KADI SARVA VISHWAVIDHYALAYA

B.E. CE/IT/CSE Semester 4 Examination- November-2022

Subject Code:- CT405-N   Subject Name:- OOPJ

Time:- 10.00 AM to 01.00 PM

Date: 14/11/2022   Total Marks:- 70

Instructions:

1. Answer each section in separate Answer sheet.
2. All questions are **Compulsory**.
3. Indicate **clearly**, the options you attempt along with its respective question number.
4. Make suitable **assumption** where needed.

Section – I

Q-1 Answer the following questions. (All compulsory)

(A)	List and explain various features of java.	[5]
(B)	What is constructor? Explain constructor overloading of java with example.	[5]
(C)	Differentiate between Method overloading and Method overriding of java.	[5]

OR

(C)	Explain any two methods of String Class and String Buffer Class of java with suitable example.	[5]

Q-2 Answer the following questions.

(A)	Explain this and static keywords of java with suitable example.	[5]
(B)	Explain use of protected and default access specifiers of java with suitable example.	[5]

OR

Q-2 (A)	Write a java program to demonstrate abstract class with suitable example.	[5]
(B)	Write a java program of multilevel inheritance with suitable example.	[5]

Q-3 Answer the following questions.

(A)	Explain super and final keywords of java with suitable example	[5]
(B)	Explain dynamic method dispatch of java with suitable example?	[5]

OR

Q-3 (A)	Write a java program to implement Arraylist and Treeset classes.	[5]
(B)	Write a java program to implement user define package.	[5]

Section – II

Q-4   **Answer the following questions.** (All compulsory)

(A)   Explain use of try, catch, finally with suitable example in exception handling of java.   [5]

(B)   Explain life cycle of thread in java.   [5]

(C)   Write a java program to copy content of file1.txt to file2.txt using java file handling.   [5]

OR

Q-4   (C)   Write a java programs to handle Arithmetic Exception.   [5]

Q-5   **Answer the following questions.**

(A)   Explain Java Border Layout with suitable example.   [5]

(B)   Write a java programs to handle ArrayIndexOutOfBounds Exception.   [5]

OR

Q-5   (A)   How can we open and read a text file in java? Explain your answer with example.   [5]

(B)   Write a java program to implement custom exception (user define exception).   [5]

Q-6   **Answer the following questions.**

(A)   Write a java program to define two threads one will print 1 to 10 numbers whereas other will print 11 to 20 numbers.   [5]

(B)   Explain Java Grid Layout with suitable example.   [5]

OR

Q-6   (A)   Explain life cycle of Applet in java.   [5]

(B)   Give the output of following java code: [5]

```
public class Code{

    public static void main(String args[])
    {
        StringBuffer str1 = new StringBuffer("ldrp");
        StringBuffer str2 = str1;
        str1.append("itr");
        System.out.println(str1 + " " + str2 + " " + (str1 == str2));
    }
}
```

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KADI SARVA VISHWAVIDYALAYA

B.E. SEMESTER – IV REGULAR EXAMINATION June -2022

SUBJECT CODE: - CT405-N   **SUBJECT NAME:- Object Oriented Programming Using Java**

DATE: -15-06-2022   **TIME: - 12:30 TO 3:30PM**   **MARKS:-70**

Instructions:
1. Answer each section in separate Answer Sheet.
2. All questions are **compulsory**.
3. Indicate clearly, the options you attempted along with its respective question number.
4. Assume suitable data wherever necessary.
5. Use of scientific calculator is permitted.

SECTION-I

Q-1 (A) List and Explain features of Java .   [05]

  (B) What is byte code? Justify why Java is platform independent .   [05]

  (C) Compare Object Oriented programming with procedural programming language.   [05]

OR

  (C) Explain following keywords by example   [05]
  this, final ,super

Q-2 (A) Give output of following code.   [05]
I . if the output of any program is an error according you, you have to mention
which type of error it is. Compile time, Runtime and Justify.

```
public class ABC
{
  public static void main (String args[])
  {
   try
      {
          int a[]= new int[10];
          a[11]=9;
      }
     catch (ArrayIndexOutOfBoundsException e)
      {
          System.out.println("ArrayIndexOutofBounds");
      }
    }
  }
```

```
II. class Ex
  {
      public static void main (String args[])
      {
        try
        {
            int a=10, int b=0;
            int output =a/b;
            System.out.println("Result:"+output);
        }
        catch(Arithmetic Exception e)
        {
            System.out.println("you Shouldn't divide number by zero");
        }
      }
  }
```

    (B) What is multithreading? Explain thread life cycle in java.   **[05]**

<div align="center">OR</div>

Q-2(A) Explain visibility modifiers with their scope in packages.   **[05]**

    (B) What is String class? Explain String class method with example.   **[05]**

Q-3(A) Explain method overloading with program.   **[05]**

    (B) What is Inheritance? Explain multilevel inheritance with program.   **[05]**

<div align="center">OR</div>

Q-3(A) What is Polymorphism? Explain method overriding with program.   **[05]**

    (B) Explain constructor in java and its rule with program.   **[05]**

Q-4(A) Compare abstract and interface in Java [05]

(B) What is package in java? Explain step to create package with example. [05]

(C) Explain Synchronization with example [05]

OR

(C) Explain Lifecycle of Applet [05]

Q-5(A) Write a program to print half pyramid using *

```
*
**
***
****
*****
```
[05]

(B) Compare Binary I/O and Text I/O [05]

OR

Q-5(A) What is Layout? Explain various Layout manager in java [05]

(B) Write a program to print half pyramid using alphabet [05]

```
A
BB
CCC
DDDD
EEEEE
```

Q-6(A) What is collection in java? Differentiate between Vector and ArrayList [05]

(B) Differentiate Application and Applet. [05]

OR

C   (A) Explain Event Handling in Applet with example. [05]

(B) abstract Vegetable class has three subclasses named Potato, Brinjal and Tomato. [05]
Write an application that demonstrates how to establish this class hierarchy.
Declare one instance variable of type String that indicates the color of a vegetable.
Create and display instances of these objects.

Best of Luck