



III B.Tech II Sem Regular End Examination, June 2022

Software Testing Methodologies**(Computer Science and Engineering/Information Technology)****Time: 3 Hours.****Max. Marks: 70**

Note: 1. Question paper consists: Part-A and Part-B.

2. In Part – A, answer all questions which carries 20 marks.

3. In Part – B, answer any one question from each unit.

Each question carries 10 marks and may have a, b as sub questions.

PART- A**(10*2 Marks = 20 Marks)**

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|-------|---|----|-----|----|
| 1. a) | What is the purpose of testing? | 2M | C01 | C2 |
| b) | Define self-blindness. | 2M | C01 | C1 |
| c) | What is transaction flowgraph? | 2M | C02 | C2 |
| d) | Give an example of data flow anomaly state graph. | 2M | C02 | C3 |
| e) | Define KV Chart. | 2M | C03 | C1 |
| f) | What are advantages of decision tables? | 2M | C03 | C4 |
| g) | What is a state graph? | 2M | C04 | C2 |
| h) | Define state-symbol product. | 2M | C04 | C3 |
| i) | What is degree of a node? | 2M | C05 | C1 |
| j) | Define idempotent generator. | 2M | C05 | C3 |

PART- B**(10*5 Marks = 50 Marks)**

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|-------|--|----|-----|----|
| 2. a) | Briefly explain about various kinds of loops. | 5M | C01 | C2 |
| b) | What are goals and phases of testing? Explain. | 5M | C01 | C1 |

OR

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|-------|---|-----|-----|----|
| 3. | Discuss about application and implementation of path testing. | 10M | C01 | C3 |
| 4. a) | How to test dataflow? Explain. | 5M | C02 | C4 |
| b) | Describe complications of transaction-flow testing. | 5M | C02 | C3 |

OR

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|----|---|-----|-----|----|
| 5. | Explain about applications, tools and effectiveness of data-flow testing. | 10M | C02 | C5 |
|----|---|-----|-----|----|

- 6 a) Describe maximum path arithmetic count with example. 5M C03 C4
b) Explain about test case design by decision tables. 5M C03 C2
- OR**
- 7 Discuss about a reduction procedure with suitable example. 10M C03 C3
- 8 a) Describe principles, limitations and extensions of state testing. 5M C04 C4
b) Explain about inputs, transitions and outputs of state graphs. 5M C04 C2
- OR**
- 9 Describe software implementation of state graph with example. 10M C04 C4
- 10 a) What are properties of relations? Explain in detail. 5M C05 C3
b) Briefly explain about matrix representation software. 5M C05 C5
- OR**
- 11 What are applications of graph matrices? Explain with suitable examples. 10M C05 C3

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