GUJARAT TECHNOLOGICAL UNIVERSITY
MCA – SEMESTER -III EXAMINATION –WINTER-2021

Subject Code: 639403   **Date: 22/12/2021**
Subject Name: Software Engineering
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)**	Explain the waterfall process model in detail. Why does a waterfall model fail at times?	**07**
	(b)	What do you mean by Eliciting Requirements? What is its role in building analysis model?	**07**
Q.2	**(a)**	Explain architectural style and its various categories in detail.	**07**
	(b)	Explain the three golden rules that form the basis of interface design.	**07**
		OR	
	(b)	Explain various kinds of design patterns in detail.	**07**
Q.3	**(a)**	Write a short note on coupling and cohesion.	**07**
	(b)	What is refactoring? Briefly describe four elements of the design model	**07**
		OR	
Q.3	**(a)**	Define Archetype? Briefly describe different architectural styles.	**07**
	(b)	Describe sprints, planning, and retrospectives.	**07**
Q.4	**(a)**	Describe scrum values revisited.	**07**
	(b)	Explain the Rules of scrum.	**07**
		OR	
Q.4	**(a)**	Describe principles of Agile software.	**07**
	(b)	Draw Sequence diagram for online bookshop.	**07**
Q.5	**(a)**	Draw Activity diagram for withdrawal of money from ATM.	**07**
	(b)	Draw an appropriate diagram of an order management system for state chart.	**07**
		OR	
Q.5	**(a)**	Draw use case diagram for online shopping system.	**07**
	(b)	The University runs various diploma, graduation and post graduation courses such as DE, D.Pharm, BE, MBA, MCA, ME, M.Pharm etc.The courses follow semester pattern and under each course various subjects are taught. Students seek admission 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 that subject examination again and clear his backlog. Draw state diagram.	**07**

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