

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY GURAJADA VIZIANAGARAM**  
**III B. Tech I Semester Regular/Supplementary Examinations, April/May -2025**  
**OBJECT ORIENTED PROGRAMMING THROUGH JAVA**

(EEE)

Time: 3 hours

Max. Marks: 70

Answer any **FIVE** Questions **ONE** Question from **Each unit**

All Questions Carry Equal Marks

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<b>UNIT-I</b>			
1.	a)	Compare and contrast procedural programming and object-oriented programming.	[7M]
	b)	Discuss the key features of the Java programming language.	[7M]
		(OR)	
2.	a)	Explain the advantages of object-oriented programming in software development.	[7M]
	b)	Describe the Java Virtual Machine (JVM) and its role in Java's platform independence.	[7M]
<b>UNIT-II</b>			
3.	a)	Define a variable in Java. Explain the different types of data types available in Java.	[7M]
	b)	Explain the structure of a Java program. Describe the purpose of the main() method.	[7M]
		(OR)	
4.	a)	Explain the concept of Java bytecode. Discuss the steps involved in compiling and executing a Java program.	[7M]
	b)	Write a Java program to demonstrate the use of arithmetic operators.	[7M]
<b>UNIT-III</b>			
5.	a)	Define a class and an object in Java. Explain how to create objects and access their members.	[7M]
	b)	What is a method in Java? Explain the different ways to define and call methods.	[7M]
		(OR)	
6.	a)	Explain the use of the this keyword in Java with an example.	[7M]
	b)	What is inheritance? Describe the advantages of using inheritance.	[7M]
<b>UNIT-IV</b>			
7.	a)	What are threads in Java? Explain how to create and start threads.	[7M]
	b)	Write a Java program to implement the Runnable interface for multithreading.	[7M]
		(OR)	
8.	a)	Explain the concept of thread priority. How can you set and get the priority of a thread?	[7M]
	b)	What is thread synchronization? Explain the use of synchronized methods and blocks.	[7M]
<b>UNIT-V</b>			
9.	a)	Describe the basic components of a Java Swing application. Provide an example of creating a simple Swing frame.	[10M]
	b)	Discuss Lambda Expressions in Java.	[4M]
		(OR)	
10.	a)	Write a Java program to create a simple GUI with buttons and labels using AWT.	[7M]
	b)	Explain the differences between AWT and Swing.	[7M]

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