

**Shiv Nadar University Chennai**  
Mid Semester Examinations 2024-2025 Odd  
Question Paper

Name of the Program: B.Tech AIDS, IoT, Cybersecurity		Semester: 3
Course Code & Name: CS2003 Object Oriented Programming		
Regulation 2021		
Time: 2 Hours	Answer All Questions	Maximum: 50 Marks

Q.No.	Questions	Marks	CO	KL
1	a State the difference between multilevel and hierarchical inheritance.	2	CO2	KL1
2	a What is the purpose of 'super' keyword in java?	2	CO2	KL1
3	a <pre>public class Output {     public static void main(String[] args) {         for(int i = 0; i &lt; 1; i++) {             System.out.println(i+'a');         }     } }</pre> What is the output of the above program?	1	CO1	KL3
	b <pre>class Solution{     public static void main(String args[]){         int i;         for(i = 1; i &lt; 6; i++){             if(i &gt; 3) continue;         }         System.out.println(i);     } }</pre> What is the output of the above program	1	CO1	KL3
4	a Write any two Javadoc tags along with their functionality.	2	CO1	KL1
5	a Write any two differences between method overriding and method overloading in Java.	2	CO2	KL2
6	a <p>A newly opened IT firm named "Technosoft Solutions" has planned to design ID cards to all the employees who were selected to join their organization. Write a java program for designing the ID card using classes, objects and access modifiers available in Java.</p> <p>Note: You can create various designation among the employees and datatypes necessary for ID card must contain the appropriate access modifiers with justification.</p>	10	CO1	KL3

7	a	Why java is called platform independent language.	5	CO1	KL2
	b	Why java does not permit multiple inheritance. Explain with an example			
8	a	Create class box and box3d. box3d is extended class of box. The class box must include constructor to set value of length, breadth, height. The class box3d must use super keyword to access the box class constructors and include additional fields weight and color. Write functions to calculate the volume of the class box and box 3d.	5	CO1	KL2
		<b>Note:</b> Base class and sub classes have respective methods and instance variables. Volume of Box = Length x Breadth x Height	10	CO2	KL2
9	a	Create an interface named "StringOperations". It contains methods namely DisplayReverse, JoinStrings, ConvertToUpper, StringTrim, ConvertToCharArray. Create an abstract class called "incompleteClass" which contains implementations for DisplayReverse and a class "completeClass" which contains full implementations for all methods in the interface.	10	CO2	KL3
		<b>Note:</b> DisplayReverse method should reverse the string. JoinStrings method concatenates the two strings. ConvertToUpper method converts the string to uppercase. StringTrim method should remove the leading and trailing whitespaces from the string. ConvertToCharArray creates a character array of the given string. You can use the built-in string functions in java or create your own functions. The input should be got from the user.			

KL – Bloom's Taxonomy Levels

(KL1: Remembering, KL2: Understanding, KL3: Applying, KL4: Analyzing, KL5: Evaluating, KL6: Creating)

CO – Course Outcomes