

Section A

- 1) What is the use of break in switch statement ? [1]
- 2) Distinguish between prefix and postfix increment operators ? [2]
- 3) Explain the difference Token in Java with example ? [8]
- 4) Explain with the help of an example , the purpose of a default in a switch statement ? [2]
- 5) If int y=10 , then find z= ++y*(y++ + 5) [2]
- 6) What will be the result stored in x after evaluating the following :-

```
int x=5;
x -= (x++) +(++x) +x;
```

[2]
- 7) What are the types of casting shown by the following ?
 - i)

```
double x= 12.3;
int y =(int)x;
```
 - ii)

```
int x=12;
double z=x/3.0;
```

[2]
- 8) State the output :

```
char ch='A';
ch++;
System.out.println(ch);
```

[1]
- 9) Write an equivalent java expression for

$$\frac{0.05-2y^8}{x-y}$$
[2]
- 10) Rewrite the following using ternary operator [2]

```
if (sal<=10000)
    tax=0;
else
    tax= 12.5/100*sal;
```
- 11) What is the final value of c , when the iteration process below executes [2]

```
int c=0;
for(i=1;i<=5;i++)
{
for(j=1;j<=5;j+=2)
{
++c;
}}}
```

12) Rewrite using switch statement :

```

if ( x==10)
    System.out.println("the value of x is 10");
else if (x==20)
    System.out.println("the value of x is 20");
else if (x==30)
    System.out.println("the value of x is 30");
else
    System.out.println("the value of x is 100");

```

13) Write the output :-

```

int i,j;
for(i=2; i<=6 ; i+=2)
{
for(j=1;j<=5;j=j+i)
{
System.out.println(j);
}
}
}

```

[2]

Section B

1) Shasha Travels. Pvt. Ltd. Gives the following discounts to its customers

<u>Ticket amount</u>	<u>Discount</u>
Above Rs 70,000	18%
Rs 55,001 to 70,000	16%
Rs 35,001 to 55,000	12%
Rs 25,001 to 35,000	10%
Less than 25,001	4%

Write a program to input the name of the customer and ticket amount and calculate the discount amount and net amount to be paid.

2) Write a program to print first 20 terms of the Fibonacci series.

0,1,1,2,3,5,

3) Write two separate program to generate the patterns:-

a) #	b) 5 4 3 2 1
@ @	4 3 2 1
# # #	3 2 1
@ @ @ @	2 1
# # # # #	1

4) Write a program to sum the series:-

$$s = \frac{1}{x^2} + \frac{4}{x^5} + \frac{7}{x^8} + \frac{10}{x^{11}} \dots \dots \dots + \frac{19}{x^{20}}$$

5) Write a program to sum the series :-

$$S = x^1 - x^2 + x^3 - x^4 + \dots \dots \dots - x^{20}$$

6) Write a menu driven program to print the following patterns based on the users choice

[8]

1) 1

1 1

1 1 1

1 1 1 1

1 1 1 1 1

2) 1

2 3

4 5 6

7 8 9 10

11 12 13 14 15

For an incorrect choice an appropriate error message should be displayed.

7) Define a class electricbill to input name the customer and number of units consumed. Calculate the amount to be paid based on the following tariff:-

[10]

<u>Number of units</u>	<u>Rate per unit</u>
------------------------	----------------------

First 100 units	Rs 2.00
-----------------	---------

Next 200 units	Rs 3.00
----------------	---------

Above 300 units	Rs 5.00
-----------------	---------

A surcharge (additional charge) of 2.5 % charged , if the number of units consumed above 300 units and display the details as follows:-

Name of the customer :

Number of units consumed :.....

Bill Amount :.....