

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER– VI (Old) EXAMINATION – WINTER 2019****Subject Code: 160701****Date: 13/12/2019****Subject Name: Software Engineering****Time: 02:30 PM TO 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) Using example explain Spiral model and Software Prototyping. **07**  
 (b) Explain software engineering as a layered technology. **07**
- Q.2** (a) Compare the advantages of function oriented and object oriented approaches to software design. **07**  
 (b) Explain the significance of User Interface (UI) in a system. Also explain the design model for UI. **07**
- OR**
- (b) What is Cyclomatic Complexity? Explain with example how to find cyclomatic complexity using flow graph. **07**
- Q.3** (a) Explain cardinality and modality with Examples. **07**  
 (b) Define Testing. What are different levels of testing and goals of different levels? **07**
- OR**
- Q.3** (a) Write and explain possible reasons for project failure. **07**  
 (b) Explain five levels of SEI-CMM. **07**
- Q.4** (a) How unit testing strategy works on a software module? What errors are commonly found during unit testing? **07**  
 (b) Explain incremental model for system development. Differentiate it with spiral model. **07**
- OR**
- Q.4** (a) Define module coupling and cohesion. Explain different types of coupling and cohesion. **07**  
 (b) Define FOUR Ps for project management and explain them in detail. **07**
- Q.5** (a) Write a short note on Reverse Engineering. **07**  
 (b) Write and explain briefly possible reasons for project failure. **07**
- OR**
- Q.5** (a) Explain with example how the overall cost of the project and duration of development can be decided using COCOMO. **07**  
 (b) What is Software Quality Assurance? Explain various factors that affect Software Quality. **07**

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