Class 9

Chapter 4(2026-27)

Values and Types

A. Tick (✓) the correct answer

1. Number of alphabets used in Java code is _____.

a. 26
b. 32
c. 52
d. Both a and c

Answer: d. Both a and c ✓
Explanation: Java uses both uppercase (26) + lowercase (26) = 52 alphabets.

2. What is the default value of a boolean data type in Java?

a. true
b. false
c. 0
d. null

Answer: b. false ✓

3. What type of token is + in Java?

a. Keyword
b. Literal
c. Operator
d. Identifier

Answer: c. Operator ✓

4. Java has a total of _____ escape sequences.

a. seven
b. five
c. eight
d. twelve

Answer: c. eight ✓

5. Datatype variable = (datatype)variable_to_be_converted; is the syntax of _____.

a. type conversion
b. initialisation
c. declaration
d. operation

Answer: a. type conversion ✓

6. "Array" is an example of _____.

a. primitive data type
b. non-primitive data type
c. character
d. assignment

Answer: b. non-primitive data type ✓

7. While naming an identifier, we must start with _____.

a. letter
b. underscore (_)
c. dollar ($)
d. All of these

Answer: d. All of these ✓

8. Which of the following is special character that separate tokens?

a. Operator
b. Digit
c. Delimiter
d. None of these

Answer: c. Delimiter ✓

9. Primitive data types in ascending order: byte < _____ < int < long.

a. double
b. boolean
c. char
d. short

Answer: d. short ✓

10. 0.5 is a _____ literal.

a. character
b. boolean

c. real
d. string

Answer: c. real ✓

11. Which of the following is also called type casting?

a. type conversion
b. initialisation
c. declaration
d. operation

Answer: a. type conversion ✓

12. “Object” is an example of _____.

a. primitive data type
b. non-primitive data type
c. character
d. assignment

Answer: b. non-primitive data type ✓

13. There are _____ categories of data types in Java.

a. two
b. three
c. one
d. five

Answer: a. two ✓

14. “++” is known as _____.

a. relational operator
b. logical operator
c. increment operator
d. decrement operator

Answer: c. increment operator ✓

15. _____ used to separate the variable.

a. separators
b. operators
c. punctuators
d. none of these

Answer: a. separators ✓

16. ASCII range of uppercase letters.

a. 1–26
b. 65–90
c. 97–122
d. none of these

Answer: b. 65–90 ✓

✓ B. Fill in the blanks

1. Implicit type conversion takes place when the two types are _____.

Answer: compatible

2. Non-primitive data types are also called _____ data types.

Answer: reference

3. Size of “short” data type is _____ than “long” data type.

Answer: smaller

4. _____ is a special Java literal which represents a null value.

Answer: null

5. Range of byte is _____.

Answer: -128 to 127

6. Syntax of assign character ‘A’ to ch is _____.

Answer: `char ch = 'A';`

7. A _____ member can be accessed by static methods only.

Answer: static

8. In primitive data types, the memory is of _____ size.

Answer: fixed

✓ C. Answer the following questions

1. Define literals. Also define real and boolean literals.

Answer:

- **Literal:** Fixed value assigned to a variable
- **Real literal:** Decimal numbers (e.g., 3.5, 0.5)
- **Boolean literal:** true or false

2. Difference between declaration and initialization.

Declaration	Initialization
Declaring variable	Assigning value
int a;	int a = 10;

3. What is the use of \t and \n in Java?

Answer:

- `\t` → Tab space
- `\n` → New line

4. Define Operators. Name any three types.

Answer:
Operators perform operations on variables.
Types:

- Arithmetic
- Relational
- Logical

5. Define separators and punctuators.

Answer:

- **Separators:** Separate parts of code (, ;)
- **Punctuators:** Special symbols used in syntax

6. What is the size (in bits)?

- short → 16 bits
- double → 64 bits
- int → 32 bits
- char → 16 bits

7. Define escape sequence. Give two examples.

Answer:
Escape sequence is a special character using `\`
Examples: `\n`, `\t`

8. Types of casting:

a. `int a = (int)5.6;` → Explicit casting
b. `long l = 4;` → Implicit casting

9. Difference between primitive and non-primitive data types.

Primitive	Non-Primitive
Simple	Complex
Fixed size	No fixed size
Example: int	Example: array

10. Meaning of composite data types.

Answer:
Composite types combine multiple values (e.g., arrays, objects)

✓ D. Case Study

1. Escape sequence is _____.

a. Graphical Character
b. Non-Graphical Character
c. ASCII Character
d. None

Answer: b. Non-Graphical Character ✓

2. Output of:

```
System.out.println("He said, \n Where are you going?");
```

a. He said, Where are you going?
b. He said,
Where are you going?
c. Both
d. A keyword

