

GUJARAT TECHNOLOGICAL UNIVERSITY**MCA - SEMESTER– IV EXAMINATION – WINTER 2019****Subject Code: 4649308****Date: 18-11-19****Subject Name: Software Quality Assurance****Time: 10:30 AM TO 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)** Attempt the following:
1. Differentiate contractor and external participants. **02**
 2. Explain the difference between procedures and work instruction. **02**
 3. Define Software, Software Quality and Software Quality Assurance. **03**
- (b)** Attempt the following:
1. Explain the objectives of Software Quality Assurance activities. **02**
 2. Discuss any two characteristics of SQA environment. **02**
 3. List the objectives of contract review. **03**
- Q.2 (a)** Discuss the importance of development and quality plan for internal projects. **07**
- (b)** Explain McCall's factor model tree. **07**
- OR**
- (b)** Explain components of Software project life cycle components. **07**
- Q.3 (a)** Describe the various software development models in detail. **07**
- (b)** List the main types of automated software test and discuss it. **07**
- OR**
- Q.3 (a)** Attempt the following: **07**
1. Identify the direct and indirect objectives of the review methodologies.
 2. Compare review methodologies.
- (b)** How can CASE tools contribute to the improved quality of software products? **07**
- Q.4 (a)** Attempt the following: **07**
1. Write short note on Formal Design Reviews (DRs).
 2. Compare path coverage Vs. line coverage.
- (b)** Discuss the sources for test cases and their advantages and disadvantages. **07**
- OR**
- Q.4 (a)** How software tests are classified? Discuss in detail. **07**
- (b)** List the managerial tools for controlling software maintenance quality and explain their importance. **07**
- Q.5 (a)** Attempt the following: **07**
1. Write short note on training and certification process.
 2. Explain the differences between defect and corrective and preventive actions.
- (b)** Explain the objectives of controlled documents. **07**
- OR**
- Q.5 (a)** Attempt the following: **07**
1. How Software quality metrics are categorized?
 2. Describe the implementation of a cost.
- (b)** Discuss the differences between the various testing strategies, their advantages and disadvantages. **07**
