

Code No: 156CW

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B. Tech III Year II Semester Examinations, August - 2022****SOFTWARE TESTING METHODOLOGIES****(Common to CSE, IT)****Time: 3 Hours****Max.Marks:75**

**Answer any five questions**  
**All questions carry equal marks**

---

- 1.a) To what extent can testing be used to validate that the program is fit for its purpose? Discuss and explain various dichotomies.  
b) Explain various consequences of bugs. What are the remedies for test bugs? Explain. [7+8]
- 2.a) State and explain various path selection rules for path testing.  
b) What is the purpose of testing? Discuss the principles of test case design. [7+8]
- 3.a) What are the transaction flows? Explain their complications.  
b) Discuss the following strategies of data flow testing with suitable examples:  
i) All-predicate-uses (APU) strategy  
ii) All-computational (ACU) strategy. [7+8]
- 4.a) What is meant by Data-flow testing? Compare the path flow and data-flow testing strategies.  
b) What is meant by a choice domain? Give an example for nice two-dimensional domains. [8+7]
- 5.a) How can we check the consistency and completeness in the decision tables? Explain.  
b) Define path product, path expression and path sum. Give examples for these. [7+8]
- 6.a) Define decision table and explain don't care and impossible terms.  
b) Explain test case design and sketch KV charts of three and four variables. [7+8]
- 7.a) What are principles of state testing? Explain its advantages and disadvantages.  
b) Differentiate between good state graphs and bad state graphs. [8+7]
- 8.a) Write an algorithm for Node Reduction and illustrate the applications of it.  
b) Define graph matrices and evaluate graph matrix with pictorial graph. [8+7]

---oo0oo---