

Quarterly Examination 2017-2018

Std. : VIII

Subject : COMPUTER SCIENCE

Full Marks : 80

Time : 2hrs.+15mins.

SECTION—A (Attempt all questions).

I. (1) Define the following terms — [6]

- (a) Inheritance (b) Encapsulation (c) object
(d) Math.max () (e) Math.floor () (f) Math.round

(2) Write the full form of (i) OOP (ii) JVM [2]

(3) Differentiate between [2x2=4]

- (i) Prefix operator and post fix operator.
(ii) \n and \t.

(4) (i) Write down the names of any 2 Java tokens. [2]

(ii) Name any 2 primitive data types. [2]

(iii) Name any 2 logical operators. [2]

(5) Write the Java expressions for the following : [2x2=4]

(i) $K = 2b + x^3 + 4y$

(ii) $C = \frac{a^2 + b^2}{2ab}$

II. Match the following and write in pairs — [3]

A	B
Character Literal	>
Floating Point Literal	120
Relational Operator	6.5
Integer Literal	'W'
Assignment Operator	;
Punctuator	=

III. What is the output of the following program code — [2]

- int a = 2;
System.out.println (a++ + ++a +4);
- System.out.print ("KSMS In Kalimati Road \t Sakchi \n Jamshedpur"); [2]

3. `System.out.println (Math.ceil (7.8));`
`System.out.println (Math.pow (5,2));`
`System.out.println (Math.sqrt (49));`
`System.out.println (Math.floor (5.3));`
`System.out.println (Math.abs) (—2.6));`
4. `int x = 15;`
`System.out.println (++x * (x%2));` [2]
5. `System.out.print ((Math.min (4,3) + (Math.max (5,6))));` [2]

SECTION—B (Attempt any 6 programs). (6x7=42)

(1) Create a class named Marks — input marks of 3 terms. scored by a student. Calculate and print the total marks and average marks.

(2) Create a class named circle — accept the radius of a circle and print its diameter, area and circumference. Use math function.

$$\text{diameter} = 2r$$

$$\text{area} = \pi r^2$$

$$\text{circumference} = 2\pi r$$

(3) Write a program to create a class Formula, Enter the value of a, b and c given by the user and find x, where $x = \sqrt{b^2 - 4ac}$

(4) Write a program to create a class Interest, input the values of principal, rate and time given by the user. Calculate and print the simple interest and amount earned.

$$\text{Simple interest} = \frac{\text{principal} \times \text{rate} \times \text{time}}{100}$$

$$\text{amount} = \text{principal} + \text{simple interest}$$

(5) Write a program to create a class cuboid, accept the length, breadth and height of a cuboid and find its volume and total surface area.

$$\text{Volume} = \text{length} * \text{breadth} * \text{height}$$

$$\text{total surface area} = 2 (\text{length} \times \text{breadth} + \text{breadth} \times \text{height} + \text{height} \times \text{length})$$

(6) Create a class sample, input two integers from the user and print and value. Now print the number that comes just after the 1st input integer value and also print the number the comes just before the 2nd input integer value.

(7) Write a program to create a class Number input the 2 integers from the user and print the greater as well as lesser value in different lines. Use Math function.

(8) Write a program to input the monthly basic pay of a person working in a office. Calculate 15% of monthly basic pay as special allowance. Find and print total salary. Name the class as salary.
 $\text{total salary} = \text{basic} + \text{special allowance}.$