



R22 Regulation

Subject code:4E4EA

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A+' Grade)

B.Tech IV Semester Supplementary Examinations, December 2025

OBJECT ORIENTED PROGRAMMING THROUGH JAVA

(Common to CSE & CSE(AI&ML))

Maximum Marks: 60

Date:16.12.2025

Duration: 3 hours

- Note:**
- 1.This question paper contains two parts A and B.
 2. Part A is compulsory which carries 10 marks. Answer all questions in Part A.
 3. Part B consists of 5 Units. Answer any one full question from each unit.
 4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks (10X1M=10 Marks)		Marks	CO	Bloom Tx
1.a)	What are Java buzzwords?	1M	CO1	BL1
b)	List different forms of inheritance in Java.	1M	CO1	BL2
c)	Mention any two advantages of using packages.	1M	CO2	BL1
d)	Define Serialization.	1M	CO2	BL2
e)	Define the term "deadlock" in multithreading.	1M	CO3	BL2
f)	List any two types of built-in exceptions in Java.	1M	CO3	BL1
g)	What is the difference between HashSet and TreeSet?	1M	CO4	BL2
h)	Mention any two uses of the Collections class.	1M	CO4	BL1
i)	What is an event listener in Java AWT?	1M	CO5	BL1
j)	What is an adapter class? Give an example	1M	CO5	BL2

Part-B

Answer All the following questions. (5X10M=50Marks)		Marks	CO	Bloom Tx
2	Explain the multilevel inheritance in java with suitable example program.	10M	CO1	BL2
OR				
3	a) Discuss the role of abstract classes and the Object class in Java. b) Explain various forms of inheritance with suitable examples.	5M 5M	CO1	BL2
4	a) Explain character stream classes with an example to read a file. b) Define an interface and explain how multiple inheritance is achieved through interfaces.	5M 5M	CO2	BL2
OR				
5	Describe the role of the CLASSPATH environment variable in Java and how it aids in locating classes.	10M	CO2	BL3
6	What is an Exception? Explain different types of Exception.	10M	CO3	BL2

	OR			
7	a) Write a java program to create two threads and execute simultaneously. b) Differentiate multithreading and multitasking.	5M 5M	CO3	BL3
8	Write a program to read a file content and extract words using String Tokenizer class. Display the file if it contains the user query term/search key.	10M	CO4	BL3
	OR			
9	a) Explain the Bit Set and Calender classes in detail. b) Discuss the differences between HashList and HashMap, Set and List.	5M 5M	CO4	BL3
10	a) What is a Layout manager? Explain different types of Layout managers. b) Write a program to create a frame window that responds to key strokes.	5M 5M	CO5	BL3
	OR			
11	a) Explain the AWT event delegation model. b) Write a Java program to handle mouse click events using MouseListener.	5M 5M	CO5	BL3