

Second Terminal Examination

Computer Applications

Marks : 80

Time : 2hrs

id:8

Section A

1) Distinguish between :-

- a) Prefix increment operator and postfix increment operator.
- b) Unary operator and binary operator.

[4]

2) Write the precedence of logical operators

[1]

3) Identifiers the errors in the following program segment :-

[3]

```
class 8ABC
{
void main();
Int a;
{
Double b ; c;
a=2.5;
b=3.2;
c=a+b;
system.out.println( c);
}
}
```

re-write correctly

4) Write java Expression for the following :-

[10]

1) $\sqrt{a^2 + b^2}$

2) $\frac{5x^3 + 2y}{x + y}$

3) $\frac{(a + b)^n}{\sqrt{3} + b}$

4) $\sqrt{2as + u^2}$

5) $\frac{b^2 - 4ac}{2a}$

1) $a = -b + c + ++b$; if $b=30, c=40$

2) $k+ = (k++) - (++j) + k$; when $\text{int } k=5, j=9$;

3) $x+= (x++) + (++x) + x$;when $\text{int } x=4$;

4) $a + = a++ + ++a + --a + a--$; when $a=5$;

5) $z = ++x * (y--) - y$; when $x=20, y=10$;

6) Predict the output , when $n=0$

```
int x=1,y=1;
if ( ++n <= 0)
    ++x;
    ++y;
System.out.println("x="+x);
System.out.println("y="+y);
```

Section B (50)

1) Write a program to accept the name and mark in two subjects .Calculate the average marks and assign grade as per the table given below :

<u>Average mark obtained</u>	<u>Grade</u>
80% or more	A
60% or more but less than 80%	B
40% or more but less than 60%	C
Less than 40%	F

Display the name along with the grade.

2) An institution has decided to admit new candidate in different streams on the following basis :-

<u>Total marks obtained</u>	<u>Stream offered</u>
300 and above	Science
200 and above but less than 300	Commerce
Below 200 but not below 75	Art
Otherwise	No admission

Write a program to input total mark and print the total mark and the stream allotted.

- 3) An electronic shop has announced the following seasonal discounts on the purchase of Laptop.

<u>Rate</u>	<u>Discount</u>
Up to Rs 25,000	2%
Rs 25,001 to Rs 57,000	5%
Rs 57,001 to Rs1,00,000	7.5%
More than Rs 1,00,000	10%

Write a program to input the rate. Calculate the discount and the net amount to be paid by the customer .

[8]

- 4) Write a program to input the cost price and the selling price of an article . If the selling price is more than the cost price then calculate and display actual profit and profit percent otherwise , calculate and display actual loss and loss percent . If the cost price and the selling price are equal , the program displays the message "Neither profit not loss".

[8]

- 5) Write a program to enter two unequal numbers . If the first number is greater, then display square of the smaller number and cube of the greater number otherwise , vice -versa .

[4]

- 6) An electronics shop has announced the following seasonal discounts on the purchase of washing machine .

<u>Purchase amount (Rs)</u>	<u>Discount on Semi automatic</u>	<u>Discount on fully automatic</u>
0 - 10,000	5%	3%
10,001 - 25,000	8%	6%
25,001 - 40,000	15%	10%
Above 40,000	20%	15%

Write a program based on the above criteria , to input name , amount of purchase and type of purchase(S for semi automatic and F for fully automatic) Compute and print the net amount to be paid by the customer along with his/her name .

[10]

- 7) Write a program to input the basic salary of an employee and calculate the gross salary based on the following condition:-

Dearness Allowance(DA) = 45% of basic salary

House Rent Allowance(HRA) =10% of basic salary

Gross salary= basic salary + DA +HRA

[4]