GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER–V (NEW) EXAMINATION – SUMMER 2024

Subject Code: 3150711   **Date:18-05-2024**

Subject Name: Software Engineering

Time:02:30 PM TO 05:00 PM   **Total Marks:70**

Instructions:
1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Simple and non-programmable scientific calculators are allowed.**

			Marks
Q.1	**(a)**	What are the umbrella activities of a software process?	**03**
	(b)	Define Verification &Validation.	**04**
	(c)	Explain in detail about incremental process model.	**07**
Q.2	**(a)**	What is Extreme Programming?	**03**
	(b)	What is SCRUM? What are the 3 pillars of SCRUM?	**04**
	(c)	Define risk? Explain in details about risk identification, risk projection, and risk mitigation.	**07**
		OR	
	(c)	Explain in detail the COCOMO model.	**07**
Q.3	**(a)**	Without developing an SRS document an organization might face severe problems. Identify those problems.	**03**
	(b)	Explain in details about Requirement Engineering Tasks.	**04**
	(c)	Prepare functional and non-function requirement specification for Hospital Management System.	**07**
		OR	
Q.3	**(a)**	List and explain work tasks for the communication activity.	**03**
	(b)	How to Collect requirement? Explain different methods to Collect requirement. What is its importance in Software Engineering?	**04**
	(c)	Prepare functional and non-function requirement specification for College Management System.	**07**
Q.4	**(a)**	Explain six sigma for software engineering.	**03**
	(b)	Explain the different design concepts.	**04**
	(c)	Draw the state transition diagram for Automatic Washing Machine.	**07**
		OR	
Q.4	**(a)**	What is the importance of SQA? Explain the SQA plan.	**03**
	(b)	Differentiate between function oriented designs and object oriented designs.	**04**
	(c)	Write a scenario and draw use case diagram for an online shopping portal.	**07**
Q.5	**(a)**	What is equivalence partitioning?	**03**
	(b)	Discuss the differences between black box and white box testing.	**04**
	(c)	Explain the DevOps Importance and Benefits. What are the challenges with DevOps implementation?	**07**
		OR	

Q.5 **(a)** What is a boundary value analysis? **03**
  (b) What do you mean by system testing? Explain in detail. **04**
  (c) Briefly discuss the process of reverse software engineering. **07**

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