R22 Regulation *Subject code: 4E7FA*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech VII Semester Regular/Supplementary Examinations, October 2026

SOFTWARE ENGINEERING

(IT)

Maximum Marks: 60 Date:26.10.2026 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	BTL
1.a)	Mention one advantage of Spiral model.	1M	1	1
b)	Differentiate between process model and process framework.	1M	1	2
c)	What is requirements validation?	1M	2	1
d)	Mention one technique for requirements elicitation.	1M	2	2
e)	Differentiate between structural and behavioral modeling.	1M	3	1
f)	Mention one use of activity diagrams.	1M	3	2
g)	What is white-box testing?	1M	4	1
h)	Differentiate between validation and verification.	1M	4	2
i)	State one purpose of risk identification.	1M	5	1
j)	Expand QA.	1M	5	2

Part-B

Answer All the following questions. (5X10M=50Marks)		Marks	CO	BTL
2	a) Apply your understanding of the changing nature of software to explain how a traditional standalone application can be transformed into a modern cloud-based application. b) Explain Spiral model with a neat sketch. What can you say about the software that is being developed or maintained as you move outward along the spiral process flow?	5M 5M	1	3
	OR			
3	a) Discuss in brief about different software myths and their consequences. b) Evaluate the strengths and weaknesses of Agile methodology.	5M 5M	1	3
4	a) Create a sample SRS for a library management system. b) Apply requirements analysis to a hospital management system.	5M 5M	2	3
	OR			
5	a) Create a requirement engineering process model for a mobile app. b) Analyze the importance of interface specification in system design.	5M 5M	2	3

6	a) Apply UML diagrams to model an online shopping system. b) Create a conceptual UML model for a banking system.	5M 5M	3	3
	OR			
7	Analyze the role of architectural styles in software design.	10M	3	4
8	a) Apply black-box and white-box testing to a payroll system. b) Explain about unit testing considerations and procedures.	5M 5M	4	3
	OR			
9	a) Evaluate product metrics for reliability and maintainability. b) What is black box testing? What is boundary value Analysis? Explain the technique specifying rules and its usage with the help of an example.	4M 6M	4	3
10	Create a risk projection model for a cloud application with an suitable application.	10M	5	3
	OR			
11	Discuss the role of ISO 9000 in software quality and its standards.	10M	5	3