DELHI PUBLIC SCHOOL NEWTOWN
SESSION 2022-23
MONDAY TEST

CLASS: IX **TOTAL MARKS: 40**
SUBJECT: COMPUTER APPLICATIONS **DATE: 20.6.22**

Instructions:

The Question Paper comprises of Two Parts. Part-I is based on Multiple Choice Questions and Application questions. Part -II is based on Java Programs. The intended marks for questions are given in brackets [ ]. This paper consists of three printed pages.

PART-I (20 marks)
[Attempt all question]

Question 1

Choose the correct answer from the choices given: **[10×1=10]**

i) If we want to access a variable from all the classes within a package, we declare a variable as:
- **a) private** **b) public**
- **c) no access specifier** **d) protected**

ii) What is meant by state of an object?
- **a) Function of the object** **b) Data Members of the object**
- **b) Content of an object** **d) Class of an object**

iii) .CLASS file is a
- **a) Interpreter** **b) Compiler**
- **b) Byte code** **d) Machine code**

iv) The number of relational operators in Java is
- **c) 6** **b) 5**
- **d) 8** **d) 4**

v) If a=6, b=5, c=12 then what will be the value of x in the following statement:
x = (a>b ? (a>c ? 20 : 10) : 15)
- **a) 10** **b) 20**
- **c) 15** **d) 12**

vi) Arrange the data types in as ascending order according to the size

i) long ii) byte iii) char iv) float

a) i,ii,iii,iv **b) ii,iii,iv,i**
c) ii,iii,i,iv **d) iii,ii,iv,i**

vii) Name the art of implementing Encapsulation in Object Oriented Programming.
a) Polymorphism **b) Abstraction**
c) Inheritance **d) Class**

viii) What is the behavior aspect of an object represented by?
a) Member Function **b) Data Member**
c) Both A and B **d) Class Function**

ix) Name the programming technique that implements programs as an organized collection of interactive objects.
a) Procedure Oriented Programming **b) Modular Programming**
c) Object Oriented Programming **d) Method based Programming**

x) A set of instructions given to a computer to do a particular task.
a) Program **b) High Level Language**
c) Object **d) Class**

Question 2

a) What will be the output of the following code [2]

```
int a=4, b=9;
if (a>b)
{  b+=b++; a= ++a*b;  }
System.out.println(a+","+b);
```

b) Identify the datatype: ‘a’, - 3, 3.14, “true” [2]

c) What is the result of evaluating the following expression: [2]

```
double c=(1.0/2.0 +3.5)*2;
System.out.println(c);
```

d) If y=14, then find the value of z, if z= (++y * (y++ +5)); [2]

e) Write one difference between: - [2]
Byte code and executable code

PART-II (20 marks)

[Attempt all questions. Each program should be written using Variable descriptions/Mnemonic Codes so that the logic of the program is clearly depicted]

Question 3 **[10]**

A salesman working in a company "Mehra and sons" gets the commission on the sales done by him depending on the following conditions:

Sales (₹)	Commission (percentage of sales)
Upto ₹10000/-	10%
₹10001- ₹20000/-	15%
₹20001 - ₹50000/-	30%
> ₹50000/-	40%

Write a program in Java to input the sales of a salesman. Calculate and display the Commission of the salesman.

Question 4 **[10]**

The Simple Interest (SI) and Compound Interest (CI) of a sum (P) for a given time (T) and rate (R) can be calculated as:
Simple interest is calculated on the principal, rate, time.

1) SI= p*r*t/100

Compound interest is calculated on the principal amount and the accumulated interest of previous periods, and thus can be regarded as "interest on interest."

2) $CI=P*((1+R/100)^{T}-1)$

Write a menu driven program in Java using switch case to calculate Simple and Compound Interest. Input sum, rate, time and type of Interest (1 for Simple interest, 2 for Compound Interest). Calculate and display the amount and interest earned.