

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA– SEMESTER - V EXAMINATION- SUMMER-2023

Subject Code: 4659303**Date: 27/06/2023****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) i. Differentiate between Testing and Debugging. **03**
 ii. Differentiate between Verification and Validation. **04**
 (b) List and Explain types of Software Applications with its purpose. **07**
- Q.2** (a) Justify the statement: “Software engineering is a layered technology” **07**
 (b) List different symbols used in a DFD and explain each symbol with purpose. **07**
- OR**
- (b) Write a detailed note on the “Three Golden Rules” for user interface design. **07**
- Q.3** (a) Write a short note on architectural context diagram. **07**
 (b) Briefly explain the concept and need for Integration Testing. **07**
- OR**
- Q.3** (a) Prepare Agile document for online railway ticket booking system. **07**
 (b) Discuss about a Strategic Approach to Software Testing. **07**
- Q.4** (a) Write a short note on Waterfall Model along with diagram. **07**
 (b) Discuss about principles of Agile Development. **07**
- OR**
- Q.4** (a) List and explain the seven major steps involved in Requirements Engineering. **07**
 (b) Discuss about the process of User Interface Analysis and Design with diagram. **07**
- Q.5** (a) List the different types of architectural styles and explain each one of them. **07**
 (b) What is meant by goal, story, scenario, pre-conditions, trigger, exception with reference to a use-case template? **07**
- OR**
- Q.5** (a) Prepare Use Case Diagram of tour management system. **07**
 System will check whether the customer is existing or new. New user will enter his personal and tour details for reservation. This login information could be used for further transactions. When customer is satisfied with tour package, he/she would request for reservation of tour. Personal details of new customer are stored in cust_info while the details regarding the tour selected by particular customer is stored in tour_info and the details regarding it would be restructured in Tour Information System. Existing customer can update his/her personal details in cust_info and cancel reservation for tour from tour_info and changes regarding it are also reflected in Tour Information System. After confirming the tour package, the customer will make payment either online or through staff by personally going at the office. Customer can make payment by cash, credit card or by cheque. System checks for the validity of staff. Once the payment is done by customer, valid staff will make Ticket Reservation System. Reserved customer will be able to view details about reservation by providing login information from cust_info and tour_info system. Administrator can add, delete or modify tour schemes from Tour Information System.
- (b) Discuss about different software design concepts. **07**
