GREENLAWNS HIGH SCHOOL

TERMINAL EXAMINATION FOR THE ACADEMIC YEAR 2022-2023

COMPUTER APPLICATION   MARKS : 60

STD X C   TIME : 1 ½ HRS

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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.

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This paper is divided into two Sections.
Attempt all questions from Section A and any three questions from
Section B.
The intended marks for questions or parts of questions are given in
brackets[]

(SECTION A)

(Attempt all questions)

Question 1.   [10]

Choose the correct answer and write the correct option.

i)   Which of the following is not a token?
a) Keywords   b)Identifiers   c) Statement   d) Operators

ii)   The Math class is part of which Java Library package.
a) java.util   b)java.io   c) java.random   d) java.lang

iii)   Function not returning any value has return type as:
a) int   b) float   c) char   d)void

iv)   One function many definitions, is called
a) function enlargement   b) function overloading

c) change function   d) none of the above

v) Which of these methods of class String is used to extract a
single character from a string object?

a) CHARAT()   b) chatat ()   c) charAt()   d) ChatAt()

vi) When a program does not contain any constructor, Java compiler provides a _____ constructor.

a) default   b)parameterized

c)constructor overloading   d)none of these

vii) Which looping process checks the test condition at the end of the loop?

a) for   . b) while   c)do-while   d) none

viii) Given the code

    for(num=1;num<=5;num++)

    System.out.print(num);

    What will get printed?

a)1   b)4   c)5   d)6

ix) Multiple branching statement of Java is

a) for   b)while   c)do-while   d)switch

x) Wrapping up of data and methods together as one unit is termed as:

a) Inheritance   b)Polymorphism

c)Encapsulation   d)Abstraction

Question 2.

i)   Write Java expression for   [2]

    $|x^2+xy|$

ii)   Evaluate the following expression: [2]
    z+= a++ + - -b + ++a + - -b;
    Where a=10, b=5, z=10

iii) What are the values stored in variables r1 and r2? [2]
  a) double r1=Math.abs(Math.min(-2.83,-5.83));
  b) double r2=Math.sqrt(Math.floor(16.3));

iv) What is the value stored in variable res given below [2]
  double res=Math.pow("345".indexOf('5'),3);

v) What will be the output for the following program segment?
  String s= "abc"; [2]
  System.out.println(s.toUpperCase());

vi) int f=10,m=9;
  String e=(m%f==9)? "YES": "NO"; [2]

  System.out.print(e);

vii) What will be the output of the following code? [2]
  System.out.println("Lucknow".substring(0,4));

viii) Find the errors in the program given below and rewrite the
  corrected form: [2]
  My class
  { int a;
    int b;
    void display1(){
      System.out.println(a+ " " +b);
    }
    static void display2()
    {
      System.out.println(a+" " +b);
    }
    public static void main()
    {
      My class ob1=new My class();
      display1().ob1;
      display2().ob2;
    }
  }

ix) Convert the following segment into an equivalent do loop.

```
int x,c;                                                    [2]
for(x=10;c=20;c>=10;c=c-2)
    x++;
```

x) a) The operator which acts on one operand is known as

_____   [1]

b) The keyword _____ is used to allocate memory

space for an object.   [1]

(SECTION B)
(Attempt any three)

Question 3.

Write a program to print the initials and surname of a given

full name.   [10]

For example   Ansh Kumar Mehra

Output   A.K. Mehra

Question 4.   [10]

Write a program to print a pattern as

5

5 4

5 4 3

5 4 3 2

5 4 3 2 1

Question 5.

Design a class to overload a function check() as follows :   [10]

i)   void check(String str, char ch) - to find and print the
      frequency of a character in a string.

For example str= "success"

ch= 's'

Output : number of s present is 3

ii) void check(String s1) – to display only vowels from string s1, after converting it to lower case.

For example : "computer"   output : o u e

Question 6.

Define a class Bill as described below: [10]

Data members :

name   :   to store the name of the consumer

consumerno   :   to store the consumer no

unitconsumed   :   to store the unit consumed

Member methods:

input()   :   to read the data

compute()   :   to calculate the bill amount as per criteria

Units consumed	Rate
Upto 100 units	1.20
More than 100 and upto 200 units	2.20
More than 200 and upto 300 units	3.20
Above 300 units	4.00

display()   :   to display the output as per the format

| Consumer Name | Consumer No | Unit Consumed | Bill Amount |

Question 7.

WAP to check if a number inputted is a Dudeney number. A number is dudeney if the cube of the sum of the digits is equal to the number itself.

Eg. $19683=(1+9+6+8+3)^3 = 27^3$