

Code No.: CS833OE

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**CMR ENGINEERING COLLEGE: : HYDERABAD**  
**UGC AUTONOMOUS**

**IV–B.TECH–II–Semester End Examinations (Regular) – April - 2025**

**SOFTWARE TESTING METHODOLOGIES**

**(ECE)**

**[Time: 3 Hours]**

**[Max. Marks: 70]**

**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 10 marks and may have a, b, c as sub questions.

**PART-A**

**(20 Marks)**

1. a) Write the consequences of bugs. [2M]
- b) Compare static testing and dynamic testing? [2M]
- c) Write the applications of data flow testing. [2M]
- d) Write how a nice domain differs from ugly domain. [2M]
- e) Recall Decision Table. [2M]
- f) Write the limitations of path testing. [2M]
- g) Define good state and bad state graphs. [2M]
- h) What is the main function of State Transition testing? [2M]
- i) What is the use of adjacency matrix of a graph? [2M]
- j) What are the problems in Pictorial graphs? [2M]

**PART-B**

**(50 Marks)**

- 2.a. Discuss about integration, interface and system bugs. [ 5M]
- b. What is path testing? Give a note on path selection and predicates. [ 5M]

**OR**

3. What is the purpose of testing and add a note on principles of test case design? [10M]
- 4.a. Explain schematic representation of domain testing with neat diagram. [5M]
- b. State and explain various restrictions in domain testing processes. [5M]

**OR**

- 5.a. Discuss about complications in transaction flow testing. [5M]
- b. Explain transaction flow graph implementation with example. [5M]
- 6.a. Explain KV charts in detail with example. [5M]
- b. Discuss about decision Table With an example. [5M]

**OR**

- 7.a. Explain basic concept of path expression with example. [5M]
- b. Elucidate the data flow anomalies in actions and state graphs. [5M]
- 8.a. Explain software implementation of state graphs. [5M]
- b. Define state graph and explain about finite state machine. [5M]

**OR**

9. Explain state testing and software implementation issues in state testing in detail. [10M]

- 10.a. Explain node reduction algorithm with example. [5M]  
b. Discuss about matrix representation software. [5M]

**OR**

- 11.a. What are some situations in which state testing may prove useful? Explain. [5M]  
b. What are properties of relations? Explain. [5M]

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