



B.Tech VII Semester Regular/Supplementary Examinations, December 2024

SOFTWARE TESTING METHODOLOGIES
(CSE (DS))

Maximum Marks: 70

Date:07.01.2025

Duration: 3 hours

- Note:**
- 1.This question paper contains two parts A and B.
 2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
 3. Part B consists of 5 Units. Answer any one full question from each unit which carries 10M.
 4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks		(10×2M=20 Marks)	CO	Bloom Tx
1	Define a taxonomy of bugs.		1	L1
2	What are flow graphs in software testing?		1	L1
3	What is transaction flow testing?		2	L1
4	How does data flow testing differ from transaction flow testing?		2	L3
5	What is the primary goal of domain testing?		3	L1
6	Why are domains and interfaces significant in testing?		3	L2
7	What is the purpose of the reduction procedure in path testing?		4	L2
8	What is a path product?		4	L1
9	What is a state graph?		5	L1
10	How does a matrix help in path optimization?		5	L3

Part-B

Answer All the following questions.		(5×10M=50Marks)	CO	Bloom Tx
11	A. Describe various dichotomies in testing and explain how they impact the testing process. [5M] B. Illustrate a generic testing model and discuss the key phases included in this model? [5M]		1	L2
OR				
12	A. What is path sensitizing in path testing? Describe the steps involved in sensitizing a path with an example? [5M] B. Define path instrumentation? Explain its importance in the execution of path testing? [5M]		1	L2
13	What are the basics of data flow testing? How does it differ from transaction flow testing? [10M]		2	L3
OR				
14	Explain the application of data flow testing in identifying errors in software systems. [10M]		2	L2

15	A. Explain the concept of "Domains and Paths" in domain testing? [5M] B. Describe the significance of domain testing in software quality assurance? [5M]	3	L2
OR			
16	A. Explain the difference between "Nice" and "Ugly" domains in domain testing. [5M] B. Discuss the importance of domains and interfaces in software testing? [5M]	3	L2
17	A. What are state graphs, and how do they contribute to state testing? [5M] B. Describe the reduction procedure in path testing. Why is it essential for optimization? [5M]	4	L3
OR			
18	A. Discuss the purpose and structure of decision tables in logic-based testing? [5M] B. How are path expressions applied in logic-based testing? Explain with an example? [5M]	4	L3
19	A. Define state graphs and discuss the characteristics of good and bad state graphs in software testing? [5M] B. Explain the concept of testability tips in the context of transition testing? [5M]	5	L2
OR			
20	How the node reduction algorithm work, and what does is its role in optimizing graph matrices? [10M]	5	L3