

Enrolment No. /Seat No.: _____

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA – SEMESTER III- EXAMINATION –SUMMER-2025

Subject Code: 639403

Date: 03/06/2025

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. Use of simple calculators and non-programmable scientific calculators are permitted.

- Q.1** (a) What do you mean by requirement Engineering? Describe the seven distinct tasks encompassed in requirement engineering. **07**
- (b) Explain the waterfall process model in detail. Why does a waterfall model fail at times? **07**
- Q.2** (a) Explain the three golden rules that form the basis of interface design. **07**
- (b) Explain various kinds of design patterns in detail. **07**
- OR**
- (b) Briefly explain the different categories of Architecture styles. **07**
- Q.3** (a) What do you understand by Scrum? Explain the different roles of Scrum. **07**
- (b) Write a short note on coupling and cohesion. **07**
- OR**
- Q.3** (a) Write a short note on Architecture trade off analysis method. **07**
- (b) Describe sprints, planning, and retrospectives. **07**
- Q.4** (a) Briefly explain the 12 principles of Agile software. **07**
- (b) Draw Activity diagram for withdrawal of money from ATM. **07**
- OR**
- Q.4** (a) What is User Interface design? Explain the rules of user interface design. **07**
- (b) Draw Sequence diagram for online bookshop. **07**
- Q.5** (a) What are the different types of Agile Methodology? How is Agile methodology different than traditional waterfall model? **07**
- (b) Draw use case diagram for online shopping system. **07**
- OR**
- Q.5** (a) What do you mean by sprint? Differentiate between “sprint planning meetings” and “sprint retrospectives meetings”. **07**
- (b) Draw use case diagram for hospital management system. **07**
