Subject Code: 20CS303PC	SET-II	HT NO:			7	R					

CMR TECHNICAL CAMPUS

UGC AUTONOMOUS

B. Tech. III Semester Supply End Examinations, July/August-2023

OOPS Through Java

Common to CSE, IT, CSM, CSD, CSG, AIML

Time: 3 Hours **Max. Marks: 70**

Note

i. This Question paper contains Part- A and Part- B.
ii. All the Questions in Part A are to be answered compulsorily.
iii. All Questions from Part B are to be answered with internal choice among them.

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PART-A

10 X 02 = 20 Marks

			Marks	CO	BL
1.	a	List and describe different types of operators?	2	CO1	L1
	b	Distinguish between Procedural language and OOPs?	2	CO1	L2
	c	Differentiate in between Interfaces vs Abstract classes.	2	CO2	L2
	d	List various steps for creating and importing packages.	2	CO2	L1
	e	Define polymorphism?	2	CO3	L1
	f	List types of inheritances in java?	2	CO3	L1
	g	How threads are synchronized?	2	CO4	L1
	h	Define the wait() and notify() methods in Inter-Thread communication	2	CO4	L1
	i	List Layout manager types	2	CO5	L1
	j	Explain AWT class hierarchy?	2	CO5	L2

PART- B

5 X 10 = 50 Marks

			Marks	CO	BL
2.	a	What do you mean Type-casting? Explain automatic type conversion with suitable example.	5	CO1	L2
	b	Define variable? Discuss the scope and life time of variable?	5	CO1	L2
		OR			
3	a	Write a Program to create Palindrome numbers	5	CO1	L3
	b	Explain briefly about String class and discuss various methods	5	CO1	L2

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in String class with an example.

4	a	Does Java Support multiple inheritance? Justify your answer with an example	5	CO2	L3
	b	Explain the uses of inner classes and local inner classes with examples	5	CO2	L2
		OR			
5	a	Explain the usage of abstract classes and methods with example programs.	5	CO2	L3
	b	What is method overriding? When its occurs? Demonstrate with a Java program.	5	CO2	L3
6	a	Discuss the fundamentals of exception handling.	5	CO3	L2
	b	Define a thread. Explain the two ways of creating threads.	5	CO3	L2
		OR			
7	a	Illustrate unchecked exceptions defined in java.lang with their meaning	5	CO3	L3
	b	Write a program to demonstrate creation of multiple threads.	55	CO3	L3
8	a	What is hash table? Explain with an example.	5	CO4	L2
	b	Explain in detail about Collection Classes.	5	CO4	L2
		OR			
9	a	Discuss in detail about Random class with an example.	5	CO4	L3
	b	Explain in details about binary input/output file operations with examples.	5	CO4	L2
10	a	Explain in brief about Events, Event sources and Event classes.	5	CO5	BL2
	b	Develop an applet that receives an integer in one text field and computes its factorial value and returns it in another text field, when the button named "compute" is clicked	5	CO5	BL4
		OR			
11	a	Develop a program that demonstrates an icon based JButton	5	CO5	BL4
	b	Demonstrate the mouse related events with java program	5	CO5	BL4

CO : **Course Outcomes**

BL : **Bloom's Taxonomy Levels** **L 1: Remembering** **L 2: Understanding** **L 3: Applying** **L 4: Analysing** **L 5: Evaluating** **L 6: Creating**

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Subject Code: 19CS405PC	SET-II	HT NO:			7	R					

CMR TECHNICAL CAMPUS

UGC AUTONOMOUS

B. Tech. IV Semester Supply End Examinations, July/August-2023

Java Programming

Common to CSE & IT

Time: 3 Hours **Max. Marks: 70**

Note

i. This Question paper contains Part- A and Part- B.
ii. All the Questions in Part A are to be answered compulsorily.
iii. All Questions from Part B are to be answered with internal choice among them.

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PART-A

10 X 02 = 20 Marks

			Marks	CO	BL
1.	a	List the String Handling Methods in Java.	2	CO1	L1
	b	List the Data Types in Java	2	CO1	L1
	c	What is CLASSPATH in Java?	2	CO2	L1
	d	Define Auto boxing.	2	CO2	L1
	e	List Different Types of Exceptions in Java	2	CO3	L1
	f	Explain synchronizing threads in Java.	2	CO3	L1
	g	What are Map Interfaces and Classes in Java?	2	CO4	L1
	h	Differentiate Between Collections Framework and Collections Classes.	2	CO4	L1
	i	List different types of Swing controls.	2	CO5	L1
	j	Define Delegation Event Model.	2	CO5	L1

PART- B

5 X 10 = 50 Marks

			Marks	CO	BL
2.		A pet store needs a program to manage their inventory of different types of pets, including dogs, cats, and birds. The pet store wants to keep track of the pet's name, breed, and age, as well as any unique information specific to each type of pet. The store would like to be able to perform certain actions on the pets, such as feeding, playing, and making them speak. Use Polymorphism and Write a Java Program to Solve the Problem Statement.	10	CO1	L3
		OR			
3	a	Explain Method Overriding with an Example.	5	CO1	L2

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	b	Explain the String Handling Methods with Suitable Example.	5	CO1	L2
4	a	Write a Java program that uses interfaces to define the behavior of different types of vehicles. The program should have an interface called Vehicle that defines the basic properties and methods of a vehicle, such as getSpeed() and accelerate(). The program should also have two concrete implementations of the Vehicle interface: a Car class and a Bicycle class. The Car class should have a method called honk() that makes the car honk, and the Bicycle class should have a method called ringBell() that makes the bicycle ring its bell. Finally, write a Driver class that uses polymorphism to drive a Vehicle object and demonstrate the use of the accelerate() and getSpeed() methods, as well as the honk() and ringBell() methods, if applicable.	10	CO2	L3
		OR			
5	a	Explain Different File Operations and How they are Handled in Java	5	CO2	L2
	b	Explain Serialization with an Example.	5	CO2	L2
6	a	Explain Exception Handling in Java and Its Importance.	5	CO3	L2
	b	Discuss the Java thread model and how it is used to create and manage threads in a Java application	5	CO3	L2
		OR			
7	a	Write a Java program that creates two threads. The first thread should print the numbers from 1 to 10, and the second thread should print the numbers from 11 to 20. The two threads should run concurrently, and the output should be interleaved, as if the two threads are running simultaneously.	10	CO3	L3
8	a	Describe the different Collection Interfaces in Java and their uses.	5	CO4	L2
	b	Describe the use of Map Interfaces and Classes in Java for mapping keys to values in a collection.	5	CO4	L2
		OR			
9	a	Explain the concept of accessing a Collection via an Iterator in Java and the process of using an Iterator to traverse a Collection.	5	CO4	L2
	b	Discuss the role of the Legacy Classes and Interfaces in Java such as Dictionary, Hashtable, Properties, Stack, Vector, and their uses.	5	CO4	L2
10	a	Discuss the various Layout Managers in Swing such as Flow Layout, Border Layout, Grid Layout, Card Layout, and Grid Bag Layout.	5	CO5	L2
	b	Explain the Life Cycle of Applet.	5	CO5	L2
		OR			
11	a	Explain the introduction and limitations of AWT and the advantages of GUI programming with Swing in Java.	5	CO5	L2
	b	Explain the process of creating a Simple Swing Application in Java and the different components involved.	5	CO5	L2