Code: 23CS3302, 23IT3302, 23AM3302, 23DS3302

II B.Tech - I Semester – Supplementary Examinations - MAY 2025

OBJECT ORIENTED PROGRAMMING THROUGH JAVA
(Common for CSE, IT, AIML, DS)

Duration: 3 hours　　　　　　　　　　Max. Marks: 70

Note: 1. This question paper contains two Parts A and B.
2. Part-A contains 10 short answer questions. Each Question carries 2 Marks.
3. Part-B contains 5 essay questions with an internal choice from each unit. Each Question carries 10 marks.
4. All parts of Question paper must be answered in one place.

PART – A

1.	a)	What is the role of the 'continue' statement in loop control?
	b)	Differentiate literal constants and symbolic constants.
	c)	How do you assign one object to another? Explain.
	d)	What is method overloading?
	e)	How do you declare and initialize an array in Java?
	f)	What is the universal superclass in Java?
	g)	Explain the role of wrapper classes with an example.
	h)	What is the difference between FileReader and FileWriter classes?
	i)	Differentiate process and thread.
	j)	Discuss applications of collection frame work in Java.

PART – B

					Max. Marks

UNIT-I

2	a)	Describe the basic principles of Object-Oriented Programming.	5 M
	b)	Discuss the concept of type casting in Java with examples.	5 M

OR

3	a)	Describe the structure of a basic Java program with example.	5 M
	b)	Write a program to differentiate for loop and for-each loop.	5 M

UNIT-II

4	Discuss the significance of following keywords with example programs: i) this ii) final iii) static	10 M

OR

5	a)	Explain the four main access modifiers and their impact on class members' visibility in Java.	5 M
	b)	List and explain methods used in comparing and extracting characters in strings.	5 M

UNIT-III

6	a)	Write a program to implement Dynamic method dispatch.	5 M

	b)	Explain how to implement the following:
		  i) Assign Array to Another Array
		  ii) Dynamic Change of the Array Size
			5 M

OR

7	a)	Explain with an example how multiple inheritance is achieved in Java.	5 M
	b)	Discuss the use of nested interfaces in Java with example program.	5 M

UNIT-IV

8	a)	How do we create and access package in Java? Explain with example.	5 M
	b)	Describe the process of creating and using custom exceptions with example program.	5 M

OR

9	a)	Explain the usage of try, catch, throw, throws and finally keywords in exception handling.	5 M
	b)	Illustrate differences between Byte streams and Character streams in Java.	5 M

UNIT-V

10	a)	Does multithreading improve the performance of applications in the multi-core processors? Justify your answer.	5 M
	b)	Explain hierarchy of collection framework with neat diagram.	5 M

		OR	
11	a)	With neat diagram explain life cycle of threads.	5 M
	b)	What is the difference between Iterator and Enumeration interface in collection framework?	5 M