

# END TERM EXAMINATION

FIFTH SEMESTER [MCA] DECEMBER 2011

Paper Code: MCA 317

Subject: Software Testing

Time: 3 hours

Maximum Marks: 60

Note: Q.no.1 is compulsory. Attempt one question from each unit.

- Q1. Attempt any ten of the following: (2 X 10 = 20)
- (a) What is software testing? How is it different from debugging?
  - (b) Explain the term Code Walkthrough.
  - (c) Explain the characteristics of "good code".
  - (d) What is special value testing?
  - (e) Explain domain testing.
  - (f) Explain slice splicing.
  - (g) Explain recovery testing with examples.
  - (h) Why is smoke-testing done?
  - (i) Differentiate between alpha and beta testing.
  - (j) How do we compute the component weight age (CW) of a object oriented software?
  - (k) Explain object-oriented testing?
  - (l) Explain the method of testing classes.

## UNIT – I

- Q2. (a) Explain the limitations of testing. Why do we say that complete testing is impossible? (5)
- (b) What are the essentials of software testing? Why software testing is hard? (5)
- Q3. (a) Write down a small program and show, why it is practically impossible to do exhaustive testing? (5)
- (b) Software testing can be an unending so hard process. What criteria are used to stop testing. (5)

## UNIT –II

- Q4. Consider a program to find roots of quadratic equation. Its input is triplet of three positive (10) integers (say a, b, c) from the interval [1,100]. The output may be one of the following words: real roots, equal roots, imaginary roots. Find all DU paths and those that are DC paths. Develop data flow test cases.
- Q5. Consider the example of grading the students of any institution. The grading is done (10) according to the following rules:

Marks Range	Grade
75-100	Distinction
60-74	First Division
50-59	Second Division
40-49	Third Division
0-39	Fail

Generate test cases using equivalences class and decision table based testing techniques.

## UNIT – III

- Q6. (a) Differentiate between integration and system testing. (5)  
(b)What is regression testing? How is it different from development testing? (5)
- Q7. (a) What is slice based testing? Explain with the help of an example. (5)  
(b) What are prioritization categories and guidelines for test case reduction? (5)

## UNIT – IV

- Q8. (a) Write down the features of graphical user interface testing. How is it different (5) from class testing?  
(b) Explain the testing process for object oriented programs with example. (5)
- Q9. (a) Explain with example static and dynamic testing tools. (5)  
(b)Write down the characteristics of modern tools. (5)

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