



R20 Regulation

Subject code: 3P4EC

# TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

**B.Tech IV Semester Supplementary Examinations, December 2025**

## SOFTWARE ENGINEERING (Common to CSE & CSE(AI&ML))

Maximum Marks: 70

Date: 20.12.2025

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 (10X2M=20 Marks)		Marks	CO	BTL
1	What is software development lifecycle?	2M	1	L1
2	List the advantages of waterfall model.	2M	1	L1
3	What is requirement management?	2M	2	L1
4	What are functional requirements for software?	2M	2	L1
5	What is design?	2M	3	L1
6	What is interface design?	2M	3	L1
7	What is testing?	2M	4	L1
8	Write on metrics of software quality.	2M	4	L1
9	What are the types of software risk?	2M	5	L1
10	Define risk identification.	2M	5	L1

### Part-B

Answer All the following questions. (5X10M=50Marks)		Marks	CO	BTL
11	a) Explain spiral model with metrics and demerits. b) Discuss different software myths and their consequences.	5M 5M	1	L2
OR				
12	Explain about specialized process models.	10M	1	L2
13	a) Describe five desirable characteristics of a good software requirement specification document. b) Differentiate between functional and non-functional requirements.	5M 5M	2	L2
OR				
14	a) What are the characteristics of software requirement documentation (SRD)? b) Explain about requirements validation.	5M 5M	2	L2
15	Write about design quality in detail.	10M	3	L2
OR				
16	Describe mapping data flow into software architecture.	10M	3	L2
17	Discuss black box testing in a detailed view.	10M	4	L2
OR				

18	Demonstrate art of debugging. Demonstrate metrics for analysis model.	10M	4	L2
19	a) Discuss the process of risk management. b) What types of risks occur during software development? Discuss.	5M 5M	5	L2
	OR			
20	a) Differentiate between reactive vs. proactive risk strategies. b) Explain what the significance of formal technical review.	5M 5M	5	L2