Seat No.: _____ Enrolment No._____

# GUJARAT TECHNOLOGICAL UNIVERSITY

**MCA– SEMESTER - III EXAMINATION- SUMMER-2023**

**Subject Code: 639403 Date: 23/06/2023**

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

| | | | |
|---|---|---|---|
| **Q.1** | **(a)** | Explain risk driven software process model in detail and discuss any 4 limitations against of Waterfall model. | **07** |
| | **(b)** | What do you mean by requirement Engineering? Describe the seven distinct tasks encompassed in requirement engineering. | **07** |
| **Q.2** | **(a)** | Define Architecture. Explain various Taxonomy of Architectural Style. | **07** |
| | **(b)** | Define Requirement Engineering. List out elements of Requirement analysis model. Draw Context level DFD for Facebook. | **07** |
| | | **OR** | |
| | **(b)** | Create First & Second level DFD for Customer for any online store. | **07** |
| **Q.3** | **(a)** | Explain three golden rules that form the basis of interface design in detail. | **07** |
| | **(b)** | Write a short note on Architecture trade off analysis method. | **07** |
| | | **OR** | |
| **Q.3** | **(a)** | List out architectural design concepts. Discuss function independence & modularity in detail. | **07** |
| | **(b)** | Discuss 12 Agile principles. | **07** |
| **Q.4** | **(a)** | Draw Activity diagram for withdrawal of money from ATM. | **07** |
| | **(b)** | Define scrum and scrum master. Discuss scrum rules. | **07** |
| | | **OR** | |
| **Q.4** | **(a)** | Define the following given terms:<br>1. Project Velocity 2. Backlog 3.Sprint 4. User Stories 5. Scrum meeting | **07** |
| | **(b)** | Draw Sequence diagram for Online shopping system. | **07** |
| **Q.5** | **(a)** | Prepared SRS for Library Management System. | **07** |
| | **(b)** | Draw & explain TimeLine Chart with milestones. | **07** |
| | | **OR** | |
| **Q.5** | **(a)** | Draw state transition diagram for order management system. | **07** |
| | **(b)** | Create Usecase & Class diagram for Hospital Management System. | **07** |

**********