**GBCS SCHEME** 22MCA22 Second Semester MCA Degree Examination, June/July 2023

Object Oriented Programming Using Java

Time: 3 hrs

USN

Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module. 2. M : Marks , L: Bloom's level , C: Course outcomes.

	Module – 1	M	L	С
a.	What is scope and life time of a variable? Discuss each with the help of a java program.	10	L2	<b>CO1</b>
b.	With the help of a proper java code, explain type conversion and type casting.	10	L2	C01
	OR			
a.	Explain the working of for-each version of for loop using a java program.	10	L2	C01
b.	Write a java program which demonstrates constructor overloading and method overloading.	10	L3	CO2
	Module 2			
a.	What is inheritance? Write a java program that implements simple inheritance.	10	L3	CO4
b.	What are the two different user of super keyword in java? Illustrate each with proper examples.	10	L2	CO4
	OR V.S			
a.	What is dynamic method dispatch? Explain how a superclass reference variable can refer to a subclass object with the help of a program.	10	L2	CO3
b.	List out the conditions that are need to be followed while using while using abstract classes. Demonstrate the same by creating an abstract class and method.	10	L2	CO3
I,	Module – 3	11		
a.	Define interface. Discuss the features of interface and explain them with the help of a java program that implements an interface.	10	L2	CO3
b.	List out the differences between abstract class and interface.	10	F	CO3
	OR			
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b.	If user wants to group all the similar type of classes and interfaces and keep them in a package and access them, how it can be done? Explain.	10	L3	င်တ်
_L	1 of 2			
	b. a. b. a. b. a. b. a. b.	<ul> <li>java program.</li> <li>b. With the help of a proper java code, explain type conversion and type casting.</li> <li>OR</li> <li>a. Explain the working of for-each version of for loop using a java program.</li> <li>b. Write a java program which demonstrates constructor overloading and method overloading.</li> <li>Module 2</li> <li>a. What is inheritance? Write a java program that implements simple inheritance.</li> <li>b. What are the two different user of super keyword in java? Illustrate each with proper examples.</li> <li>OR</li> <li>a. What is dynamic method dispatch? Explain how a superclass reference variable can refer to a subclass object with the help of a program.</li> <li>b. List out the conditions that are need to be followed while using while using abstract classes. Demonstrate the same by creating an abstract class and method.</li> <li>Module - 3</li> <li>a. Define interface. Discuss the features of interface and explain them with the help of a java program that implements an interface.</li> <li>b. List out the differences between abstract class and interface.</li> <li>OR</li> <li>a. What is package in Java? List and explain the system packages in java.</li> <li>b. If user wants to group all the similar type of classes and interfaces and keep them in a package and access them, how it can be done? Explain.</li> </ul>	<ul> <li>a. What is scope and life time of a variable? Discuss each with the help of a 10 java program.</li> <li>b. With the help of a proper java code, explain type conversion and type 10 casting.</li> <li>a. Explain the working of for-each version of for loop using a java program.</li> <li>b. Write a java program which demonstrates constructor overloading and method overloading.</li> <li>a. What is inheritance? Write a java program that implements simple inheritance.</li> <li>b. What are the two different user of super keyword in java? Illustrate each with proper examples.</li> <li>a. What is dynamic method dispatch? Explain how a superclass reference variable can refer to a subclass object with the help of a program.</li> <li>b. List out the conditions that are need to be followed while using while using abstract classes. Demonstrate the same by creating an abstract class and method.</li> <li>b. List out the differences between abstract class and interface.</li> <li>b. List out the differences between abstract class and interface.</li> <li>c. Module - 3</li> <li>a. Define interface. Discuss the features of interface and explain them with the help of a java program that implements an interface.</li> <li>b. List out the differences between abstract class and interface.</li> <li>c. OR</li> <li>a. What is package in Java? List and explain the system packages in java.</li> <li>b. If user wants to group all the similar type of classes and interfaces and keep them in a package and access them, how it can be done? Explain.</li> </ul>	<ul> <li>a. What is scope and life time of a variable? Discuss each with the help of a java program.</li> <li>b. With the help of a proper java code, explain type conversion and type casting.</li> <li>a. Explain the working of for-each version of for loop using a java program.</li> <li>b. Write a java program which demonstrates constructor overloading and method overloading.</li> <li>Module -2 <ul> <li>a. What is inheritance? Write a java program that implements simple inheritance.</li> <li>b. What are the two different user of super keyword in java? Illustrate each with proper examples.</li> <li>a. What is dynamic method dispatch? Explain how a superclass reference variable can refer to a subclass object with the help of a program.</li> <li>b. List out the conditions that are need to be followed while using while using abstract class and method.</li> <li>b. List out the conditions that are need to be followed while using while using abstract class and method.</li> <li>c. Module -3 <ul> <li>a. Define interface. Discuss the features of interface and explain them with the help of a java program that implements an interface.</li> <li>b. List out the differences between abstract class and interface.</li> <li>c. Module -3 <ul> <li>a. Define interface. Discuss the features of interface and explain them with the help of a java program that implements an interface.</li> <li>b. List out the differences between abstract class and interface.</li> <li>c. Interface in Java? List and explain the system packages in java.</li> <li>d. List out the differences between abstract class and interfaces and keep them in a package and access them, how it can be done? Explain.</li> </ul> </li> </ul></li></ul></li></ul>

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<b>Q.</b> 7	a.	Module – 4 What is the use of multiple catch statement in exception handling? Discuss with a Java program.	<b>10</b> ලද	12	CO5
	b.	Weather try block can be nested in Java? If yes, demonstrate with the help of a java program.	10	L2	CO5
		OR			
Q.8	a.	Write a java program which uses throws keyword for handling exception.	10	L3	CO5
	b.	How to create a custom exception class in java? Demonstrate using a java program.	10	L3	C05
		Module – 5	1	1	
Q.9	a.	Write a Java applet program which handles keyboard event	10	L3	CO6
	b.	Explain the methods involved in life cycle of an applet.	10	L2	CO6
Q.10	a.	How JButton class is used in swings? Explain.	10	L2	<b>CO</b> 7
	b.	Write a Java program to display a frame using JFrame class.	10	L3	<b>CO</b> 7
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