Code No: V3126

R07

Set No: 1

III B.Tech. I Semester Supplementary Examinations, April/May – 2013

SOFTWARE TESTING METHODOLOGIES
(Common to CSE, IT)

Time: 3 Hours   **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks
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1. a) What are the goals of testing? Why testing?
    b) Give some Bug statistics.
    c) How should you go about quantifying the nightmare?   [5M+5M+6M]

2. a) Describe heuristic procedures for sensitizing paths.
    b) Explain implementation and application of path testing.
    c) How to test Multi-entry/Multi-exit routines? Explain.   [5M+5M+6M]

3. a) What do you do when you see a Graph? Explain the implementation of transaction flow testing.
    b) What are data flow anomalies? Explain.
    c) Explain ADUP strategy with example.   [6M+6M+4M]

4. a) What are various domain errors? Explain.
    b) Describe span compatibility with examples.
    c) How to test two-dimensional domains? Explain.   [5M+5M+6M]

5. a) How to determine the mean processing time of a routine? Explain.
    b) Explain about path products and path sums.
    c) Briefly describe a reduction procedure.   [6M+5M+5M]

6. a) What is the test case design of Boolean algebra? Explain.
    b) Describe definitions and notation of decision tables.
    c) Define KV chart. Explain its simple forms with examples.   [5M+5M+6M]

7. a) Discuss in detail about transition bugs.
    b) Explain about good state graphs and bad.   [8M+8M]

8. Explain the following:
    a) Graph matrix
    b) Partitioning algorithm
    c) Synchronization of test case
    d) Usage of JMeter for function testing   [4M+4M+4M+4M]

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R07

Set No: 2

Code No: V3126

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SOFTWARE TESTING METHODOLOGIES
(Common to CSE, IT)

Time: 3 Hours   **Max Marks: 80**

Answer any FIVE Questions
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*****

1. a) Is complete testing possible?
    b) Explain the following phrase: "Testing isn't everything".
    c) What are structural bugs? Explain.   [5M+5M+6M]

2. a) Discuss about notational evolution of control flowgraph.
    b) Explain three kinds of loops in detail.   [8M+8M]

3. a) Describe application, tools and effectiveness of data-flow testing.
    b) What are the components of data-flow model? Explain.
    c) Discuss about complications in transaction-flow testing.   [6M+4M+6M]

4. a) How to test one-dimensional domains? Explain.
    b) Define domain testing. Distinguish between systematic and orthogonal boundaries.
    c) Explain in detail about domains and interface testing.   [5M+5M+6M]

5. a) Give an example of dataflow testing.
    b) What is the fewest number of paths possible? Give an example.
    c) Write Haung's theorem. Give an example.   [5M+6M+5M]

6. a) Explain in detail about decision tables and structure.
    b) Discuss in detail about specifications in Logic-based testing.   [8M+8M]

7. a) Describe state testing in detail.
    b) Define state and state table.
    c) Explain about essential and inessential finite-state behavior.   [8M+4M+4M]

8. Explain the following:
    a) Matrix representation in software
    b) Properties of Relations
    c) Rapid testing
    d) HTTP connection for website access   [4M+4M+4M+4M]

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R07

Set No: 3

Code No: V3126

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Answer any FIVE Questions
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1. a) What are test and test design bugs?
    b) Discuss about the importance of bugs?
    c) Describe a model for testing.   [4M+4M+8M]

2. a) Define traversal marker. Explain with example.
    b) What is testing blindness? Explain kinds of blindness.
    c) Describe fundamental path selection criteria.   [6M+6M+4M]

3. a) Discuss in detail about transaction-flow testing techniques.
    b) Distinguish between forgiving and unforgiving dataflow anomaly state graphs.
    c) What are the strategies of data-flow testing? Explain.   [6M+4M+6M]

4. a) Explain about domains and testability.
    b) What is the strategy of domain-testing? Explain domain bugs and how to test for them.
                                                                                                              [6M+10M]

5. a) Write and explain node-by-node removal algorithm with suitable example.
    b) What is the average number of paths available in a flowgraph? Give an example.
                                                                                                              [10M+6M]

6. a) Describe test case design of decision tables.
    b) Give motivational overview of Logic-based testing.
    c) Discuss in detail about Boolean algebra.   [5M+5M+6M]

7. a) Explain about equivalent states.
    b) What should you do if you must build finite-state machines into your code?
    c) How to convert a specification into a state graph? Give an example.   [5M+5M+6M]

8. Explain the following:
    a) Partial ordering relations
    b) The matrix of a graph
    c) Creation of test script for unattended testing
    d) Performance testing of a database application   [4M+4M+4M+4M]

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R07

Set No: 4

Code No: V3126

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SOFTWARE TESTING METHODOLOGIES
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Time: 3 Hours   **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks
*****

1. a) Describe interface, integration and system bugs in detail.
    b) Distinguish between testing and debugging.
    c) Write and explain about bug consequences.   [5M+5M+6M]

2. a) What is path testing? Explain effectiveness of path testing.
    b) Discuss about predicate expressions.
    c) What is the path-testing criterion?   [6M+6M+4M]

3. a) Why isn't static analysis enough? Why is testing required?
    b) What is data-flow testing? Explain data flow graphs.
    c) Explain path selection, sensitization, and instrumentation of transaction-flow testing.
                                                                     [4M+6M+6M]

4. a) Describe ugly domains and how programmers and testers treat them.
    b) Explain in detail about domains and paths.   [6M+10M]

5. a) What is a KV-chart? Explain three variables KV-chart.
    b) Explain in detail about decision tables and structure.
    c) What are the rules of Boolean algebra? Explain.   [4M+6M+6M]

6. a) What is the maximum number of different paths available? Explain with example.
    b) Explain about regular expressions and flow-anomaly detection. [8M+8M]

7. a) Describe software implementation of state graphs with suitable example.
    b) Define improper state graph. Give some examples.
    c) Define unreachable state and dead state.   [8M+4M+4M]

8. Explain the following:
    a) Usage of Winrunner for regression testing
    b) Node-reduction algorithm.
    c) Motivational overview of graph matrices.   [4M+8M+4M]

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