

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA – SEMESTER -III EXAMINATION –WINTER-2022

Subject Code: 639403**Date: 29/12/2022****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) Define Software Engineering. Explain the functions of waterfall model with a clear diagram. **07**
- (b) How requirement modeling helpful in software development? Explain Flow Oriented Modeling and Behavioral Modeling by taking suitable example. **07**
- Q.2** (a) Briefly explain the different categories of Architecture styles. **07**
- (b) Why we use “Use Case diagrams”? Draw Use case diagram for Hospital Management System. **07**
- OR**
- (b) What do you mean by requirement negotiation? Explain the importance of validation in requirement engineering process. **07**
- Q.3** (a) What do you understand by Scrum? Explain the different roles of Scrum. **07**
- (b) Define Data flow diagram. Explain different levels of DFD by taking suitable example. **07**
- OR**
- Q.3** (a) Write short on the following. **07**
- i. Timing diagram
- ii. Communication diagram
- (b) Write differences between Sequence diagram and Activity diagram. Make an Activity diagram for online customer shopping. **07**
- Q.4** (a) Explain the following **07**
- i. Requirement Elicitation
- ii. Adaptive software Development
- (b) What is User Interface design? Explain the rules of user interface design. **07**
- OR**
- Q.4** (a) Briefly explain the 12 principles of Agile software. **07**
- (b) Write short note on scrum planning and sprints. **07**
- Q.5** (a) Consider the scenario to draw a use case diagram. “A customer can view and buys a product he can make payment through net banking or debit/credit card transactions. The supplier can restocks and manage delivery of product”. **07**
- (b) Explain the Architectural mapping with data flow with respect to Architectural design. **07**
- OR**
- Q.5** (a) What do you mean by sprint? Differentiate between “sprint planning meetings” and “sprint retrospectives meetings”. **07**
- (b) What are the different types of Agile Methodology? How is Agile methodology different than traditional waterfall model? **07**
