

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 ñ Mean Time Between Failure.
 - (iv) Context diagram represents system as a whole.
 - (v) For software architecture, there can be many separate software designs. Most of the technical effort is consumed in design phase of software development.
 - (vi) Black Box testing focuses on the program control structure.
- (b) Explain in detail the process model which is normally suited for development of large-scale software system. **07**
- Q.2** (a) Explain Spiral model with suitable example. Also explain how it differs from Software Prototyping model. **07**
- (b) Consider a project to develop a text editor. Major modules of project are: 1. 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** **07**
- (b) Explain function point analysis method. Compute the function points for the following data set: Inputs =8, Outputs= 12, Inquiries = 4, Logical files = 41, Interfaces =1 and $\sum F_i = 41$. **07**
- Q.3** (a) What is SRS? Why SRS is known as black-box specification of the system? What are major issues addressed by SRS? **07**
- (b) Define module coupling and cohesion. Explain different types of coupling and cohesion. **07**
- OR**
- Q.3** (a) What is Software Quality Assurance? Explain various factors that affect Software Quality. **07**
- (b) Explain the process model which is used in situations where the requirements are well defined. **07**
- Q.4** (a) Write short note on : Risk Management **07**
- (b) Explain óHow to manage the different versions that get created and how to maintain code quality under changing conditions.ó **07**
- 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 carry out each testing. **07**
- 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 framework and maturity model. **07**
- (b) Write short note on: Software Project Management. **07**