

Roll No.

67242

**M.C.A. 5th Sem. (with new notes)
(Current Scheme)**

Examination-December, 2014

Software Testing & Quality Assurance

Paper-MCA-502

Time : 3 hours

Max. Marks : 80

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard will be entertained after the examination.

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

$8 \times 2 = 16$

1. (a) What is regression testing ?
- (b) What is the difference between static testing and dynamic testing ?

- (c) List the weaknesses of ISO 9000.
- (d) State the objectives for debugging.
- (e) What kind of errors can be detected using unit testing ?
- (f) What is the test case ? What are contents ?
- (g) What is software testability ?
- (h) What is the difference between verification and validation ?

Unit-I

- 2. (a) What is the difference between white box testing and black box testing ? Explain with the help of an example. 8
- (b) What is boundary value analysis testing method ? Explain with the help of an example. 8
- 3. (a) What is software testing ? What are its principles ? Explain why testing can only detect the presence of errors, not their absence. 8

- (b) What is cyclomatic complexity of a program ? How it is useful in program testing ? Explain with the help of an example. 8

Unit-II

4. (a) What is integration testing ? Explain its various techniques. 8

- (b) Differentiate the following :

(i) Alpha testing and Beta testing 4

(ii) Load testing and stress testing 4

5. (a) What is system testing ? Discuss at least three testing methods under system testing. 8

- (b) What do you mean by software metric ? Explain various metrics for software testing. 8

Unit-III

6. What is software quality assurance ?
Explain various activities of software quality assurance. 16
7. How object-oriented software testing differs from procedure-oriented software testing ?
Discuss the techniques of object-oriented software testing.

Unit-IV

8. (a) What is software reliability ? Discuss various metrics of software reliability. 8
- (a) What are the components of SQA plan ?
Explain. 8
9. (a) List the various software quality attributes and explain briefly. 8
- (a) Explain various levels of Capability Maturity model. 8