R20 Regulation *Subject code: 3P5HE*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech V Semester Regular/Supplementary Examinations, February 2024

SOFTWARE ENGINEERING

(CSE (DATA SCIENCE))

Maximum Marks: 70 Date:27.02.2024 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	CO	Bloom Tx
All the following questions carry equal marks (10x2M=20 Marks)			
1	Differentiate between personal process models and team process models	1	3
2	Outline the key characteristics of the Incremental Process Model in software development.	1	1
3	Define functional requirements and non-functional requirements in software development.	2	1
4	Differentiate between user requirements and system requirements.	2	3
5	Differentiate internal and external design.	3	3
6	What is design process?	3	2
7	What is validation testing, and how does it differ from system testing?	4	1
8	Differentiate between white box testing and black box testing.	4	3
9	Define reactive and proactive risk management approaches.	5	1
10	Give examples of common software risks.	5	1
	Part-B		
Answer All the following questions. (5X10M=50Marks)			
11	A. Provide an overview of the Evolving role of software in software engineering. [5] B. Briefly discuss about the water fall model. [5]	1	3
	OR		
12	Discuss the importance of Capability Maturity Model Integration (CMMI) in software engineering. How does it help organizations improve their software development processes? [10]	1	2
13	Discuss the importance of requirements validation in software development projects. Provide a detailed explanation of three validation techniques, highlighting their advantages and limitations. [10]	2	2
	OR		
14	Describe how software requirements are documented. state the importance of documentation. [10]	2	2

15	Name different types of architectural styles exist for software and explain any software architecture in detail. [10]	3	3
	OR		
16	Define design class-based components, and how are they used in component-level design? [10]	3	3
17	Explain equivalence partitioning and boundary value analysis techniques used in black box testing. [10]	4	4
	OR		
18	Discuss the key characteristics of software quality metrics. Provide examples of software quality attributes that can be measured using metrics. [10]	4	2
19	Discuss the concept of risk projection in software risk management. Explain how risk projection helps in anticipating potential future risks. [10]	5	2
	OR		
20	Explain the process of risk identification in software projects. Discuss techniques commonly used for identifying risks. [10]	5	3