

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA– SEMESTER –IV EXAMINATION –SUMMER-2019

Subject Code:4649308**Date: 21-05-2019****Subject Name: Software Quality Assurance****Time:10.30 am to 1.00 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)** Answer the following **07**
1. List the factors that differentiate Software Product from other Industrial Product.
 2. Define Software Quality Assurance
 3. What are the importance of carrying out a contract review for internal projects?
 4. What is Testing Process?
 5. List various software development models.
 6. List the components of software maintenance.
 7. Describe in one or two line typical project life cycle tasks.
- (b)** Distinguish between software errors, software faults and software failures. Give an appropriate live example to differentiate. **07**
- Q.2 (a)** Compare the KLOC and function points measures for the size of a software system. **07**
- (b)** What is a CASE tool? What is the contribution of case tools to software maintenance quality and improved project management. **07**
- OR**
- (b)** Explain the difference between classic and real CASE tools and provide some examples. **07**
- Q.3 (a)** What are the three factor categories belonging to McCall's factor model? What factors are included in each of the categories? **07**
- (b)** Explain Cyclomatic Complexity with appropriate example **07**
- OR**
- Q.3 (a)** Discuss the difference between bottom-up and top-down testing strategies and explain the use of stubs and drivers. **07**
- (b)** Describe the model for SQA defect removal effectiveness and costs. **07**
- Q.4 (a)** Explain the objectives of development and quality plans. **07**
- (b)** Discuss the advantages and disadvantages of automated computerized testing. **07**
- OR**
- Q.4 (a)** Explain direct and indirect objectives of the review methodologies. **07**
- (b)** Explain the difference between procedures and work instructions. **07**
- Q.5 (a)** Explain main objectives of training and certification. Discuss what is needed to prepare a training and updating program. **07**
- (b)** Explain the objectives of software quality metrics. List the requirements for successful software quality metrics. **07**
- OR**
- Q.5 (a)** Explain the standard and unique problems involved in implementing a cost of software quality system. **07**
- (b)** Explain the corrective and preventive actions process. **07**
