

Code No: 815BE**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****MCA V Semester Examinations, June/July - 2018****SOFTWARE TESTING METHODOLOGIES****Time: 3 Hours****Max. Marks: 60****Note:** This question paper contains two parts A and B.

Part A is compulsory which carries 20 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 8 marks and may have a, b, c as sub questions.

PART - A**5 × 4 Marks = 20**

- 1.a) What is bug? What are the consequences of bugs? Explain. [4]
- b) Name and explain different data flow testing strategies. [4]
- c) Explain how domain testing can be used in both functional and structural testing. [4]
- d) Differentiate among path testing, state testing and logic based testing. [4]
- e) Define graph matrix and explain out-degree and in-degree. [4]

PART - B**5 × 8 Marks = 40**

2. Explain different kinds of bugs with examples for each. Also write the taxonomy of bugs. [8]

OR

3. Define path sensitization and explain path sensitization for achievable and unachievable paths. [8]

4. Demonstrate the transaction flows and its complications. State and explain various transaction flow junctions and mergers. [8]

OR

5. Explain the procedure to construct data flow graph. Compare the path flow and data flow testing strategies. [8]

6. Discuss in detail about nice domains and ugly domains with suitable examples. [8]

OR

7. Define path product, path expression and path sum. Give suitable examples and applications for each. [8]

8. What are the testing strategies for KV charts? Explain the KV charts for two variables and three variables. [8]

OR

- 9.a) Discuss the principles of state testing. Explain its advantages and disadvantages. [4+4]
- b) Explain about don't care conditions in logic based testing. [4+4]

10. Discuss node reduction algorithm in terms of matrix operations. Demonstrate the matrix operations in tool building. [8]

OR

- 11.a) What are the potential benefits from using tools to support testing? Discuss. [4+4]
- b) Explain the Win-Runner testing process in detail. [4+4]