

**67242**

**MCA 5th Semester current scheme with new notes  
maximum marks scheme 80 Examination,  
December – 2015**

**SOFTWARE TESTING AND QUALITY ASSURANCE  
Paper–MCA–502**

*Time allowed : 3 hours ]*

*[Maximum marks : 80*

*Note : Attempt five questions in all. Question No. 1 is compulsory. Attempt four more questions, selecting one question from each unit. All questions carry equal marks.*

1.
  - (a) Describe the features of test cases.
  - (b) Define mutation testing
  - (c) What is meant by integration testing ?
  - (d) Define Quality Assurance.
  - (e) List out the objectives of FTR.
  - (f) Define software reliability.
  - (g) What are the key challenges of software testing ?
  - (h) What are the weaknesses of ISO 9000 ?

**Unit–I**

2. Compare the following functional testing techniques and give example of each :
  - (a) Boundary Value Analysis
  - (b) Cause Effect Graph
3. Define the following terms used in structural testing and give an example of illustration :
  - (a) Cyclomatic Complexity

- (b) Deriving Test Cases
- (c) Graph Matrices

### **Unit-II**

- 4. (a) Differentiate between alpha testing and beta testing.
  - (b) What are the differences between load testing, performance testing and stress testing ?
5. What is software quality ? What are different factors used to measure software quality ?

### **Unit-III**

6. What are various issues and different strategies used for Object Oriented Testing ?
7. Explain the concept of code walk throughs and code inspections. Also give their limitations.

### **Unit-IV**

8. (a) What are the effective methods to ensure the success of SQA ?
- (b) Differentiate between software safety and software reliability.
9. (a) Compare the weaknesses and strengths of ISO 9000, SPICE and CMM.
- (b) Why are software reliability growth models required ?