(Please Write your Exam Roll No. immediately) Exam. Roll No. ……..

END-TERM EXAMINATION

DECEMBER 2006

Paper Code: MCA-317 **Subject: Software Testing**

Time: 3 Hours **Maximum Marks: 60**

Note: Question 1. is compulsory. Attempt one question from each unit

Q. 1. (a) What is alpha and beta testing? **(2)**
(b) What is black box and white box testing? **(2)**
(c) What is slice based testing? **(2)**
(d) What are characteristics of modern testing tools? **(2)**
(e) Explain GUI Testing. **(2)**
(e) Explain the steps involved in data flow testing. **(4)**
(e) Explain domain testing? **(4)**
(e) List advantages and disadvantages of b/w 2 debugging techniques. **(2)**

UNIT - I

Q. 2. (a) What is software testing? Explain the limitation of software testing.
(b) Can a program be tested completely? Explain with the help of example. **(10)**

Q. 3. (a) Explain the terms :-
(i) Mistake (ii) Error (iii) Fault (iv) Failure (v) Bug

(b) Is white box testing better than black box testing? Discuss. **(10)**

UNIT - II

Q. 4. Consider a program for determination of Next Date. Its input is a triple of day, month and year with the values in the following ranges. **(10)**
$1 \leq \text{month} \leq 12$
$1 \leq \text{day} \leq 31$
$1900 \leq 2025$

The possible outputs are "Next Date" and "Invalid date". Design the test cases using design table based testing.

Q. 5. (a) Explain cause effect graphing technique with the help of an example. **(10)**

(b) Calculate by different ways the cyclomatic complexity of following program

```
class grade {
public static void main (string args[])
{
        int score = 65;
        char grad;
        if (score >= 90)
        grade='A'
        else if (score>=80
        grade='B'
        else if (score>=70)
        grade='C'
        else if (score>=60)
        grade='D'
        else
        grade='F'
}
}
```

UNIT - III

Q. 6. (a) Explain integration testing. Explain guidelines for selection of integration method. List disadvantages of big bang approach in system testing.

(b) What is scenario testing? What is system scenario? Explain approaches to develop system scenarios. **(10)**

Q. 7. (a) List the reasons for a software change. Explain the testing which is done when software is modified. Explain the purpose of doing this testing.

(b) Give reasons why we can't execute all test cases. Briefly explain schemes for reducing test cases. **(10)**

UNIT - IV

Q. 8. (a) Explain five myths and realities about testing of object-oriented software.
(b) Discuss various issues involved in object oriented testing. **(10)**

Q. 9. (a) Can tests for a base class be reused for a derived class? Explain by taking some code.
(b) Explain three static and two dynamic tools. **(10)**
