

R15**Code No: 825AH****JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****MCA V Semester Examinations, June/July - 2018****SOFTWARE TESTING METHODOLOGIES****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**5 × 5 Marks = 25**

- 1.a) Explain different types of loops and related bugs with examples. [5]
- b) What are the components of a data flow model? Explain. [5]
- c) What is meant by domain dimensionality? [5]
- d) Distinguish between path sums and path products. [5]
- e) Discuss about the matrix operations in tool building. [5]

PART - B**5 × 10 Marks = 50**

- 2.a) How control and sequence bugs can be caught? Explain their consequences.
- b) Explain about simple independent and co-related predicates. [5+5]

OR

- 3.a) Discuss about the bugs related to internal and external interfaces and its consequences.
- b) What is the use of link counters in path testing? Explain. [5+5]

- 4.a) What are data flow anomalies? Discuss them with examples.
- b) Discuss about transaction flow testing and its significance. [5+5]

OR

- 5.a) Compare different data flow testing strategies.
- b) What are the applications of transaction flow testing? Discuss. [5+5]

6. Explain the following domain boundaries with examples.
a) Linear & Non-linear b) Nice & Ugly [5+5]

OR

7. With examples, explain the applications of the following with respect to testing.
a) Regular Expressions b) Flow anomaly detection [5+5]

- 8.a) How Boolean expressions can be used in test case design? Explain.
b) Discuss about the contradictions and ambiguities in specifications. [5+5]

OR

- 9.a) What are state graphs? What kind of bugs can cause state graphs? Explain.
b) With an example, explain the process of converting a specification into a state graphs. [5+5]

- 10.a) What are the benefits of using tools in software testing? Discuss.
b) What is the power of a matrix in Graph representation? Explain. [5+5]

OR

- 11.a) How does Win runner recognize objects in an application? Explain.
b) What are the merits and demerits of different graph matrix representations? Discuss.[5+5]

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