USN | | | | | | | | | | **Course Code** | 2 | 1 | C | S | 3 | 2 |

Third Semester B.E. Degree Examinations, April/May 2023
OBJECT ORIENTED PROGRAMMING USING JAVA
(Common to CSE & AIML)

Duration: 3 hrs   **Max. Marks: 100**

Note: *1. Answer any **FIVE** full questions, choosing **ONE** full question from each module.*
        2. Missing data, if any, may be suitably assumed

Q. No		*Question*	*Marks*	*(RBTL:CO: PI)*
		MODULE – 1		
1.	**a.**	List and explain any five Java buzzwords.	**06**	(2 :1: 1.4.1)
	b.	What is type casting? Illustrate with example.	**06**	(2 :1: 1.4.1)
	c.	Write a program to display sum of digits of a number using while loop. (Hint: 1425 sum is 1+4+2+5)	**08**	(2 :1: 1.4.1)
		OR		
2.	**a.**	Briefly explain any six object-oriented programming features.	**06**	(2 :1: 1.4.1)
	b.	Show how 1D and 2D arrays are created in Java with examples.	**06**	(2 :1: 2.5.2)
	c.	Describe the following control construct with examples. (i) labelled break (ii) labelled continue	**08**	(2 :1: 2.5.2)
		MODULE – 2		
3.	**a.**	What is inheritance? Explain different types of inheritance supported in Java.	**06**	(2 :2: 2.5.2)
	b.	What is the need of constructor in Java? Explain the types with suitable program.	**06**	(2 :2: 2.5.2)
	c.	Write a program in Java if number is less than 10 and greater than 50 it generates the exception as out of range, else it displays the square of that number.	**08**	(3 :2: 2.5.2)
		OR		
4.	**a.**	Explain garbage collection in Java with example program.	**06**	(2 :2: 1.4.1)
	b.	What are the different uses of super keyword?	**06**	(2 :2: 2.5.2)
	c.	Write a Java program to demonstrate method overloading and method overriding.	**08**	(3 :2: 2.5.2)
		MODULE – 3		
5.	**a.**	What are packages? Explain the steps for package creation in Java.	**06**	(2 :3: 1.4.1)
	b.	What are interfaces? Develop a simple program to implement interfaces.	**06**	(2 :3: 2.5.2)
	c.	What are the different thread priority methods and write a program to demonstrate thread priorities in Java.	**08**	(3 :3: 3.6.2)
		OR		
6.	**a.**	Define a thread? List out the difference between multiprocessing and multithreading concepts.	**06**	(2 :3: 2.5.2)
	b.	Discuss the different uses of synchronization in Java with example.	**06**	(2 :3: 2.5.2)

Note: (**RBTL - Revised Bloom's Taxonomy Level: CO - Course Outcome: PI - Performance Indicator**)

	c.	Write a Java program to implement producer-consumer problem using thread.	**08**	(3 :3: 3.6.2)

<div align="center"><u>MODULE – 4</u></div>

7.	**a.**	Explain the two key features of swings.	**06**	(2 :4: 2.5.2)
	b.	Explain any six-event listener interfaces with syntax.	**06**	(2 :4: 2.5.2)
	c.	Write a Java program that handles all mouse events and shows the event name at the center of the window when a mouse event is fired (Use adapter classes).	**08**	(3 :3: 3.6.2)

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

8.	**a.**	What is an event? Explain the delegation event model.	**06**	(2 :4: 2.5.2)
	b.	Explain any six event classes with syntax.	**06**	(2 :4: 2.5.2)
	c.	Write a Java program that works as a simple calculator. Use a grid layout to arrange buttons for the digits and for the +, -, *, and % operations. Add a text field to display the result. Handle any possible exceptions like divide by zero.	**08**	(3 :4: 3.6.2)

<div align="center"><u>MODULE – 5</u></div>

9.	**a.**	Explain classification of JDBC drivers.	**06**	(2 :5: 2.5.2)
	b.	Brief out the steps in the JDBC Database connection.	**06**	(2 :5: 2.5.2)
	c.	Write a Java snippet to connect to a database using URL.	**08**	(3 :5: 3.6.2)

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

10.	**a.**	Explain statement object and prepared statement objects.	**06**	(2 :5: 2.5.2)
	b.	What is a result set? Explain various types of scrollable result set.	**06**	(2 :5: 2.5.2)
	c.	Write a Java program that connects to a database using JDBC and does add, delete, modify and retrieve operations.	**08**	(3 :5: 3.6.2)

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