



**B.Tech VIII Semester Regular Examinations, June 2022**

**SOFTWARE TESTING METHODOLOGIES**

(Computer Science & Engineering)

**Maximum Marks: 70**

**Date: 18.06.2022 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

(10x2M=20 Marks)

- 1 Differentiate conventional testing and object-oriented testing.
- 2 What is the need of validation?
- 3 Differentiate testing and debugging
- 4 Explain the path selection criteria
- 5 Explain bug assumption.
- 6 Explain data flow anomalies.
- 7 What are domain bugs and how they are tested?
- 8 What is mutation testing?
- 9 What is cyclomatic complexity?
- 10 How a graph is represented in matrix form?

**Part-B**

Answer All the following questions.

(5X10M=50Marks)

- 11 A. What is program's control flow? How is it useful for path testing? (5M)  
B. Explain the long-term goals of software testing. (5M)  
OR
- 12 A. Explain the taxonomy of bugs. (5M)  
B. Differentiate unit verification versus unit validation. (5M)
- 13 A. Describe the process of path testing criteria. (5M)  
B. Explain the terms dicing, data flow and debugging. (5M)  
OR
- 14 A. Explain the control flow graph and its notations. (5M)  
B. Explain in detail about the issues in object-oriented testing. (5M)
- 15 A. Discuss the benefits of designing stubs and drives. (5M)  
B. State the restrictions at domain testing process. (5M)  
OR
- 16 A. What are nice domains? Explain in detailed. (5M)  
B. With a neat diagram, explain the schematic representation of domain testing. (5M)

- 17 A. Reduce the following functions using K-Maps  
 $F(A,B,C,D) = P(4,5,6,7,8,12,13) + d(1,15)$  (10M)  
OR
- 18 A. Explain the test case design using decision tables. (5M)  
B. Explain the process of flow anomaly detection. (5M)
- 19 A. What are graph matrices and their applications? Explain in detail. (5M)  
B. Explain about good state and bad state graphs. (5M)  
OR
- 20 A. Write testers comments about state graphs. (5M)  
B. Explain the node reduction algorithm. (5M)