatile ☒
- d) final