R13

e No: 126ER

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B.Tech III Year II Semester Examinations, May - 2016
SOFTWARE TESTING METHODOLOGIES
(Common to CSE, IT)

Time: 3 hours   Max. Marks: 75

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART - A

(25 Marks)

1.a) Define testing and debugging. [2]
  b) What are the elements of flow graph? [3]
  c) What is Data-flow testing? [2]
  d) Give an example of a transaction-flow. [3]
  e) What is domain testing? [2]
  f) Define linear vector space. [3]
  g) What are distributive laws? [2]
  h) Give examples of four variable KV-chart. [3]
  i) Define state-transition table. [2]
  j) What is partial ordering relation? [3]

PART - B

(50 Marks)

2.a) Distinguish the following:
     i) Function vs structure
     ii) The builder vs Buyer
  b) How should you go about quantifying the nightmare? Explain. [5+5]

OR

3.a) Is complete testing possible? Explain.
  b) What are the three kinds of loops? Explain with example. [5+5]

4.a) Describe the complications of transaction flows.
  b) What are data-flow anomalies? Explain. [5+5]

OR

5.a) Define transaction flow testing. Explain transaction flow structure.
  b) Explain about the data-flow model with example. [5+5]

6.a) What are the restrictions of domain testing? Explain.
  b) How to test two-dimensional domains? Explain. [5+5]

OR

7.a) What is the strategy of domain testing? Explain in brief.
  b) Discuss about domains and testability. [5+5]

8.a) Explain about the mean processing time of a routine with example.
  b) Justify the following statement:
      "Decision tables can also be used to examine a program's structure".   [5+5]

OR

9.a) Explain Push/Pop arithmetic with example.
  b) What are the rules of Boolean algebra? Explain.   [5+5]

10. Explain the following:
     a) Impact of bugs in state testing
     b) Number of states in a state graph.
     c) Properties of relations.   [3+4+3]

OR

11. Explain the following:
     a) Software implementation of state graphs.
     b) Applications of graph matrices.   [5+5]

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