

Code: R7421506

R7

B.Tech IV Year II Semester (R07) Advanced Supplementary Examinations, June 2012

SOFTWARE TESTING METHODOLOGIES

(Computer Science and Systems Engineering)

Time: 3 hours

Max Marks: 80

Answer any FIVE questions

All questions carry equal marks

- 1 (a) Give brief explanation of white box testing and black box testing and give differences between them.
(b) What are the differences between static data and dynamic data?
- 2 Describe the following concepts:
 - (a) Predicates.
 - (b) Predicate expression.
 - (c) Predicate coverage.
 - (d) Achievable paths.
- 3 How does the transaction flow occur? Illustrate with the help of examples.
- 4 (a) What is the purpose of domain testing? Give its schematic representation.
(b) Define the following concepts:
 - (i) Domains (ii) Domain closure
 - (iii) Domain dimensionality. (iv) Bug assumptions for domain testing.
(c) Explain simple domain boundaries and compound predicates.
- 5 Write about:
 - (a) Data-flow testing.
 - (b) Link weight.
 - (c) Loops.
- 6 (a) Simplify the Boolean function using Karnaugh map method:
 $F(W,X,Y,Z) = \sum m(0,1,2,4,5,6,8,9,12,13,14)$
(b) Simplify the Boolean function using Karnaugh map method:
 $F(A,B,C,D) = A'B'C'D' + AB'C'D' + A'BC + A'CD' + A'C'D'$
- 7 Explain state graphs with implementation.
- 8 What are graph matrices and their applications?
