

EXAM

Class: 9

Subject: Computer Applications

Full Marks: 100

Time: 2 hours

This Paper is divided into two Sections.

*Attempt **all** questions from **Section A** and **any four** questions from **Section B**.*

The intended marks for questions or parts of questions are given in brackets [].

SECTION A (40 Marks)

*Attempt **all** questions*

A. Answer the following questions.

[15×2=30]

1. Write the different between Applets and Application.
2. Find the value of val after calculation (where ch= 'e') and mention operator name used in the calculation.
`int val = (ch> 'D') ? 400 : 200 ;`
3. Write the different between next() and nextLine() statement.
4. What is ASCII code? Write the code to print the ASCII value of G.
5. Define conditional operator with one example.
6. Define increment and decrement operators with example.
7. Writ the purpose of logical operators? Name all the logical operators.
8. What will be the value of $(4 * --a) \% 5$ and $(4 * a--) \% 5$, where $a=2$?
9. Difference between Compile time error and Runtime error.
10. What is an error. List the types of error.
11. What is difference between input using Scanner and method parameters?
12. What is difference between `==` operator and `=` operator?
13. Write the value of following code using $ch=300$ and $m=100$:
`int ch=(m>300)?(m/10)*2:(m/200)-2;`
14. What are the Java packages? Write any two types of Java packages.
15. Explain the process to creation of dynamic memory with the help of an example. Also, define the purpose of `(.)` operator.

B. Find the following questions output.

[5×2=10]

1. `int x=5,y=10;`
`System.out.println("Result= "+x+y);`
`System.out.println("Result= "+(x+y));`
2. `int m=4;`
`System.out.println("output= "+m++);`
`System.out.println("Output= "++m);`
`System.out.println("output= "+m++);`
`System.out.println("Output= "+m++);`
3. `int x=3, y=3;`
`int x1=x+x++;`
`System.out.println("Result= "+x1);`
`int y1=y++ +y;`
`System.out.println("Result= "+y1);`

4. `int x=105;`
`System.out.println("Result= "+(char)x);`
5. `int x=55, y=510;`
`System.out.println("Result= "+(x+++y++));`

SECTION B (60 Marks)

Attempt **any four** questions from this Section.

*The answers in this Section should consist of the **Programs in either Blue J environment or any program environment with Java as the base.***

*Each program should be written using **Variable descriptions/Mnemonic Codes** so that the logic of the program is clearly depicted.*

*Flow-Charts and Algorithms **are not required.***

C. Write the following programs.

[15×4=60]

1. Write a program to input two sides of a Rectangle. Evaluate and print the area and perimeter of a Rectangle.
2. Write a menu driven (switch case) program to calculate and print area of circle and calculate and print perimeter of rectangle. Use CalculateDisplay() method.
3. Create a class Employee with the data members/instance variables empCode (to store employee code in integer), BasicPay (to store the basic salary) and to calculate the total monthly salary, annual salary and tax as follows:
DA=95% of basic pay
HRA=15% of basic pay
Total salary= basic pay +DA+HRA
Annual salary=total salary × 12
Income tax = Annual salary × 15%
4. Write a program, which takes the Name of a student and 5 subjects marks as the parameter of a method **void Result()**. Print student name and total marks and average marks obtain by student.
5. Write a java program to accept 4-digit number and Calculate sum of first two digits square and sum of last two digits square are same or not.

Example 1: **Input:** N= 5214

$$(5+2)^2 = (1+4)^2$$

Output: Sum of first two digits square and sum of last two digits square are not same.

Example 2: **Input:** N= 4215

$$(4+2)^2 = (1+5)^2$$

Output: Sum of first two digits square and sum of last two digits square are same.

6. Write a program to input a number in X1 and check whether the number is Tech number or not.

