Seat No.: _____   Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA- Vth SEMESTER–EXAMINATION –JUNE - 2012

Subject code: 650001   **Date: 11/06/2012**
Subject Name: Software Engineering (SE)
Time: 02:30 pm – 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.**

Q.1 **(a)** What do you mean by the term "Software Engineering"? Explain **07** Software Engineering as a Layered Technology.

(b) Define the term software process model. Compare the spiral models **07** of software development with prototyping model.

Q.2 **(a)** What is requirement engineering? Describe the seven distinct tasks **07** encompassed in requirement engineering.

(b) List out various project estimation techniques and discuss any two of **07** them.

OR
(b) List the metrics used for requirement modeling. Explain function- **07** point metric with example.

Q.3 **(a)** List the fundamental design concepts. Discuss modularity and **07** functional independence.

(b) What is software architecture? List different architecture styles. **07** Discuss call-return architectural style.

OR
Q.3 **(a)** State and explain the three golden rules that form the basis of **07** interface design.

(b) What is design in the context of web engineering? Explain the WebE **07** design pyramid.

Q.4 **(a)** Explain object-oriented testing strategies **07**

(b) Briefly discuss the metrics for object oriented design. **07**

OR
Q.4 **(a)** Discuss the test strategies for conventional software. **07**

(b) Briefly discuss the architectural design metrics. **07**

Q.5 (a) What is white box testing? Why it is required? Discuss different techniques of it? **07**

(b) Software is to be developed for hotel management system in which information is provided for all type of activities conducted in hotel. The major users of the system are hotel staff, people who stay in the hotel and people who visit the restaurant. Information for the billing system, hotel account management, staff salary, hotel menu information, hotel room information is provided by software. Prepare Software Requirement Specification and Use Case Diagram. **07**

OR

Q.5 (a) Explain in detail component-level design for traditional software components. **07**

(b) A Library lends books and magazines to member, who is registered in the system. Also it handles the purchase of new titles for the Library. Popular titles are bought into multiples copies. Old books and magazines are removed when they are out or date or in poor condition. A member can reserve a book or magazine that is not currently available in the library, so that when it is returned or purchased by the library, that person is notified. The library can easily create, replace and delete information about the tiles, members, loans and reservation in the system. Prepare Software Requirement Specification and Use Case Diagram. **07**

****