GUJARAT TECHNOLOGICAL UNIVERSITY
MCA – SEMESTER-V   EXAMINATION –SUMMER-2020

Subject Code:4659303   **Date:06-11-2020**
Subject Name: Software Engineering (SE)
Time:10:30 AM to 01:00 PM   **Total Marks: 70**
Instructions:

      1. Attempt all questions.
      2. Make Suitable assumptions wherever necessary.
      3. Figures to the right indicate full marks.

Q.1	**(a)**	Do as directed	
		(1) What is software engineering?	**02**
		(2) What is system testing?	**02**
		(3) Discuss layered technology	**03**
	(b)	Explain Call and Return Architecture.	**07**
Q.2	**(a)**	Explain Prototype and Spiral model.	**07**
	(b)	What is requirement engineering? Discuss various tasks in detail.	**07**
		OR	
	(b)	Discuss eliciting requirement in detail.	**07**
Q.3	**(a)**	Write a note on (a) Archetypes and (b) Modularity.	**07**
	(b)	Explain Transform Mapping in detail.	**07**
		OR	
Q.3	**(a)**	Explain classification of architectural styles.	**07**
	(b)	Write a note on design classes.	**07**
Q.4	**(a)**	What is test strategy? Explain conventional software in detail.	**07**
	(b)	Prepare Activity and Sequence diagram for Online Quiz System.	**07**
		OR	
Q.4	**(a)**	What is testing? Explain black box testing in detail.	**07**
	(b)	Prepare Activity and Sequence diagram for ATM System.	**07**
Q.5	**(a)**	Prepare DFD and Use case diagram for 'Online Mobile Recharge' - gives us the information about all the mobile service providers. This application provides us the complete information regarding any mobile service provider in terms of their plans, options, benefits, etc. Suppose, any Airtel customer wants to have the information of all the schemes and services provided by the company, he/she can have the information and according to his/her convenience he/she can recharge the mobile from the same application. The advantage of this proposed system is to have the recharging facility of any service provider under same roof.	**07**
	(b)	Case Study: create agile document for Earned-value and burn charts of online shopping application.	**07**
		OR	

Q.5 **(a)** Prepare DFD and Class diagram for the University runs various diploma, graduation and post-graduation courses such as DE, Dpharm, BE, MBA. MCA, ME, MPharm etc. The courses follow semester patterns and under each course various subjects are taught. Students seek admissions to these courses and if found eligible, the student is enrolled for the requested course. There are several faculty members in the university who teach the various subjects of these courses. The subject teacher conducts semester examinations for the concerned subject at the end of the semester and the student's performance is recorded. Even if a student is unable to pass a subject, he is promoted to the next semester but has to reappear for the subject examination again and clear his backlog. **07**

(b) Case Study: create agile document for Earned-value and burn charts of online railway reservation application. **07**

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