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NIST INSTITUTE OF SCIENCE & TECHNOLOGY
(Autonomous)



B. Tech 4th Semester (2022 Batch)				Branch(s)	CSE/CST/IT/ECS
Subject Code	22CS4PC02T	Subject Name		Object Oriented Programming using JAVA	
Time	90 min	Exam	Mid Semester	Max. Marks	50
Examination Superintendent		Prof. Chittaranjan Biswal			
Name of the Instructor(s)		Prof. Ashutosh Parida, Prof. Ch Sree Kumar, Prof. Debasish Padhy, Prof. Swetanjali Maharana, Dr. Krishna Prasad			
Date of Examination		15-04-2024 (Monday)	Sitting	01:30 PM to 03:00 PM	

Answer Question No.1 from PART-I which is compulsory, any four from PART-II and any one from PART-III.

The figures in the right hand margin indicate marks.

PART-I

(Answer all the questions)

Q1.		CO	Level	Level-1: Knowledge Level-4: Analysis	Level-2: Comprehension Level-5: Synthesis	Level-3: Application Level -6: Evaluation	2 X 5
	(a)	1	3	How this and super keyword are used. Write code snippet.			
	(b)	1	2	Define class, object and constructor.			
	(c)	2	2	What is Object class and mention any 2 methods of it.			
	(d)	2	2	What is an abstract class? Why it is necessary?			
	(e)	2	3	How to use final in the inheritance. Show a simple example.			

PART-II

(Answer Any Four questions out of six)

500

Q2.		CO	Level	Level-1: Knowledge Level-4: Analysis	Level-2: Comprehension Level-5: Synthesis	Level-3: Application Level -6: Evaluation	4 X 6
	(a)	1	3	Write a program in java to initialize objects using constructor.			
	(b)	2	4	Mention 2 features which can be achieved using Interface in java. Write a java program which has an interface Area_shapes which has 2 methods CalcSquare(), CalcCircle(). Write a separate class named AreaShp which implements the interface. Provide the body for the methods present in the interface (Each method body has to read data from the user and calculate the area)			
	(c)	2	4	Write a program in java to show how a parent class constructor can be called using Super?			
	(d)	1	4	Explain the static and final keywords with an example for each.			
	(e)	2	4	Write a program to find the area of square and circle using method overloading?			
	(f)	2	4	Define Exception and write the general form of exception handling block. Write a program to demonstrate multiple catch statements in java			

PART-III

(Answer Any One question out of two)

		CO	Level	Level-1: Knowledge Level-4: Analysis	Level-2: Comprehension Level-5: Synthesis	Level-3: Application Level -6: Evaluation	1 X 16
Q3.	(a)	1	3	What is the significance of each key word in the below line public static void main (String args[]) { ... }			
	(b)	2	4	using BufferedReader and InputStreamReader how can we read integer, byte, short and double data from the keyboard. Just write code snippet. Entire program is not required			
Q4.	(a)	2	4	Create a package which has 2 classes - Addition and Subtraction. Import the packages in a separate class and perform the addition and subtraction			
	(b)	1	4	Define constructor. Mention 3 rules of creating java constructor. Write a program in java which shows constructor overloading			
	(b)	1	4	Write a program in Java where a student class (having regno, rollno, college_name, and branch as its own instance variables) and extending from Person class (name, age and gender are its own instance variables) Use the constructors for this class. Use the super and this keywords in your program. Display the properties of Student class object with suitable methods.			