

## Important Topics to Cover for Exam :-

### Module 1 :

1. Definitions of Error, Fault, Failure, Incident, Test, (10)  
Reliability, Usability, Software Testing.
2. Different measures in software quality. (4)
3. Test & Debug cycle. Explain Testing & Debugging process (10)
4. Functional vs Structural Testing (10)
5. Test generation strategies (6)
6. What is Test Metric? Various test metrics associated with ST (10)
7. Element & Inspection of Static Testing (5/10)
8. Triangle Problem - Traditional Implement<sup>n</sup> - Flowchart (10)  
Structured Implement<sup>n</sup> - Diagram
9. NextDate Function - Pseudocode - 10
10. a) Commission Problem  
b) Currency Converter  
c) Wind Shield Wiper Controller } 10.

### Module 2 :

(4-6)

1. Boundary Value Testing, analysis, types & limitations
2. BVA - Triangle Problem, NextDate, Commission prob
3. Equivalence class Testing, defn, types
4. ECT - Triangle problem, NextDate, Commission prob
5. Decision Table, technique
6. DT - Triangle problem, NextDate, Commission prob
7. Fault based testing : Assumptions



### Module 3 :

1. Definition of Path Testing - Triangle prob - Program Graph (10)
2. DD Path - Triangle prob (10)
3. Test Coverage Metrics & Metric based Testing (5)
4. Basis path testing (5)
5. Essential complexity (5)
6. Dataflow testing - Define / Use testing - Commitment prob  
↳ Dupath Calculators (10)
7. Slice based testing - Commitment prob (10)
8. Note on the guidelines & observation about dataflow test

### Module 4 :

1. Alternative life cycles (10)
2. Context diag, Level 1 Dataflow diag - SATM System (10)
3. Decomposition tree for SATM System (10)
4. Unit Call graph for SATM - Decomposition based integration using graph based approach (10)
5. Callgraph based Integration - Neighbourhood (10)  
Pair wise
6. MM Path - SATM System - MM path complexity (10)

### Module 5 :

- 1) Functional Strategies for Thread testing considering all relevant parameters.
- 2) Dynamic interaction in Multiple processors.
- 3) EOPN. Also consider Thread structures  
↳ Explain Interactn, Decomposition, Determinism
- 4) Static Interaction in Multiple vs Single processor
- 5) