

Std :9

Marks : 80

Section A

Time :2 hrs

- 1) What is meant by a package ? Give an example . [2]
- 2) Name the types of operators listed below :- [2]
  - i) > , < , >= , <=
  - ii) ++
  - iii) && , ! , ||
  - iv) ?:
- 3) Which statement is used to include a package into a program ? [1]
- 4) Write the statement to create a scanner object ? [1]
- 5) Give the output :- [2]

```
int i,s=0;
for( i=5; i>=1; i--)
{
  if (i%2==0)
    s=s+i;
}
System.out.println("s="+s);
```
- 6) Rewrite the following program segment using **if..else** statement . [2]

```
String grade =(mark>=90)?"A" : (mark>=80)?"B":"C";
```
- 7) Write java expression :- [2]
$$\frac{\sqrt{3x-x^4}}{x+y}$$
- 8) Evaluate the following :- [2]

```
a+ = ++a + a-- + --a ; when a=2
```
- 9) Write the memory capacity (size) of short and float data type ? [2]
- 10) What is the use of **break** in switch ...case statement ? [1]
- 11) Distinguish between :- [4]
  - a) next() and nextInt()
  - b) floor() and ceil()
- 12) What are the types of casting shown by the following examples ? [2]
  - i) 

```
double x=2.6;
int y= (int)x;
```
  - ii) 

```
int x=4;
```

13) Rewrite using **switch...case** statement:-

```
if(grade == 'A')
    System.out.println("90-100");
```

else

```
if( grade == 'B')
    System.out.println("70-89");
```

else

```
if( grade == 'C')
    System.out.println("50-69");
```

else

```
System.out.println("less than 50");
```

14) Give the **output** of the following program segment and also mention **how many times** the loop is executed.

```
int i;
```

```
for( i=5 ; i > 10 ; i++)
```

```
    System.out.println(i);
```

```
    System.out.println(i*2);
```

15) What is a literal ? Give an example .

16) What is the default value of boolean variable ?

### Section B

1) Write a program to input name and taxable income of a person. Calculate the tax as per the table given below:-

Taxable Income(TI) in Rs	Income Tax in Rs
Does not exceed Rs 2,00,000	Nil
Is greater than 2,00,000 and less than or equal to Rs 5,00,000	$(TI - 2,00,000) \times 10\%$
Is greater than 5,00,000 and less than or equal to Rs 8,00,000	$[(TI - 5,00,000) \times 20\%] + 20,000$
Is greater than 8,00,000	$[(TI - 8,00,000) \times 30\%] + 50,000$

2) Write **two separate program** to generate the following pattern using iteration statement .

i) @  
@ #  
@#@  
@##  
@###

ii) @  
##  
@@@  
####  
@@@@@

- 3) Write a menu driven program to do the following :-
- 1) Generate and display first n terms of the Fibonacci series  
[0,1,1,2,3,5,8 .....]
  - 2) Print first 10 terms of the series:-  
0,3,8,15,35 .....99

[10]

- 4) Write a program to calculate the Electricity bill according to the following condition:-

<u>Number of unit</u>	<u>Rate per unit</u>
First 100 units	Rs 2.00
Next 200 units	Rs 3.50
Above 300 units	Rs 5.00

A surcharge of 2.5% charged if the number of units consumed is above 300 units.

[10]

- 5) Using switch statement, write a menu driven program for the following:

- 1) To find and display the sum of the series given below: [10]

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

- 2) To display the following series:-[using nested loop]

1 11 111 1111 11111

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

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