Seat No.: _____   Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER–VI • EXAMINATION – SUMMER 2013

Subject Code: 160701   **Date: 24-05-2013**
Subject Name: Software Engineering
Time: 10.30 am - 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.

Q.1 **(a)** State True/False   **07**
(i) Once we write the program and test it, our work is not over.
(ii) Design should be traceable to the requirements model.
(iii) Full form of MTBF is – Mean Time Between Failure.
(iv) Context diagram represents system as a whole.
(v) For software architecture, there can be many separate software designs.
(vi) Most of the technical effort is consumed in design phase of software development.
(vii) Black Box testing focuses on the program control structure.

(b) Explain in detail the process model which is normally suited for development **07** of large-scale software system.

Q.2 **(a)** Explain Spiral model with suitable example. Also explain how it differs from **07** Software Prototyping model.

(b) Consider a project to develop a text editor. Major modules of project are: 1. **07** Menu Panel (size 9KB) 2. Text editing window (size 5 KB) 3. Short cut keys handler (size 6 KB). Use COCOMO to determine the overall cost of the project and duration of development.   **OR**

(b) Explain function point analysis method. Compute the function points for the **07** following data set: Inputs =8, Outputs= 12, Inquiries = 4, Logical files = 41, Interfaces =1 and Û Fi = 41.

Q.3 **(a)** What is SRS? Why SRS is known as black-box specification of the system? **07** What are major issues addressed by SRS?

(b) Define module coupling and cohesion. Explain different types of coupling and **07** cohesion.

OR

Q.3 **(a)** What is Software Quality Assurance? Explain various factors that affect **07** Software Quality.

(b) Explain the process model which is used in situations where the requirements **07** are well defined.

Q.4 **(a)** Write short note on : Risk Management   **07**

(b) Explain "How to manage the different versions that get created and how to **07** maintain code quality under changing conditions."

OR

Q.4 **(a)** Explain in detail the design issues while designing User Interface.   **07**

Q.4 **(b)** Explain Black box testing and White box testing. Explain any one technique to **07** carry out each testing.

Q.5 **(a)** What are different levels of testing and the goals of the different levels?   **07**
(b) Write short note on: Reverse Engineering.   **07**

OR

Q.5 **(a)** Explain Software Process Improvement. Explain various elements of SPI **07** framework and maturity model.

(b) Write short note on: Software Project Management.   **07**

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