Code: R7421506

R7

B.Tech IV Year II Semester (R07) Supplementary Examinations, March/April 2013

SOFTWARE TESTING METHODOLOGIES

(Computer Science and Systems Engineering)

Time: 3 hours Max Marks: 80

Answer any FIVE questions

All questions carry equal marks

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1 (a) What is the purpose of testing and debugging? Both are same or not. If not, give the differences.

(b) What are control and sequence bugs? How they can be caught?

2 (a) State and explain various kinds of predicate expressions with examples.

(b) What is meant by program's control flow? How is it useful for path testing?

3 (a) What is meant by transaction flow testing? Discuss its significance.

(b) Distinguish control flow and transaction flow.

4 (a) With a neat diagram, explain the schematic representation of domain testing.

(b) Discuss in detail about testability of domains.

5 (a) With example discuss path sums and path products.

(b) Discuss in brief applications of paths.

6 (a) Reduce the following functions using K-Maps.
$F(w, x, y, z) = \sum (1,2,4,6,7,8,12,13) + d (1,15)$.

(b) How the Boolean expression can be used in test case design?

7 (a) Explain the software implementation issues in state testing.

(b) How to convert a specification into a state graph and how contradiction can come about? Explain with example.

8 (a) Write the basics principles to represent a graph in matrix form.

(b) Explain the node reduction algorithm in terms of matrix operations.

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