KADI SARVA VISHWAVIDYALAYA

B.E. SEMESTER 4th (ATKT) EXAMINATION OCTOBER-2023

Subject Name: Object Oriented Programming using Java   Subject Code: CT405-N
Date: 04/11/2023 (Saturday)   Time: 12:00 p.m. to 03:00 p.m.   Total Marks: 70

Instructions:
1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Indicate clearly, the options you attempt along with its respective question number.
4. Use the last page of main supplementary for rough work.

Section-I

Q.1	(A)	Discuss significance of byte code.	[5]
	(B)	List OOP characteristics and describe inheritance with examples	[5]
	(C)	List and explain various features of Java.	[5]

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

	(C)	Explain all,access modifiers and their visibility as class members.	[5]

Q.2	(A)	Compare String with StringBuffer. Also, write a program to count the occurrence of a character in a string.	[5]
	(B)	How can you create package in Java? Explain with example.	[5]

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

Q.2	(A)	Explain the words **final** and **this** with the help of an example.	[5]
	(B)	Explain types of constructor with the help of an example	[5]

Q.3	(A)	What is collection in Java? Differentiate between Vector and ArrayList.	[5]
	(B)	Write a JAVA program for matrix multiplication.	[5]

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

Q.3	(A)	Explain the following:	[5]
		i) Arguments and Parameters of a function	
		ii) Pass by Value and Pass by reference	
	(B)	Compare abstract & interface in Java.	[5]

Section-II

Q.4 (A) What is an Exception? Explain try, catch and finally with example. [5]

  (B) What is thread? Describe the complete life cycle of thread [5]

  (C) What is the keyword "throw" and "throws" used for? [5]

OR

  (C) Write a program that illustrates interface inheritance. Interface P is extended by P1 and [5] P2. Interface P12 inherits from both P1 and P2. Each interface declares one constant and one method. class Q implements P12. Instantiate Q and invoke each of its methods. Each method displays one of the constants.

Q.5 (A) Compare Binary I/O and text I/O. [5]

  (B) Explain Thread Synchronization with example. [5]

OR

Q.5 (A) Differentiate Application and Applet. [5]

  (B) Explain event handling in Java with suitable example. [5]

Q.6 (A) Explain the various Character I/O classes with example. [5]

  (B) Explain various layouts in Java with proper example. [5]

OR

Q.6 (A) Write a program to explain the concept of TreeSet. [5]

  (B) Explain the lifecycle of Applet. [5]

KADI SARVA VISHWAVIDYALAYA

B.E. SEMESTER 4th (REG/ATKT) EXAMINATION MAY-2023

Subject Name: Object Oriented Programming using Java   Subject Code: CT405-N

Date: 15/05/2023 (Wednesday)   Time: 10:00 a.m. to 01:00 p.m.   Total Marks: 70

Instructions:
1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Indicate clearly, the options you attempt along with its respective question number.
4. Use the last page of main supplementary for rough work.

Section-I

Q.1	(A)	List and explain the features of Java.	[5]
	(B)	List the various operators in Java and explain any two with proper example.	[5]
	(C)	What is control structures and selection in Java? Explain it with example.	[5]

OR

	(C)	Write a JAV,A program to implement the Fibonacci series using for loop control structure.	[5]

Q.2	(A)	Discuss various access modifiers available in JAVA? How access modifier affects the visibility of a member in different access locations? Explain with suitable example.	[5]
	(B)	Explain constructor in java along with its rules and types. Also write down the program to demonstrate the concept of constructor overloading.	[5]

OR

Q.2	(A)	Explain the given keywords with proper example. 1) this 2) final super	[5]
	(B)	Write a JAVA program for matrix multiplication.	[5]

Q.3	(A)	Differentiate method overloading and method overriding with the help of example.	[5]
	(B)	What is collection in Java? Differentiate between Vector and ArrayList.	[5]

OR

Q.3	(A)	Explain the use of final keyword in JAVA with proper example.	[5]
	(B)	Compare abstract & interface in Java.	[5]

Explain the Process of thread Creation with example.

Section-II

Q.4 (A) What is Inheritance? List out its types and explain any one with proper example. [5]

(B) What is Polymorphism? List out its types and explain method overriding with program. [5]

(C) Compare Binary I/O and text I/O. [5]

OR

(C) Describe abstract class called Shape which has three subclasses say Triangle, Rectangle, [5] and Circle. Define one method area() in the abstract class and override this area() in these three subclasses to calculate for specific object i.e. area() of Triangle subclass should calculate area of triangle etc. Same for Rectangle and Circle.

Q.5 (A) What is an Exception? Explain try, catch and finally with example [5]

(B) What is multithreading? Explain thread life cycle in java. [5]

OR

Q.5 (A) Write a program to raise and handle divide by zero exception. [5]

(B) Explain synchronization in thread with example. [5]

Q.6 (A) Explain the lifecycle of Applet. [5]

(B) Explain event handling in Applet with example. [5]

OR

Q.6 (A) Explain the various Character I/O classes with example. [5]

(B) Differentiate Application and Applet. [5]