Answer: b. He said, (newline) Where are you going? ✓

3. To print "He is a computer student" we write:

a. `System.out.println("He is a computer student");`
b. `System.out.println("\"He is a computer student\"");`
c. `System.out.println("\"He is a computer student\"");`
d. None

Answer: b ✓

4. What is the use of \t ?

a. Insert tab
b. Insert backspace
c. Insert newline
d. Insert carriage return

Answer: a. Insert tab ✅

5. Escape sequence to insert double quote:

a. \”
b. \
c. \r
d. \b

Correct Answer: (Correct concept) → a. \” ✅

✅ E. Assertion and Reasoning

1.

Assertion: 10.5F is float ✓
Reason: Floating literals are float by default ✗

Answer: c. A is true, R is false ✅

2.

Assertion: double → int implicit ✗
Reason: Smaller → larger conversion ✓

Answer: d. A is false, R is true ✅

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Class 9

Chapter 4(2025-26)

Values and Types

A. Tick (✓) the correct answer

1. Java has a total of Escape Sequences.
   ☞ **c. eight**
2. `Datatype variable = (datatype)variable_to_be_converted;` is the syntax of
   ☞ **a. type conversion**
3. "Array" is an example of
   ☞ **b. Non-primitive data type**
4. While naming an identifier, we must start with
   ☞ **a. letter**
5. Which of the following is special character that separate tokens?
   ☞ **c. Delimiter**
6. Primitive data types in ascending order: byte <
   ☞ **d. short**
7. 0.5 is a _____ literal.
   ☞ **c. real**
8. Which of the following is also called type casting?
   ☞ **a. type conversion**
9. "Object" is an example of
   ☞ **b. non-primitive data type**
10. 0.0f is default value of _____ data type.
    ☞ **b. float**
11. There are _____ data types in Java.
    ☞ **a. two** (primitive & non-primitive)
12. "++" is known as
    ☞ **c. increment operator**
13. _____ used to separate the variable.
    ☞ **a. separators**

B. Fill in the blanks

1. Implicit Type conversion takes place when the two types are **compatible**.
2. Non-Primitive data types are also called **reference** data types.
3. Size of "short" data type is **smaller** than "long" data type.
4. **null** is a special Java literal which represents a null value.
5. Range of byte is **–128 to 127**.
6. **0 and 1** are binary digits.

7. Syntax of assign character 'A' to ch: **char ch = 'A';**
8. A variable is available to the entire class → **static variable**.
9. In primitive data types, the memory is of **fixed** size.
10. A **static** member can be accessed by static methods only.

C. Short Answer type questions

1. Define literals. Also, define real and boolean literals.

- **Literals** are constant values assigned to variables.
- **Real literal**: Represents floating-point numbers (e.g., `3.14`, `0.5`).
- **Boolean literal**: Represents truth values (`true` or `false`).

2. Write the difference between declaration and initialization.

- **Declaration**: Creating a variable with data type (e.g., `int a;`).
- **Initialization**: Assigning a value to a variable (e.g., `a = 10;`).

3. What is the use of `\t` and `\n` in Java?

- `\t` → Inserts a **tab space**.
- `\n` → Moves the cursor to the **next line**.

4. Define Operators. Name the three types of Operators.

- **Operators** are special symbols that perform operations on variables/values.
- Three types:
    1. Arithmetic Operators (+, -, *, /, %)
    2. Relational Operators (>, <, ==, !=)
    3. Logical Operators (&&, ||, !)

5. Define separators and punctuators.

- **Separators (Delimiters)**: Characters used to separate statements (e.g., `; , ( ) { }`).
- **Punctuators**: Same as separators, they structure code into blocks/statements.

6. What is the size of the following in terms of bits.
a. short → **16 bits**
b. double → **64 bits**
c. int → **32 bits**
d. char → **16 bits**

7. Define escape sequence. Give two examples.

- **Escape sequence**: A character preceded by `\` which has a special meaning in Java.
- Examples: `\n` (new line), `\t` (tab).

8. What are the types of casting shown in the following examples?

a. `int a = (int)5.6;` → **Explicit type casting**

b. `long l = 4;` → **Implicit type casting (widening)**

9. Give one example of primitive and composite data types.

- Primitive: `int a = 10;`
- Composite: `int arr[] = {1, 2, 3};`

10. What is the meaning of composite data types? Name some composite data types.

- **Composite data types** are built using primitive data types.
- Examples: **Array, Class, Interface, String, Object**.