

BOYS' HIGH SCHOOL AND COLLEGE  
FIRST TERM EXAMINATION (2023-24)  
CLASS - IX  
COMPUTER APPLICATION



Maximum Marks: 100

Time allowed: Two hours

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 for writing the answers.

This Paper is divided into two Sections.

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

SECTION A

(Attempt all questions from this Section.)

Question 1

Choose the correct option:

[20]

- i. Assembly language consist of \_\_\_\_\_ instead of binary digits.
  - a) mnemonics
  - b) symbols
  - c) artificial intelligence
  - d) All of these
- ii. The word Polymorphism comes from the \_\_\_\_\_ word meaning “many forms.”
  - a) Arabic
  - b) French
  - c) Greek
  - d) British
- iii. If  $\text{int } a=3, b=5$ ; What is the value of c, when  $c = ++ a \% ++b$  ?
  - a) 0
  - b) 1
  - c) 4
  - d) 3
- iv. Java is a \_\_\_\_\_ independent language.
  - a) application
  - b) case
  - c) platform
  - d) function
- v. Which escape sequence is used to insert a new line?
  - a) \ n
  - b) \ m
  - c) / n
  - d) / t
- vi. What will be the output of the following code:  

```
int a = -5;
System.out.println (-a++);
```

  - a) 5
  - b) - 5
  - c) - 6
  - d) 6
- vii. The wrapping up of data members and member methods together into a single unit is called \_\_\_\_\_.
  - a) Encapsulation
  - b) Inheritance
  - c) Polymorphism
  - d) Abstraction
- viii. The first version of Java is \_\_\_\_\_.
  - a) JDK 1.0
  - b) JDK Alpha
  - c) JDK Beta
  - d) JDK Betal
- ix. Multiline comments can be added by using-
  - a) /\* ..... \*/
  - b) /\* ..... /\*
  - c) /\* ..... \*/
  - d) /\* ..... /
- x. What will be the output of the following code:  

```
public static void main( )
{
System.out.print(“Hello”);
System.out.println(“World”);
}

```

  - a) HelloWorld
  - b) Hello World
  - c) Hello  
World
  - d) Hello  
World
- xi. Evaluate the value of z, if value of  $x=6$  and  $y=5$  :  

```
int z = (y-x) > (x-y) ? (y / x) : (x * y) ;
```

  - a) 1
  - b) 30





- c) 0  
d) 11
- xii. Give the output of the following expression:  
`int b = a++ - ++a + --a + --a;` when `a=5`.  
a) 10  
b) 9  
c) 5  
d) -9
- xiii. Java was developed at Sun Microsystems in \_\_\_\_\_  
a) 1996  
b) 1992  
c) 1993  
d) 1995
- xiv. Implicit type conversion is a process of \_\_\_\_\_  
a) narrowing  
b) squeezing  
c) following  
d) widening
- xv. `a = a + b`, can be written as -  
a) `a += b`  
b) `a + b =`  
c) `a = + b`  
d) `a = b +`
- xvi. What will be the output of the following:  
`int a = 3, b = 4;`  
`System.out.println (( a! = b) ? (a + b) : (a - b));`  
a) 1  
b) -1  
c) 7  
d) -7
- xvii. Which is a built-in package in Java?  
a) awt  
b) swing  
c) sql  
d) all of the above
- xviii. `double a = 5;` is a \_\_\_\_\_ error.  
a) runtime  
b) syntax  
c) logical  
d) physical
- xix. The full-form of ASCII is-  
a) American Style Count for Information Interchange  
b) American Standard Count for Internet Interchange  
c) American Standard Code for Information Interchange  
d) American Style Code for Information Interchange
- xx. Which of the following is not a valid operator in Java?  
a) `<=`  
b) `!=`  
c) `! = =`  
d) `= =`

### Question 2

- i. Write any two rules that are to be followed while naming a variable. [2]
- ii. Differentiate between Machine-Level language and Assembly language. [2]
- iii. Rewrite the following code using ternary operator: [2]
- ```
int sales; double dis;
{
if ( sales >= 5000)
dis = sales * 20 / 100.0;
else
dis = sales * 15 / 100.0;
}
```
- iv. Give the output of the following code: [2+2]
- a) `int z = (++ x) + (-- y) - (-- y) + (++ x) * 3;` when `int x = 3, y = -6`.  
b) `a += (++ a) - (-- a) - (++ a) + (a --) - (-- a);` when `a = 5`
- v. Write a Java expression for:  $r = (a^2 + b^2) + \frac{1}{3}ab$  [2]
- vi. What will be the output of the following code: [2]
- ```
{
char ch = 'B';
int n = ch + 5;
char c = (char) n;
System.out.println( n );
System.out.println( c );
}
```
- vii. What is the use of “\n” and “\t” escape sequence? [2]
- viii. Arrange the data types in ascending order of their size: **double, short, byte, int** [2]
- ix. Find out the error in the following code and correct it: [2]
- ```
{
```

```

int a = 1
int b = a * a ;
System.out.println ( "Result is:" b);
}

```

### SECTION B

*(Attempt any four questions from this Section.)*

*The answers in this section should consist of the program in either BlueJ environment or any program environment with java as the base.*

*Each program should be written using variable description so that the logic of the program is clearly depicted.*

*Flowcharts and algorithms are not required.*

#### Question 3

[15]

Write a program to input two numbers in two variables and interchange the values in the variables without using third variable.

#### Question 4

[15]

Write a program to input name, roll number and marks in four different subjects of a student and calculate the total and average of it. If the average obtained is 40% or more then display result as "Promotion granted" otherwise "Promotion not granted" (using Ternary operator). Print the result in the following format:

Name :

Roll number:

Marks 1:

Marks 2:

Marks 3:

Marks 4:

Total:

Average:

Result:

#### Question 5

[8]

- Write a program to input the name and age of a voter and check whether he/she is eligible to vote or not. (Note: age to vote should be greater than or equal to 18)
- Write a program to input a number and check whether the entered number is even or odd.

#### Question 6

[15]

A man invests certain sum of money at 5% compound interest for the first year, 8% for the second year and 10% for the third year. Write a program to input sum of money (principle), rate of interest for three years and calculate the amount after three years.

[Hint: Amount =  $P (1 + R1 / 100) (1 + R2 / 100) (1 + R3 / 100)$  ]

#### Question 7

[15]

Write a program to input the Name, Employee ID, Mobile number and monthly salary of a salesman. If the monthly sales of a salesman is greater than or equal to Rs. 10,000 then the bonus of 15% will be added in his salary otherwise 10% bonus will be given. Calculate the total salary of a salesman after adding the bonus and print the details as per the following:

#### EMPLOYEE DETAILS

Employee Name:

Sales ID:

Mobile Number:

Monthly Salary:

Bonus Amount:

Total Salary:

#### Question 8

- Write a program to accept time in seconds and convert it into hours, minutes and seconds.
- A Cinema Hall offers 20% discount on the movie tickets. But the customer has to pay 18% GST and 15% Entertainment tax on the remaining price. Write a program to input the customer name, mobile number and price of the ticket. Calculate and print the Name, Mobile number and Total amount to be paid by the customer.

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