

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

## GUJARAT TECHNOLOGICAL UNIVERSITY

MCA - SEMESTER-V • EXAMINATION – WINTER 2013

**Subject Code: 650001**

**Date: 26-11-2013**

**Subject Name: Software Engineering**

**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) List three golden rules of user interface design. Explain each golden rule in detail. **07**
- (b) Explain waterfall and spiral process model. List the differences between them. **07**
- Q.2** (a) Fill in the blanks **07**
1. \_\_\_\_\_ refers to the set of tasks that ensures that software correctly implements a specific function.
  2. \_\_\_\_\_ is an indication of the relative functional strength of a module.
  3. \_\_\_\_\_ diagram in UML indicates how events cause transitions from object to object.
  4. \_\_\_\_\_ is a design concept that suggests that any complex problem can be easily handled if it is subdivided into pieces that can each be solved and optimized independently.
  5. \_\_\_\_\_ testing techniques enables to derive sets of input conditions that will fully exercise all functional requirements for a program.
  6. \_\_\_\_\_ is a software metric that provides a quantitative measure of the logical complexity of a program.
  7. \_\_\_\_\_ testing executes a system in a manner that demands resources in abnormal quantity, frequency or volume.
- (b) Explain User Interface of a WebApp design principles and guidelines. **07**
- OR**
- (b) Explain WebApp testing process and content testing. **07**
- Q.3** (a) What is refactoring? Briefly describe four elements of the design model. **07**
- (b) What is a component? Explain three views of the component. **07**
- OR**
- Q.3** (a) Define Archetype? Briefly describe different architectural styles. **07**
- (b) What is coupling? Explain different coupling categories/ List out basic design principles of class based components. **07**
- Q.4** (a) Explain core principles that guide software process and practice of Software Engineering. Which do you believe is most important? **07**
- (b) Explain seven Requirement Engineering tasks in detail. **07**
- OR**
- Q.4** (a) Explain in detail, different steps to perform when creating a behavioral model. **07**
- Q.4** (b) Explain different elements of Requirements model. **07**
- Q.5** (a) Define metrics and measures. Explain design metrics for WebApp. **07**
- (b) What is error density? Explain different types of system testing. **07**
- OR**
- Q.5** (a) What is software project scheduling? Explain following model. **07**
1. COCOMO II
  2. Software equation model.
- (b) Define testability. Explain control structure testing in detail. **07**

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