

GUJARAT TECHNOLOGICAL UNIVERSITY
ME - SEMESTER- III • EXAMINATION – SUMMER 2015

Subject Code: 730104**Date: 02/05/2015****Subject Name: Software Engineering Methodology****Time: 2:30 pm TO 5:00 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 is software testing? Explain two distinct types of testing that may be used at different stages in the software process. **07**
- (b) Discuss the differences between verification and validation, and explain why validation is a particularly difficult process. **07**
- Q.2** (a) What is coupling and cohesion? How they are significant in Object Oriented Design? **07**
- (b) What are the key areas covered by the ISO 9001 model for quality assurance? **07**
- OR**
- (b) Explain the two types of standards that may be established as part of the quality assurance process. **07**
- Q.3** (a) Compare and contrast the terms project management and software engineering. **07**
- (b) What are the activities performed during the requirement engineering process? **07**
- OR**
- Q.3** (a) Explain The SCM Repository in detail. **07**
- (b) Describe role of four P's for effective software project management. **07**
- Q.4** (a) What are the major attributes of quality for WebApps? **07**
- (b) The value of size of a program in KLOC and different cost drivers are given as size 300 KLOC, complexity 0.95, analyst capability 1.85, application of software engineering method 0.8, performance requirement 0.75, Calculate the effort for three types of projects i.e., organic, semidetached and embedded using COCOMO model. **07**
- OR**
- Q.4** (a) What is software risk? Describe the process of risk management. Illustrate your answer with a suitable diagram. **07**
- (b) Discuss the design principles which an user interface designer should take into consideration. **07**
- Q.5** (a) Define the following software product metric **07**
- (i) Fan-in/Fan-out (ii) Length of code
- (iii) Depth of conditional nesting (iv) Fog index
- (b) What is a configuration management plan? Briefly explain the contents of a CM plan. **07**
- OR**
- Q.5** (a) Write short notes on Cleanroom strategy. **07**
- (b) What are CASE tools? Give examples of activities that can be automated using CASE. Explain the classification of CASE tools. **07**
