



Std: X
 Date: 09/01/19

Subject: Computer

Marks: 100
Dur. : 2 Hrs

SECTION A

Question 1

(Marks 40)

- a Define java byte code 1
- b Write difference between operator and expression 2
- c Name types of java programs. 2
- d What parse function does? Explain with an example. 2
- e Write difference between Constructor and Function. 2
- f Name any two construct used in java. 1

Question 2

- a Write java statement to create an int array of size 20. 2
- b What is the role of keyword void in function declaration. 2
- c Which OOP principle implemented by function overloading. 1
- d Name the following: 2
 - (i) A package that is invoked by default
 - (ii) A String function that compares two words and returns boolean value.
- 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 = 4;
x -= ++x + ++x + ++x * 4;
```
- b Write the output for the following: 4

```
String s1 = "Mission Impossible";
System.out.println(Math.pow(s1.indexOf('I'), 2));
System.out.println(s1.length());
System.out.println(s1.substring(0, 6) + s1.substring(10));
System.out.println(s1.lastIndexOf('s'));
```

68
57
90
122
- c Solve the following code. 3

```
int a[] = {'a', 'b', 'c', 'd', 'A', 'B', 'C', 'D'};
System.out.println((int)a[3]);
System.out.println(a.length);
System.out.println(a[4]);
```

d Write output for the following :

- (i) `System.out.print("Beautiful");`
`System.out.println("Flower");`
- (ii) `System.out.println("Life is "+"\\n"+"Challenge");`

2

e Write output

```
int i=5;
for(; i<=20;i+=4)
System.out.print(i);
System.out.println(i);
```

5 9 13 17

3

f Answer the following questions based on function

```
void show (int H)
{
H*=7
System.out.println("H"+H);
}
public void result ()
{
int q=8;
show(q);
}
```

- (i) Name the formal and actual parameter
- (ii) Name the local variable
- (iii) Give the output when function show () is called?

2

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

2

h Explain any two Character class function with an example.

SECTION B

(60 Marks)

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

Q.4 Define a class Library with following specifications :

- Data members : String title : to store title of the book
- String author : to store the author name
- int acc_num : stores the accession number
- double fine : calculate fine amount

Member methods :

- void input ()- to take value from user for the variables title , author , acc_num
- void cal () - to calculate fine as per the number of days book is returned late
fine is Rs 5 per day.

void display - Display details in the following format :

Accession Number	Title	Author	Fine
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Call all the above function in main function.

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

double area (double a , double b , double c) :
ar = $\sqrt{s(s-a)(s-b)(s-c)}$ where $s = a+b+c/2$

double area (int x , int y , int ht) : ar1= 1/2 ht(x+y)

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

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

(i) Display only even factors of a number

(ii) $1/2+3/4+5/6+7/8+\dots+x/x+1$ (take value of x)

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

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 only even ascii code of characters.

Q.8 Write a program to create two array name A and B of size 10. Perform following operation :

(i) Input in an array A and find square of each number and store in array B and display both the arrays simultaneously.

(ii) Display square root of each number from array A and display square root.

Q.9 Write a program to input a number from user and using binary search method find the number is present in the given array or not. Display proper message .

Array is : a [] = { 125 ,234,567, 657 ,786 .896 ,983,1010,1110,1212}