R22 Regulation *Subject code:4E2AR*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech II Semester Supplementary Examinations, June 2026

INTRODUCTION TO OBJECT ORIENTED PROGRAMMING & DATA STRUCTURES USING JAVA

(CSE(DS))

Maximum Marks: 60 Date: 19.06.2026 Duration: 3 hours

Note: **1.This question paper contains two parts A and B.**
2. Part A is compulsory which carries 20 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	BTL
1.a	What are agents and communities in java?	1M	CO1	L1
b	What is Reading console Input and Writing Console Output?	1M	CO1	L1
c	List types of inheritance in Java.	1M	CO2	L1
d	How to compile and run the package program?	1M	CO2	L1
e	Differentiate between throw and throws.	1M	CO3	L4
f	What is Exception?	1M	CO3	L1
g	What is insertion sort?	1M	CO4	L1
h	What is singly linked list?	1M	CO4	L5
i	What are the operations performed in stack and queue ADT?	1M	CO5	L1
j	List some Java collection Framework.	1M	CO5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)		Marks	CO	BTL
2	What is string and explain different types of string handling methods in java.	10M	CO1	L2
	OR			
3	Define stream and explain about byte stream and character stream with example program.	10M	CO1	L2
4	What is inheritance explain different types inheritance with example program	10M	CO2	L2
	OR			
5	Explain in detail about super, final and this keywords in java with example programs.	10M	CO2	L2
6	How the exceptions are handled in Java? OR Explain exception handling mechanism in Java?	10M	CO3	L2
	OR			
7	Explain recursion. Write a recursive algorithm to calculate factorial of a Number analyse complexity of algorithm.	10M	CO3	L2

8	What is searching explain different types of searching techniques with example program.	10M	CO4	L2
	OR			
9	Explain how to represent singly linked list with help of diagram and example.	10M	CO4	L2
10	Differentiate between stack and queue with example program.	10M	CO5	L2
	OR			
11	Explain double ended queue? Write a JAVA program to implement Deque using ArrayList.	10M	CO5	L2