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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