



**DELHI PUBLIC SCHOOL NEWTOWN**  
**SESSION 2021-22**  
**MONDAY TEST**

---

**CLASS: IX**  
**SUBJECT: COMPUTER APPLICATIONS**

---

**FULL MARKS: 40**  
**DATE: 21.06.2021**

---

**Instructions:**

- Attempt all questions.
  - The question paper consists of two printed pages.
  - Answer should be to the point.
  - VDT should be written with the program.
- 

**Question 1**

**[2x5=10]**

- a. How is Encapsulation useful in Object Oriented Programming? Explain with the help of a real life example.
- b. Describe the components of the given statement:- `Rainbow rw=new Rainbow()`.
- c. Give an example of Polymorphism that you see around you.
- d. State the storage sizes of the following data types: *long, float, char and double*.
- e. Distinguish between the following:  
i. 'A' and "A"      ii. = and ==

**Question 2**

**[2x5=10]**

- a. Write the equivalent Java expression for the given equation  $S = ut + \frac{1}{2}at^2$
- b. Java program uses compiler as well as interpreter. Explain.
- c. Consider a real world object as 'Cricket Ball'. Mention two attributes and two methods by taking the 'Cricket Ball' as a software Object.
- d. What kind of literals are the following:  
`0x5a3` , `45L` , `-234.67`, `"true"`
- e. What is the difference between / and % operator?

**Question 3**

**[5+5]**

- a. The angles of a quadrilateral are in the ratio 3:4:5:6. Write a program to find and display all of its angles.  
[Hint: The sum of angles of a quadrilateral = 360°]

- b. Write a program to input the time in seconds. Display the time after converting them into hours, minutes and seconds.

Sample Input: Time in seconds: 5420

Sample Output: 1 Hour 30 Minutes 20 Seconds

**Question 4**

**[10]**

Write a program by using class 'Employee' to accept Basic Pay of an employee. Calculate the allowances/deductions as given below.

Allowance / Deduction	Rate
Dearness Allowance (DA)	30% of Basic Pay
House Rent Allowance (HRA)	15% of Basic Pay
Provident Fund (PF)	12.5% of Basic Pay

Find and print Gross and Net pay with all types of allowances/deductions

[ Hint: Gross Pay is the sum of Basic Pay , DA and HRA

Net Pay is calculated by deducting PF from Gross Pay ]