R20 Regulation *Subject code: 3E8EF*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech VIII Semester Supplementary Examinations, May 2026

STACK TECHNOLOGIES

(CSE)

Maximum Marks: 70 Date: 04.05.2026 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 which carries 10M.
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 (10X2M=20 Marks)		Marks	CO	Bloom Tx
1	What are the key features introduced in Hibernate 3?	2M	1	L1
2	How do you configure Hibernate in a Java project?	2M	1	L1
3	What is the core purpose of the Spring framework?	2M	2	L1
4	How does component scanning enhance bean discovery in Spring applications?	2M	2	L1
5	What is Spring Boot, and what problem does it aim to solve?	2M	3	L1
6	Differentiate between Spring MVC and Spring Boot.	2M	3	L1
7	Write the concept of data flow in React.	2M	4	L1
8	What are rendering methods in React?	2M	4	L1
9	What is simple spring boot micro servies?	2M	5	L1
10	What is micro services?	2M	5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)		Marks	CO	Bloom Tx
11	Describe the process of integrating Hibernate into a Java application.	10M	1	L2
	OR			
12	Explain the process of mapping using annotations in Hibernate.	10M	1	L2
13	Describe the steps involved in building a Spring web application.	10M	2	L2
	OR			
14	Discuss the concept of object-relational mapping (ORM) in the context of Spring.	10M	2	L2
15	Apply the key features and benefits of using Spring Boot for building enterprise applications.	10M	3	L2
	OR			
16	How does Spring Boot simplify the development of Spring MVC applications, and what are some best practices for building RESTful APIs with Spring MVC in a Spring Boot application?	10M	3	L2

17	Summarize the concept of components in React and how they facilitate building reusable UI elements.	10M	4	L2
	OR			
18	Illustrate how to build a dynamic form in React and integrate third-party libraries.	10M	4	L2
19	What are the benefits and challenges of adopting a microservices architecture compared to monolithic architectures?	5M 5M	5	L2
	OR			
20	Design a simple Spring Boot based microservice and demonstrate its integration with React.	10M	5	L2