

Code No: 156CW

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**B. Tech III Year II Semester Examinations, July - 2023****SOFTWARE TESTING METHODOLOGIES****(Computer Engineering – Software Engineering)****Time: 3 Hours****Max. Marks: 75**

- Note:** i) Question paper consists of Part A, Part B.
ii) Part A is compulsory, which carries 25 marks. In Part A, Answer all questions.
iii) In Part B, Answer any one question from each unit. Each question carries 10 marks and may have a, b as sub questions.

PART – A**(25 Marks)**

- 1.a) Outline the consequences of bugs. [2]
- b) Summarize dichotomies. [3]
- c) Define domain and interface testing. [2]
- d) What are transaction flows? [3]
- e) Give an overview on path expressions. [2]
- f) What is regular expression? [3]
- g) What are state graphs? [2]
- h) What do you mean by transition testing? [3]
- i) What are properties of relations? [2]
- j) Write eight steps in a reduction procedure. [3]

PART – B**(50 Marks)**

2. Discuss about the model for testing. [10]
OR
- 3.a) Discuss on the basic concepts of path testing and its applications.
b) What are the structural test strategies based on the program's control flow graph? Explain. [5+5]
- 4.a) What are domains and paths? Explain.
b) Define data flow testing. Explain data flow testing strategies. [5+5]
OR
5. Define domain testing. Explain about nice domains in detail. [10]
6. Briefly explain about regular expressions and flow-anomaly detection. [10]
OR
- 7.a) What are decision tables? Illustrate the applications of decision tables. How is a decision table useful in testing? Explain with an example.
b) Explain Kv charts in detail with example. [5+5]

- 8.a) What are the principles of state testing. Discuss advantages and disadvantages. [5+5]
b) Give a note on good and bad state graphs. [5+5]

OR

9. Differentiate and explain the state testing and transition testing with an example. [10]

10. Explain about node reduction algorithm with a suitable example. [10]

OR

- 11.a) What are graph matrices and write a short note on their applications. [5+5]
b) What are the matrix operations in tool building? Explain. [5+5]

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Use of paper July/Aug-2023