

QUARTERLY EXAMINATION : 2023-24

Class - IX (ICSE)

Time : 2 hrs.

Subject - Computer Application

M.M. : 100

Answers to this paper must be written on the paper provided separately.

You will not be allowed to write during the first 15 minutes.

This time is to be spent in reading the question paper.

The time given at the head of this paper is the time allowed to write the answers.

This paper is divided into TWO sections.

Answer ALL the questions in Section A and any FOUR questions from Section B.

The intended marks for questions or parts are given in [].

SECTION - A [40 MARKS]

Attempt ALL questions from this section.

- Q.1- Choose the correct answer from the following option:- [20]
- Wrapping up of data and methods together as one unit is termed as :
 - Inheritance
 - Polymorphism
 - Encapsulation
 - Abstraction
 - The datatype which is specified that the method does not return a value :
 - void
 - VOID
 - void
 - boolean
 - The number of bytes occupied by the constant 45 are :
 - 4 bytes
 - 8 bytes
 - 1 byte
 - 2 bytes
 - int res = 'A'; what is the value of res?
 - A
 - 65
 - 66
 - 97
 - Name the type of error that occurs for the following statement :
System.out.println(Math.sqrt(-16));
 - Syntax error
 - Run time error
 - Logical error
 - No error
 - The keyword that creates an object of a class is :
 - NEW
 - New
 - new
 - None of these
 - "Delhi" is a :
 - Boolean literal
 - Integer literal
 - Character literal
 - None of these
 - The operator that gives true if all inputs are true :
 - &&
 - ||
 - !
 - Both (a) & (b)
 - The keyword used to call package in the program :
 - export
 - import
 - include
 - extends
 - The absence of which statement leads to fall through situation in switch case statement?
 - continue
 - break
 - return
 - System.exit(0)
 - int x = (int)32.8; is an example of _____ type conversion.
 - implicit
 - automatic
 - explicit
 - coercion
 - The code obtained after Java compilation is known as :
 - source code
 - byte code
 - object code
 - machine code
 - An object belonging to a particular class is known as a/an _____ of that class.
 - interface
 - instance
 - alias
 - member
 - A package is a :
 - collection of data
 - collection of functions
 - collection of classes
 - a nested class
 - Character literal is enclosed within :
 - single quotes
 - double quotes
 - both (a) and (b)
 - none of these

This paper consists of 2 printed pages and 1 blank page.

Turn Over

- xvi. The scanner class belongs to :
- io package
 - util package
 - awt package
 - net package
- xvii. Object oriented programming mainly uses :
- Top-down approach
 - Bottom-up approach
 - Top-down and bottom up approach
 - None of these
- xviii. Single line comment can be added using :
- //
 - /**/
 - \\
 - both (a) & (b)

- xix. Which of the following is not a primitive data type in Java?
- boolean
 - short
 - float
 - class

- xx. Which operator cannot be used with if-else statement?

- <=
- ||
- &&
- ?:

Q.2- i. Identify the literals:- [2]

- 0.5
- 'A'
- &&
- 25

ii. Give the output if a = 3:- [2]

a+ = a++ + ++a + --a + a--

iii. Write Java expression:- [2]

$$\frac{1}{3} ab + \frac{1}{2} cd$$

iv. Rewrite the following using ternary operator:- [2]

```
if(marks >= 90)
    grade = "A";
else
    grade = "B";
```

v. Name the type of error in each case:- [2]

- Multiplication operator is used in place of division.
- Division by zero

vi. What are the values stored in variables a and b? [2]

- a = Math.sqrt(Math.floor(16.4));
- b = Math.abs(Math.min(-25.5, -12.5));

vii. Name the method of scanner class that is used:- [2]

- to input an integer data from the standard input device
- to input a string data from the standard input device

viii. Predict the output of the following code:- [3]

```
switch(opn)
{
    case 'a' : System.out.println("Platform Independent");
              break;
    case 'b' : System.out.println("Object Oriented");
              break;
    case 'c' : System.out.println("Robust and Secure");
              break;
    default  : System.out.println("Wrong Input");
}

```

when (a) opn = 'b' (b) opn = 'x' (c) opn = 'a'

ix. Name a package that is invoked by default:- [1]

x. Name the following:- [2]

- Which function will terminate the execution at that moment?
- Which statement is used to exit from the switch block?

SECTION - B [60 MARKS]

Attempt any FOUR questions from this Section.

The answer in this section should consist of the programs either Blue J environment or any program environment with Java as the base.

Each program should be written using *variable description/mnemonic* codes such that the logic of the program is clearly depicted.

Flow charts and algorithms are not required.

- Q.3- An Electricity Board charges for electricity per month from their consumers according to the units consumed. The tariff is given below : [15]

Units Consumes

Upto 200 units

More than 200 units and upto 300 units

More than 300 units and upto 400 units

More than 400 units

Charges

₹ 3.80 / unit

₹ 4.40 / unit

₹ 5.10 / unit

₹ 5.80 / unit

Write a program to calculate the electricity bill taking consumer's name and units consumed as inputs. Display the output.

- Q.4- Write a program in Java to calculate and display the hypotenuse of a right angled triangle by taking perpendicular and base as inputs. [15]

Hint :- $h = \sqrt{p^2 + b^2}$

- Q.5- Write a program to input three unequal numbers. Display the greatest and the smallest number. [15]

Sample Input : 35, 86, 67

Sample Output : Greatest Number = 86

Smallest Number = 35

- Q.6- Using a switch case statement, write a menu driven program to convert a given temperature from Fahrenheit to Celsius and vice-versa. For an incorrect choice, an appropriate message should be displayed [15]

Hint :- $c = \frac{5}{9} * (f - 32)$ and $f = 1.8 * c + 32$

- Q.7- A special two-digit number is such when the sum of its digits is added to the product of its digits, the result is equal to the original two-digit number. [15]

Eg. Input - 59

Sum of digits = $5 + 9 = 14$

Product of digits = $5 * 9 = 45$

$14 + 45 = 59$

Write a program to accept a 2-digit number. Add the sum of its digits to the product of its digit. If the value is equal to the input number display the message "Special 2 digit number" otherwise display the message "Not a special 2 digit number".

- Q.8- Write a program to input three angles of a triangle and check whether its construction is possible or not. If possible then check and display whether it is an acute-angled triangle, right-angled or an obtuse angled triangle. Otherwise display 'A triangle is not possible'. [15]

Sample Input : Enter three angles = 40 , 50 , 90

Sample Output : Right Angled Triangle

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