

Std: X

Date: 07/12/19

Subject: Computer

(Marks 40)

SECTION A

Question 1

- a Name any two visibility modifiers used in java. 1
- b Write difference pure and impure function. 2
- c Name types of java programs. 2
- d Differentiate between boxing and unboxing. 2
- e Write default value of char and boolean data type. 1
- f Name any two construct used in java. 1

Question 2

- a Write java statement to create an String array of size 20 . 2
- b Explain System.exit() with an example. 2
- c Which OOP principle implemented by function overloading . 1
- d Name the following : 2
 - (i) A keyword which make method as a class method.
 - (ii) A String function that extracts number of characters from desired position.
- e Write a java statement to create a reverse loop from 8 to 0 2
- f Define java token. 1

Question 3

- a Write the value of x after execution . 2

```
int x = 6;
x -= ++x + --x + ++x * 4;
```
- b Write the output for the following : 4

```
String s1 = "Mission Impossible";
System.out.println(Math.pow( s1.indexOf('o'),2 ) );
System.out.println( s1.charAt(3));
System.out.println( s1.substring(0,6).compareToIgnoreCase("mission"));
System.out.println( s1.lastIndexOf('i') );
```
- c Solve the following code. 3

```
int a[] = { 'a','b','c','d','A','B','C','D'};
System.out.println( (int)a[5] );
System.out.println(a.length);
System.out.println(a[1]);
```

char

d Write output for the following .

(i) `System.out.print("Beautiful");`

`System.out.println("Flower");`

(ii) `System.out.println("Life is "+"\\t"+ "Challenge");`

e Write output

`int i=5;`

`while(--i>=1)`

`System.out.print(i+ " ");`

`System.out.print(i);`

f Answer the following questions based on function

class Check

```
{ void show (int H)
{
    H*=4
    System.out.println("H"+H);
}
public void result ()
{
    int q=8;
    show(q);
}}
```

(i) Name the formal and actual parameter

(ii) Give the output when function show () is called?

(iii) Create an object of above class.

g Write difference between next () and nextLine () .

h Write two Integer class functions.

i Write java expression $|a^2+b^2|$

2
1
1

SECTION B

(60 Marks)

(attempt any four questions from this section. Variable description is necessary)

Q.4 Define a class Taximeter with following specifications :

Data members : String name : to store passenger's name

int taxino : to store taxi number

Int km : to store no. Of kilometres travelled

Member methods :

void accept ()- to take value from user for the variables name , taxino, km

void calculate () - to calculate bill as per the following criteria

Kilometers travelled	Rate/km
≤ 1 km	Rs .25
$1 < km \leq 6$	Rs.10
$6 < km \leq 12$	Rs.15
$12 < km \leq 18$	Rs.20
> 18	Rs 25

void display() - To display all the details in the following format

TaxiNo	Name	Km travelled	Bill
--------	------	--------------	------

Create an object in main method and call all the methods.

Q. 5 Design a class to overload a function name area to perform following operation .

double area (double a , double b , double c) :

$$ar = \sqrt{s(s-a)(s-b)(s-c)} \quad \text{where } s = a+b+c / 2$$

double area (int x , int y , int ht) : ar 1= 1/2 ht(x+y)

double area (double d1 , double d2) : ar2= 1/2(d1 x d2)

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Q.6 Write a menu driven program to perform following operation as per user's choice. Take number from user.

(i) Display 20 terms of Fibonacci series(0 1 1 2 3 5....)

(ii) $1/2+3/4+5/6+7/8+\dots+19/20$

(iii) calculate and display frequency of even digits in a number

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Q.7 Write a program to accept word from user and perform following operation

(i) check if it is a special word or not(special word is one which has first and last character same.) display proper message.

(ii) count total number of vowels

(iii) display ascii code of each characters in a word.

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Q.8 Write a program to create two dimensional array of size 3x3 to accept elements. Display them in the matrix form.

Q.9 Write a program to input 20 numbers from users. Using bubble sort method Arrange them in descending order and display them.

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