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. What is a scope? [2]
b. What are datatypes? [2]
c. Define dangling else. [2]
d. What is dynamic initialization? [2]
e. Write 2 differences between for and while. [2]

Q.2- a. What are identifiers? [2]
b. Differentiate between break and continue. [2]
c. What is a block? [2]
d. Name different types of JAVA programs. [2]
e. What are escape sequences? [2]

Q.3- a. Define infinite loop. [2]
b. Give the output of the following:- [2]

```
Class Ques
{
    public void abc( )
    {
        int a = 1, i = 3;
        while(++i < 9)
        a * = i;
        System.out.println(a);
    }
}
```

c. Write corresponding JAVA expression/statement for the following:- [4]

i. $3 - rs^{2r} + 4s$ ii. $\sqrt{a^3 + b^3 + c^3}$

iii. $4y^3 + 2y^3 + 3y$ iv. $z = x^2 + y^2 + xy / z$

d. Give the output of the following:- [2]

`x = ++b * b++ - - -a;` if a = 5, b = 3

`x % = x++ + ++x -2;` if x = 5

e. Rewrite the following using for loop:- [2]

```
int x = 1;
do
{
    System.out.println(x);
    x++;
}
    while(x < 5);
```

f. Find the errors:- [2]

```
switch(ch)
{
    case 'a':
    n = n + 2;
    t = t + 3;
    System.out.printl(n + " " + t);
```

```
        break;
        case "b":
            n = n + 4
            t = t + 7
        break;
        System.out.print(n + " " + t);
    }
```

g. What will be the output of the following code:- [2]

```
out = num + pr > 1850 ? 100 : 400;
```

i. if pr = 2000, num = 100 ii. if pr = 500, num = 100

h. Give the output of the following:- [4]

```
switch(st)
{   case 'A':
    System.out.print("Grade A");
    case 'B':
    System.out.print("Grade B");
    case 'C':
    System.out.print("Grade C");
    break;
    case 'D':
    System.out.print("Grade D");
    default:
    System.out.print("Grade F");
}
```

Input values are :

i. C ii. A iii. F iv. D

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 a layout? Explain any three types of layouts. [5]
b. Explain the term breakup, how is it useful? [5]
c. What is mail merge? Describe the features of the mail merge. [5]

Q.5- a. Differentiate between Internet and WWW. [5]
b. What do you understand by Hyperlink? How will you apply hyperlink to an image on a slide? [5]
c. What makes word processor different from a text editor? [5]

Q.6- a. Write a program to input a number and check whether it is perfect or not. (A number is said to be perfect, if it is equal to the sum of its factors other than the number itself. [7]
b. Write a program to input two numbers and find their LCM and HCF. [8]

Q.7- Write a program to print the sum of negative numbers, sum of positive odd numbers and sum of positive even numbers from a list of n numbers entered by the user. The list terminates when the user enters a zero. [15]

Q.8- a. Write a program to find the sum of following series:- [8]
2 + 5 + 10 + 17 + 26 + ... n terms
b. WAP to input a number and check whether no is prime or not. [7]
eg. Prime No. : 2, 3, 5, 7, 11 . . . . . etc.

Q.9- A library charges a fine for books returned late. [15]
Following are the fines :
First five days : ₹ 1 per day
Six to ten days : ₹ 1.50 per day