

ANNUAL EXAMINATION : 2022-23

Class - IX

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]
- Multiple branching statement of Java is :
    - for
    - while
    - do-while
    - switch
  - The logical operation which is an unary operator :
    - &&
    - ||
    - !
    - >>
  - `int res = 'A';` What is the value of res?
    - A
    - 66
    - 65
    - 97
  - Name the type of error that occurs for the following statement :  
`System.out.println(Math.sqrt(24 × 25));`
    - syntax error
    - run-time error
    - logical error
    - no error
  - "Delhi" is a :
    - Boolean literal
    - Integer literal
    - Float literal
    - None of these
  - Which of the following methods checks that a string starts with a particular string or not?
    - Starts()
    - Startswith()
    - StartsWith()
    - StartWith()
  - The trim() function removes spaces from :
    - left of a string
    - right of a string
    - both sides of a string
    - middle of a string
  - The statement `(1 > 0) && (1 < 0)` evaluates to :
    - 0
    - 1
    - false
    - true
  - Given array `int z[] = {15, 16, 17};` it will occupy \_\_\_ bytes in memory.
    - 3
    - 12
    - 24
    - 64
  - In \_\_\_ search, the algorithm uses the middle value of an array for the search operation.
    - binary
    - linear
    - bubble
    - selection
  - A package is a :
    - collection of data
    - collection of functions
    - collection of classes
    - a nested class
  - Which of the following is the correct usage?
    - `int a[-40]`
    - `inta[40]`
    - `floata[a - 40]`
    - none of these
  - Which of the following relates with hacking?
    - virus spread
    - to steal information
    - junk emails
    - none of these
  - Which of the following loop executes at least once?
    - for
    - while
    - do-while
    - all of these
  - The keyword used to terminate a loop is :
    - break
    - stop
    - continue
    - loop

This paper consists of 3 printed pages and 1 blank page.

Turn Over

- xvi. Which of the following features is not the principle of OOP?
- Encapsulation
  - Transparency
  - Inheritance
  - Polymorphism
- xvii. Which of the following is not a primitive data type in Java?
- Boolean
  - short
  - ~~short~~ int
  - class
- xviii. A Trojan is a \_\_\_\_\_.
- virus
  - software
  - antivirus
  - none of these
- xix. The unsolicited emails and attractive advertisements are known as :
- Spam
  - Hacking
  - Virus
  - None of these
- xx. Single line comments can be added using :
- //
  - /\*\*/
  - \\
  - both (a) & (b)

Q.2- i. State the values of n and ch [2]

```
char c = 'A';
```

```
int n = c + 1
```

```
char ch = (char)n;
```

ii. Write Java expression:- [2]

$$\frac{2}{3}(a^2 - b^2)h$$

iii. What will be the output of the following code? [2]

```
int k = 5, j = 9;
```

```
k+ = k++ - ++j + k;
```

```
System.out.println("k=" + k);
```

```
System.out.println("j="+j)
```

iv. Name the method of scanner class that : [2]

i. is used to input an integer data from the standard input device.

ii. is used to input a string data from the standard input device.

v. What will be final values stored in variables? [2]

```
double a = -99.51;
```

```
double b = -56.25;
```

i. double p = Math.abs(Math.floor(a));

ii. double q = Math.sqrt(Math.abs(b));

vi. Rewrite using ternary operator:- [2]

```
if(marks >= 90)
```

```
    grade = "A";
```

```
else
```

```
    grade = "B";
```

vii. Determine how many times the body of the loop will be executed:- [2]

```
int x = 5, y = 50;
```

```
while (x <= y)
```

```
{
```

```
    y = y/x;
```

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

```
}
```

viii. Rewrite the following code using while loop:- [2]

```
int n, r = 425
```

```
.do
```

```
{
```

```
    n = r % 10;
```

```
    r = r/10;
```

```
    system.out.println(n);
```

```
}
```

```
while(r!=0);
```

- ix. Give the output:- [2]
- System.out.println("Lucknow".substring(0, 4));
  - System.out.println("REDUCE".compareTo("REVOLT"));
  - System.out.println("computer".equals("Computer"));
  - System.out.println("ACHIEVEMENT".replace('E', 'A'));
- x. Given array  $\text{intp}[] = \{136, 280, 900, 200, 100\}$ ; [2]
- Find the value of  $p[2] - 1 + p[3]$
  - Find the value of  $p.length$

### 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- Write a program to input 10 element ~~s~~ in an Array and find the sum of even and odd elements separately and print. [15]
- Q.4- Write a program to input a string and count the number of vowels present in it and print it. [15]
- Q.5- Anshul transport company charges for the parcels of its customers as per the following criteria : [15]

<u>Weight in Kg</u>	<u>Charge per kg</u>
Upto 10 kgs	₹ 25 per kg
Next 20 kgs	₹ 15 per kg
Above 30 kgs	₹ 10 per kg

Write a program to calculate the charge as per the weight of the parcel and print it.

- Q.6- Write a menu driven program to accept a number from the user, check and display whether it is a Palindrome or a prime number. [15]
- Palindrome number is, when read in the reverse order is same as the original number. Eg. 11, 101, 151 etc.
  - Prime number is only divisible by 1 and itself. Eg. 3, 5, 7, 11 etc.
- 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 and check whether it is a special two-digit number or not.

- Q.8- Write 2 separate programs to display the sum of the following series:- [7]
- $1 + 4 + 9 + \dots + 400$  [7]
  - $\frac{1}{2} + \frac{2}{3} + \frac{3}{4} + \dots + \frac{19}{20}$  [8]

#####