

End Term Examination

Fifth Semester [MCA] December 2013

Paper Code: MCA303

*Subject: Software Testing
(2010 batch)*

Time: 3Hours

Maximum Marks: 60

*Note: Attempt Five question including Q.No.1 which is compulsory.
Select 1 Question from each unit.*

Q1 Attempt any ten of the following: (2*10 =20)

- a) Software Testing is software verification plus software validation .Discuss.
- b) What is special value testing?
- c) Differentiate between positive and negative testing.
- d) Give two advantage and disadvantage of functional test cases.
- e) What are the major problems that we face during object oriented testing?
- f) How graph theory is useful in testing?
- g) What is risk and how risk analysis is useful?
- h) What do you understand by system testing coverage?
- i) Why developers are not good testers?
- j) What is fault prediction model?
- k) Is testing different from debugging? Justify.
- l) Distinguish between dynamic and static testing.

Unit-1

- Q2. a) 'Software testing is an incremental process'. Justify the statement. 5
b) Discuss briefly the phases through which we can approach testing using a sample software testing problem .Comment on difficulty of testing . 5
- Q3. a) Why exhaustive testing does not guarantee 100% correctness even for small programs illustrate with help of an example. 5
b) What are the factors for determining the limit of testing? 5

Unit-2

- Q4. Write a program for multiplication if two matrices. Draw the DD graph and calculate 10 cyclomatic complexity for it. Also derive du-paths and dc-paths using data flow testing?

Q5. A program determines the next date in calendar .its input is entered in the form of <ddmmyy> with the following range : 10

1<=mm<=12

1<=dd<=31

1900<=yyy<=2020

Its output would be the next date or error message 'invalid date' .Design test cases using equivalence class partitioning method.

Unit-3

Q6. a) What are prioritization categories and guidelines for test case-reduction? 5
b) What is the need of regression testing? How it is done? 5

Q7. What is use-case testing? How do you develop the test cases base on use case specification for the login screen? 10

Unit -4

Q8. a) What is state base testing? Why it is suitable for object oriented testing? 5
b) Discuss some methods of integration testing with examples. 5

Q9. a) What is metrics? Why do we need to measure software? 5
b) What is class testing? Discuss the issue related to class testing. 5