

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

Section A

Attempt all questions

Q. 1 (a) Differentiate between the following :- (2 each)

- (i) presentation and slide
- (ii) byte code and JVM
- (iii) slide show and slide sorter

(b) Write a note on “Conditional Statements”. Give two such statements used in Java. (4)

Q. 2 (a) Rewrite the following Java program in its correct form :- (4)

```
// The purpose of the program is to display “1 2 3 4 5” (in a straight line)
public void static main (strings a€)
{
    class A
    {
        for(i=1;i<=5;i++);
        System.out.println(“i”);
    }
}
```

(b) Compare the following only with the help of examples :- (2 each)

- (i) for and while
- (ii) prefix and postfix decrement operator.
- (iii) logical and relational operators in Java

Q. 3 State and reason the output of the following code segments :- (2 each)

- | | |
|--|---|
| <p>(a) int a=9,b=6, c=4;
double x = ++a/++c + b++%c;
S.o.pln(x);</p> | <p>(b) int a=10, b=7, c=6, d;
d= a/b + c%4;
S.o.pln(d);</p> |
| <p>(c) int x= 1, y= 0, z;
z= x --> y?x: y;
S.o. pln(z);</p> | <p>(d) int i;
for (i = 10;i>=1;i-=5);
S.o.pln(h);</p> |
| <p>(e) int h='A';
h= -h;
S.o.pln(h);</p> | |

Q. 4 (a) Give the output of the program segment given below. Copy the program in the answer after correcting the syntax errors if any :-

```
s =0;
n =1;
while (n<5)
{
    s+=n++;
    System.out.println(s);
}
System.out.println(n);
```

(b) Rewrite the program segment shown below using a FOR loop :-

```
x = 10;
do
{
    n = x*x;
    System.out.println(n);
    x-=2;
} while(x>0);
```

(5 each)

Section B

Attempt any four questions

(Note : Write the Java programs with mnemonic names, indentation and remarks)

Q. 5 Write a complete program in Java which accepts marks of a student and display the grade obtained based on the following information. Use meaningful variable names and put comments wherever required. (15)

Marks	Grade
Below 41	D
41 – 60	C
61 – 80	B
80 and above	A

Q. 6 Write a program to display the following output :- (15)

```
a z A
b y B
c x C
```

Q. 7 Write a JAVA program using switch case to give the following options to the user :- (15)

If choice is 1, display first six prime numbers.
If choice is 2, check if the input number is even or odd.

Q. 8 A library charges fine for books returned late. Following are the fines:- (15)

First 5 days : 40p per day
6 to 10 days : 65p per day
Above 10 days : 80p per day

Design a class in Java to calculate the fine assuming that a book is returned N days late.

Q. 9 Write a Java Program to input number as long as the user desires. (15)

When the input is over, display the average of positive and negative numbers separately along with the total number input, in the following manner :-

TOTAL NUMBER INPUT : _____

AVERAGE OF POSITIVE NUMBRS : _____

AVERAGE OF NEGATIVE NUMEBRS : _____

(Note that “_____” should be replaced by actual values)
