

Roll No.

67242

**MCA 5th Semester Current Scheme
(With New Notes) Examination –
November, 2017**

SOFTWARE TESTING & QUALITY ASSURANCE

Paper : MCA-502

Time : Three Hours]

[Maximum 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 examination.

Note : Question No. 1 is *compulsory*. Attempt *four* questions by selecting *one* question from each Unit. All questions carry equal marks.

1. (a) What is data-flow guided testing ? $2 \times 8 = 16$
- (b) Name two software project management software tools.
- (c) Is debugging a kind of testing ? Justify your answer.
- (d) What is ticking-box testing ?

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- (e) How is Beta testing useful ?
 - (f) What are testing tools ? Name two popular testing tools.
 - (g) What is software quality management ?
 - (h) What is the relevance of interface testing ?
- UNIT – I**
- 2. (a) What is software testing ? What are its objectives ? When is the role of software testing start in software lifecycle ? When can planning for software testing start ? Explain. 10
 - (b) Why does software testing need extensive planning ? Explain. 6

3. Differentiate between the following :

- (a) Equivalence partitioning and Boundary value analysis methods. 6
- (b) Verification and Validation. 4
- (c) Glass-box testing and Black-box testing. 6

UNIT – II

- 4. (a) What do you mean by software testing strategy ? Enumerate the characteristics of a good software testing strategy. Also discuss the strategies involved in integration testing. 10
- (b) What is software quality ? Illustrate the important software quality attributes. 6

5. Explain the following :

- (a) Metrics for analysis 5
- (b) Test Data Generators 6
- (c) Alpha Testing 5

UNIT – III

- 6. (a) What is Object-Oriented Testing (OOT) ? What are various OOT methods ? Illustrate each stating their usefulness. 8
 - (b) What is Software Quality Assurance (SQA) ? What are the objectives and goals of SQA? Illustrate. 8
7. Explain the following :
- (a) Structured Walkthrough 5
 - (b) Test Case Design 6
 - (c) Formal Technical Review 5

UNIT – IV

- 8. (a) Compare ISO 9000 and SEI-CMM quality models. 8
 - (b) What is meant by software hazard analysis ? Outline its objectives and indicate the general threats applicable to the software design. 8
9. (a) What is SQA plan ? Illustrate the activities involved in SQA plan. 6
- (b) What do you mean by software quality standards ? Illustrate their essence as well as benefits. 5
 - (c) What is software safety ? Discuss its significance. 5