R13

Code No: 126ER

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech III Year II Semester Examinations, May - 2017
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) What is meant by a software bug? Explain. [2]
b) What is the intent of path based testing? [3]
c) What are the complications with transaction flows? [2]
d) What are the applications of data flow testing? Explain. [3]
e) What is Interface testing? Give example. [2]
f) What is the purpose of Domain Testing? Give its schematic representation. [3]
g) What is decision table and how is a decision table useful in testing? [2]
h) How can we check the consistency and completeness in the decision tables? [3]
i) What are the applications of node reduction algorithm? [2]
j) Differentiate between good state graphs and bad state graphs. [3]

PART - B

(50 Marks)

2. What are the consequences of bugs? To what extent can testing be used to validate that the program is fit for its purpose? Explain. [10]

OR

3. What is the purpose of testing? Discuss about various testing dichotomies with examples. [10]

4. Explain the Transaction Flow testing with an example. [10]

OR

5. Discuss the following strategies of data flow testing with suitable examples:
a) All-predicate-uses (APU) strategy
b) All-computational (ACU) strategy. [5+5]

6. What is meant by a nice domain? Give an example for nice two-dimensional domains. [10]

OR

7. Define the following concepts with respect to domain testing:
a) Domains b) Domain dimensionality
c) Domain closure d) Bug Assumptions for domain Testing [10]

8. What is the looping probability of a path expression? Write arithmetic rules and explain with an example. [10]

OR

9. Describe the procedure for specification validation using KV charts. [10]

10. What are the principles of state testing? Explain its advantages and disadvantages. Mention design guidelines for building finite state machines into your code. [10]

OR

11. Write a detailed note on graph matrices and their applications. Write about the usage of Winrunner tools. [10]

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