

GUJARAT TECHNOLOGICAL UNIVERSITY**ME - SEMESTER– II (Old course)• REMEDIAL EXAMINATION – SUMMER 2015****Subject Code: 1720204****Date:14/05/2015****Subject Name: Software Engineering Methodologies****Time: 02:30 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 do you mean by software design? Name various system design methodologies and describe in brief the Data Design methodology. **07**
- (b)** Explain how the software development efforts are distributed among different phases of software development life cycle. **07**
- Q.2 (a)** Use the COCOMO II model to estimate the efforts required to build software for a simple ATM that produces 12 screens, 10 reports and will require approximately 80 software components. Assume average complexity and average developer / environment maturity. Use the application composition model with object points. **07**
- (b)** Explain why software reliability is important in software engineering. **07**
- OR**
- (b)** To achieve rapid development, the RAID model assumes the existence of one thing. What is it, and why is the assumption not always true? **07**
- Q.3 (a)** What do you mean by structure analysis? Explain in detail the tools used for analysis of any software system. **07**
- (b)** Define the term project management. Discuss in detail the functions and activities of project management. **07**
- OR**
- Q.3 (a)** What characteristics can be measured when we assess an object oriented design? Explain in detail. **07**
- (b)** Discuss the role of configuration management in controlling software evaluation. Also discuss its role in maintaining product integrity. **07**
- Q.4 (a)** Explain the notion of coupling and cohesion with example. **07**
- (b)** Explain the process of User Interface design. Also list the guidelines for Good User Interface. **07**
- OR**
- Q.4 (a)** Explain in detail the various software complexity measures and their needs. **07**
- (b)** Explain the product-line architecture. **07**
- Q.5 (a)** What do you mean by estimation and scheduling? Explain in detail various cost estimation models used in Software engineering. **07**
- (b)** Draw a Context level and 1st level DFD for a web based order processing system for a computer store. **07**
- OR**
- Q.5 (a)** What is the purpose of software quality assurance? Why should the quality assurance organization be independent of development organization? **07**
- (b)** Write short notes on the followings: **07**
- (i) Software Evaluation Techniques.
 - (ii) Software Testing.
