



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