



**DELHI PUBLIC SCHOOL NEWTOWN**  
**SESSION 2025-26**  
**MONDAY TEST**

**Class: IX**  
**Subject: COMPUTER APPLICATIONS**

**Total Marks: 40**  
**Date: 28/07/25**

**Instruction:**

- Attempt all questions.
- The intended marks for questions are given in brackets [ ].
- Write a variable description table or comments for all programs.
- This paper consists of three printed pages.

**Question 1**

**[10]**

**Choose the correct answer**

**i.** What will be the output of the following Java expression?

```
int a = 7, b = 4;  
a = a++ + ++b - b-- + --a-b;  
System.out.println(a);
```

- a. 10                      b. 9                      c. 8                      d. 7

**ii.** Which of the following statements is true about integer division in Java?

- a. It always returns a float                      b. It performs automatic rounding  
c. The decimal part is truncated                      d. It gives a compile-time error if the result is a fraction

**iii.** What is the output of the following Java statement?

```
System.out.println("Java\\nRocks");
```

- a. Java                      b. Java\nRocks                      c. Compile-time error                      d. Java Rocks

Rocks

**iv.** Which of the following is NOT a valid Java identifier?

- a. \_totalMarks                      b. 3rdPlace                      c. MAX\_LIMIT                      d. amount\$paid

**v.** What is the final value of **ch** in the following?

```
char c = 'x';  
int k = c + 3;  
char ch = (char)(k - 2);
```

- a. 'z'                      b. 'y'                      c. 'a'                      d. 'w'

vi. What will be the output of the following Java statement?

**System.out.println(Math.pow(2, 3) + Math.sqrt(16));**

- a. 10.0                      b. 12.0                      c. 10                      d. 12

vii. Which one of the following Math methods returns the **absolute value** of a number?

- a. Math.ceil()              b. Math.abs()              c. Math.floor()              d. Math.pow()

viii. **Assertion (A):** In Java, the default value of a **boolean** variable is **false**.

**Reason (R):** Boolean is a non-primitive data type and hence cannot be initialized

- a. Both A and R are true, and R is the correct explanation of A  
b. Both A and R are true, but R is not the correct explanation of A  
c. A is true, but R is false  
d. A is false, but R is true

ix. **Assertion (A):** In Java, a class acts as a blueprint from which individual objects are created.

**Reason (R):** Java automatically creates an object of every class declared in a program.

- a. Both A and R are true, and R is the correct explanation of A  
b. Both A and R are true, but R is not the correct explanation of A  
c. A is true, but R is false  
d. A is false, but R is true

x. What is the output of the expression **(5 > 2) && (3 < 1)**?

- a. true                      b. false                      c. 1                      d. 0

## Question 2

i. Rewrite the following expression using Java's math library methods:

[2]

$$\sqrt{a^2 + b^2 + c^n}$$

ii. What is the difference between **=** and **==** operators in Java? Give an example.

[2]

iii. Predict the output of the following and explain operator precedence:

**int x = 4 + 3 \* 2 \*\* 2;**

[2]

iv. What is the default value of the following data types in Java?

[2]

- a) char                      b) boolean

v. Evaluate the following expression and state the final value of 'result':

[2]

**int result = 4 + 5 \* 2 - 6 / 3;**

## Question 3

[10]

Write a program in Java to accept a 3-digit number. Display the sum of cubes of all three digits. Calculate and display the square root of the sum using appropriate library methods.

For example:

Number : 245

Digit 1 : 2

Digit 2: 4

Digit 3: 5

Sum of cubes of digits :  $(2)^3 + (4)^3 + (5)^3 = 197$

Square root of 197 = 14.04

#### Question 4

[10]

A bookstore offers a **12% discount** on the marked price of a book. After the discount, the buyer must pay **5% service tax** on the reduced price. Write a Java program to:

- Accept the marked price
- Calculate the final payable amount after discount and tax
- Display all intermediate steps (discount, tax, final amount)

Sample Input:            Marked Price = ₹500

Sample Output:          Discount = ₹60            Discounted Price = ₹440

Service Tax = ₹22        Amount Payable = ₹462