

GREENLAWNS HIGH SCHOOL  
TERMINAL EXAMINATION FOR THE ACADEMIC YEAR 2023-2024  
COMPUTER APPLICATION

MARKS : 100

STD IX

TIME : 2 HRS

*You will not be allowed to write during the first 10 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.*

*Attempt all questions from Section A and any four questions from Section B.*

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

**(SECTION A)**

*(Attempt all questions)*

Question 1 :

Multiple choice question [ Each is of 1 mark]

(i) Name the process that converts source code to bytecode

- (a) Interpretation
- (b) Compilation
- (c) Translation
- (d) Coding

(ii) Which among the following is not a language feature in Java?

- (a) Robust
- (b) Secured
- (c) platform independent
- (d) procedure oriented

(iii) What is the extension of byte code in Java?

- (a).java (b).class (c).exe (d).doc

(iv) Which among the following keyword is used to allocate memory space for an object?

- (a) new
- (b) for
- (c) while
- (d) int

(v) Operators with higher precedence are evaluated before operators with relatively lower precedence. Arrange the operators given below in order of higher precedence to lower precedence.

- (i) &&    (ii)%    (iii)>=    (iv)++
- (a) iv i iii ii
  - (b) iv iii ii i
  - (c) iv ii iii i
  - (d) i ii iii iv

(vi) The statement to stop the execution of a construct

- (a) System.exit(0)
- (b) break
- (c) stop

(vii) Which of the following data types can have only one value at a time?

- (a) Primitive
- (b) Reference
- (c) Abstract
- (d) Import

(viii) (1==1)&&(0<=0) is

- (a) 1    (b) 0    (c) false    (d) true

(ix) Which of the following modifier can be used with function name?

- (a) float
- (b) static
- (c) parameter
- (d) double

- (x) Which among the following operator is used to check if the two operands are equal or not?
- (a) equals
  - (b) =
  - (c) ==
  - (d) equals is
- (xi) Which among the following Scanner methods allows us to input a number with a decimal point?
- (a) nextInt()
  - (b) nextFloat()
  - (c) nextDecimal()
  - (d) nextPoint()
- (xii) Which among the following is used to represent single line comment?
- (a) //
  - (b) /\*
  - (c) \\\
  - (d) <!--
- (xiii) In case you need to give a proper message (prompt string) before taking an input from the user, which would be the most preferable method?
- (a) Initialization
  - (b) Parameterized input
  - (c) Scanner input
  - (d) Prompt input
- (xiv) State whether the following statements about switch statements are correct
- (i) switch statement often provides a better alternative than a large series of if else if statements.
  - (ii) the break statement is used inside the switch to terminate a statement sequence.
- (a) True, False
  - (b) True, True
  - (c) False, False
  - (d) False, True

(xv) A conditional statement evaluates to \_\_\_\_\_ datatype.

- (a) String
- (b) double
- (c) boolean
- (d) float

(xvi) Which among the following logical operators is used to negate a condition?

- (a) && (b) || (c) ! (d) =!

(xvii) The conditional statement, \_\_\_\_\_ can only test for equality, whereas \_\_\_\_\_ can evaluate any type of Boolean expression.

- (a) if, switch
- (b) switch, if
- (c) while, if
- (d) if, while

(xviii) Which among the following is not a primitive data type?

- (a) int
- (b) float
- (c) String
- (d) char

(xix) Which of the following is not a punctuator?

- (a) ; semicolon
- (b) , comma
- (c) : colon
- (d) . dot

(xx) Which among the following is a logical error?

- (a) Missing semicolon
- (b) Mismatched braces in classes and methods
- (c) Misspelled keywords and identifiers
- (d) Addition is required but subtraction is performed.



Question 2.

(a) Write the conditional code snippet to determine if a character 'p' entered by the user is in uppercase or lowercase letter. [2 marks]

(b) What is the output of the following program: [2 marks]

```
class second
{
    static void check()
    {
        int r, a=50, b=10;
        r=(a>45)?a:b;
        System.out.print(r);
    }
}
```

(c) Write the corresponding Java expression for the following mathematical operation: [2 marks]

$$z = x^3 + y^3 - xy/z;$$

(d) Give the output of the following: [2 marks]

```
int m=2, n=4, r=1;
int res=(++r)+n+(++m)+(r++)
```

(e) Rewrite the following using ternary operator: [2 marks]

```
if(x>y)
z=true;
else
z=false;
```

(f) What is wrong with the following program segment? [2 marks]

```
{
    int friend;
    friend=10;
    System.out.println(+friend);
}
```

(g) State one difference between floating point literal and double literal?

[2 marks]

(h) What will be the output of the following code fragment? [2 marks]

```
int i,j;
i=j=10;
int a=50,b=60;
if(a<100)
{
    if(b>50)
        ++j;
}
else
    ++j;
System.out.println("i:"+i);
System.out.println("j:"+j);
```

(i) Give an example to show the methods print() and println(). [2 marks]

(j) What are the types of casting shown by the following examples? [2 marks]

(i) double x=15.2;

```
int y = (int)x;
```

(ii) int x=12;

```
long y=x;
```

(SECTION B)

(Answer any four questions from this Section)

*The answers in this section should consist of the programs in either BlueJ environment or any program environment with Java as the base. Each program should be written using variable description/mnemonic codes so that the logic of the program is clearly depicted. Flowcharts and algorithms are not required.*

Question 3.

Write a program to input an integer and check whether it's 3 digit number or not. If it is, print the largest digit in the number. [ 15 marks]

Question 4.

[ 15 marks]

Write a program to pass 2 integer number as parameters, if either of the 2 number is zero, display invalid entry and the program should end. If it is a valid entry, divide the larger number with the smaller number and display the result.

Question 5.

Write a program using variables to find the profit and profit percent of a certain transaction where

S.P= 10000 and C.P= 7000

[15 marks]

Question 6.

Write a menu driven program to initialize an integer variable with 89467 and check whether to extract the first digit and store it in a variable and display it or extract the last digit and store it in a variable and display it. [15 marks]

Question 7.

Write a program to input the radius and height of a cylinder and find its volume and total surface area.

Note: Total Surface Area= $2 \pi r^2 + 2 \pi r h$

Volume= $\pi r^2 h$

[15 marks]

Question 8.

A library charges a fine for books returned late. Following are the fines:

First five days : 50 paise per day.

Six to Ten days : 75 paise per day.

Above ten days : 1.20 paise per day.

Design a program to calculate the fine assuming that a book is returned N days late. [ 15 marks]