

GREENLAWNS SCHOOL, WORLI
TERMINAL EXAMINATION
COMPUTER APPLICATION

STD : X

MARKS : 100

Date :- 23/9/25

TIME : 2 Hrs

Answer 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 the paper is the time allowed for writing the answers.

*This paper is divided in to two Sections. Attempt **all questions in Section A** and **any four questions from Section B**. The intended marks for the questions or parts thereof are given in brackets([]).*

Section A (40 marks)
(Attempt all questions)

Question 1

Choose the correct answer and write the correct option.

[20]

- 1) Which of the following ASCII code range is applicable for special character?
 - a) 34 to 47 and 57 to 65
 - b) 32 to 47 and 57 to 63
 - c) 33 to 47 and 57 to 64
 - d) None of them
- 2) The trim() method of the string class remove
 - a) Leading space only
 - b) Trailing space only
 - c) Space between words
 - d) Leading and trailing space
- 3) Which among the following is the correct construct for creating an object named 'book' of the 'Library' class?
 - a) Library book=new Library;
 - b) book =new Library();
 - c) Library() book=new Library();
 - d) Library book=new Library();
- 4) Default constructor can also be called as
 - a) Parameterised constructor
 - b) Non parameterised constructor
 - c) Method
 - d) None of these
- 5) The function which changes the state of an object is known as
 - a) Pure function
 - b) Impure function
 - c) Both a and b

- d) none
- 6) Parameters used in function call statement are known as:
- a) defined parameter
 - b) passed parameter
 - c) actual parameter
 - d) formal parameter
- 7) Which of the following is a valid java keyword?
- a) If
 - b) BOOLEAN
 - c) static
 - d) Switch
- 8) The access modifier that gives least accessibility is:
- a) private
 - b) public
 - c) public and private
 - d) none
- 9) What will be the output of the following code?
- ```
System.out.println("Lucknow".substring(0,4));
```
- a) Lucknow
  - b) Luckn
  - c) Luck
  - d) luck
- 10) A mechanism where one class acquires the properties of another class:
- a) Polymorphism
  - b) Inheritance
  - c) Encapsulation
  - d) Abstraction
- 11) Identify the type of operator &&:
- a) ternary
  - b) unary
  - c) logical
  - d) relational
- 12) Which of the following is not a token ?
- a) keywords
  - b) identifiers
  - c) statement

d) operators

13) Through which access specifier, a class makes its element visible to all ?

- a) public
- b) private
- c) protected
- d) none

14) Function not returning any value has return type as :

- a) int
- b) char
- c) float
- d) void

15) The function call in which the data in actual parameters get changed is known as ..... .

- a) Call by Value
- b) Call by Reference
- c) Return by Value
- d) Return by Reference

16) What are the values stored in variables r1 :

```
double r1 = Math.abs(Math.min(-2.83, -5.83));
```

- a) -2.83
- b) -5.83
- c) 2.83
- d) 5.83

17) Give the output of the following string functions:

```
"ACHIEVEMENT".replace('E', 'A')
```

- a) ECHIEVEMENT
- b) ECHIAVAMANT
- c) ACHIIVAMANT
- d) None of them

18) Find the infinite loop:

- a) for(int x=1;x<10;x++);
- b) for(int x=11;x>1;x--);
- c) for(int x=1;x<10;x--);
- d) none of these

19) What are the final values stored in variable x ?

```
double a = -6.35;
double x = Math.abs(Math.ceil(a));
```

- a) -6
- b) -7
- c) 6
- d) 7

20) charAt( ) takes first value as

- a) 1
- b) 0
- c) 2
- d) None of these

Question 2 State the difference of the following:

[10]

- a) While and do while loop
- b) constructor and method
- c) = and ==
- d) Pure and impure function
- e) System.out.print( ); and System.out.println( );

Question 3

[10]

- a) Explain call by reference.
- b) Explain block variable with eg.
- c) Explain Pure function.
- d) What is actual parameter
- e) How many values does a sub function can return?

### Section– B (60 marks)

*(Attempt any four questions from this section. The answers in this section should consist of the program in Blue J environment with java. )*

#### Question 4

Define a class ElectricBill with the following specifications:

class : ElectricBill

Instance variables / data member:

String n — to store the name of the customer

int units — to store the number of units consumed

double bill — to store the amount to be paid

Member methods:

void accept( ) — to accept the name of the customer and number of units consumed

void calculate( ) — to calculate the bill as per the following tariff:

| Number of units | Rate per unit |
|-----------------|---------------|
| First 100 units | Rs.2.00       |
| Next 200 units  | Rs.3.00       |
| Above 300 units | Rs.5.00       |

A surcharge of 2.5% charged if the number of units consumed is above 300 units.

void print( ) — To print the details as follows:

Name of the customer: .....

Number of units consumed: .....

Bill amount: .....

Write a main method to create an object of the class and call the above member methods.

### Question 5

Write a program to enter a word and check whether it is a palindrome word using user define function. (note have to return a value from sub function to main function ) [15]

### Question 6

Generate the following pattern [15]

Output :        4444

                 3333

                 2222

                 1111

### Question 7

Write a program to enter a sentence from the keyboard and count number of capital, small letter and digits in it [15]

### Question 8

Write a program to accept a string. Convert the string into upper case letters. Count and output the number of double letter sequences that exist in the string.

Sample Input: "SHE WAS FEEDING THE LITTLE RABBIT WITH AN APPLE"

Sample Output: 4

### Question 9

Generate the following series:

1) 5,25,125,625,3125 ..... n numbes

2) 1,4,9,16,25 ....100

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