HALF YEARLY EXAMINATION : 2013-2014

Class - IX

Time : 2 hr.   **Subject - Computer Application**   **M.M. : 100**

Answers to this paper must be written on the paper provided separately.
You will not be allowed to write during the first 15 minutes.
This time is to be spent in reading the question paper.
The time given at the head of this paper is the time allowed to write the answers.

This paper is divided into TWO sections.
Answer ALL the questions in Section A and any FOUR questions from Section B.
The intended marks for questions or parts are given in [ ].

SECTION - A [40 MARKS]
Attempt ALL questions from this section.

Q.1- a. Define Unicode. [2]
b. Name the types of Java program. [2]
c. Name the primitive data types. [2]
d. What do you mean by Nested loop? [2]
e. Define continue statement. [2]

Q.2- a. Differentiate between while and do-while. [2]
b. Write 2 features of Java. [2]
c. What is the use of keyword 'break'? [2]
d. What do you mean by precedence of operator? [2]
e. Explain two types of comments in Java. [2]

Q.3- a. Write Java expression:- [2]

   i. $\dfrac{(a+b)^2}{\sqrt{ab}}$ ii. $a^2 + b^2 + c^3$

b. What is the difference between = and == operators? [2]
c. Give the output : (if a = 3 , b = 5 and c = 6) [2]
   i. a – (b+ +)/ – – c   ii. a * (+ + b) * (– – c)
d. Give one word answer:- [2]
   i. Which loop is used for fixed number of iterations?
   ii. Statement which can test only for equality.
e. Write any two rules for naming variable. [2]
f. Underline the errors and correct them:- [2]
   ```
   class design
   {
        public static void main (String args{ })
        {
            byte 1 a = 10;
            int b = 20;
            int c = (a > b) ? a , b:
            System.out.println ('The value of c is:' + c);
        }
   }
   ```
g. Give the output:- [4]
   ```
   i.   int a = 5, b = 2 , c;
        if(a > b || a !=b)
        c = + + a + – – b;
        System.out.println(c + " " + a + " " + b);
   ```
   ```
   ii.  int i = 2; k = 1;
        while (++ i < 6)
        k * = i;
        System.out.println(k);
   ```

h. Rewrite using while statement:- [2]
```
int f = 1, i;
for (i = 1; i <= 5, i++)
{
    f *= i;
    System.out.println(f);
}
```

i. Give the output:- [2]
i. Math.floor(2.9)   *2.0*
ii. Math.abs(3.7)   *3.7*

SECTION - B [60 MARKS]
Attempt any FOUR questions from this Section.
Each program should be written using *variable description/mnemonic* codes such that
the logic of the program is clearly depicted.
Flow charts and algorithms are not required.

Q.4- a. What is an operating system? Give an example. [5]
b. Name 5 services provided by internet. [5]
c. Define software piracy. [5]

Q.5- a. What do you understand by Recycle Bin? [5]
b. What do you understand by 'Computer Network'? [5]
c. Define Hacking. [5]

Q.6- a. Digital shoppy announces seasonal discount on the laptops in the given order: [15]

Cost of the laptop	Discount
₹ 20,000/- – ₹ 30,000/-	10 %
₹ 30,001/- – ₹ 40,000/-	15 %
₹ 40,001/- – ₹ 50,000/-	18 %
> ₹ 50,000/-	20 %

Sales tax is calculated at 12 % on the price after the discount. Write a program to input the cost of the laptop and print the amount payable by the customers.

Q.7- Write a menu driven program to accept a number from the user and check whether it is a prime or a perfect no. [15]
Prime numbers have 2 factors , 1 and the number itself.
Eg. 53 has only 2 factors 1 and 53
Perfect numbers are those whose sum of the factors (other than the number itself) is equal to the number.
Eg. 6 = 1 + 2 + 3

Q.8- a. Write a program to input a number and check whether it is palindrome or not. [8]
b. Input a number and find its factorial:- [7]
Eg. 5 != 1 * 2 * 3 * 4 * 5

Q.9- a. Write a program for the following series:- [7]
0 , 3 , 8 , 15 , ...
b. Write a program for the following pattern:- [8]
```
1 3 5 7 9
3 5 7 9
5 7 9
7 9
9
```

*****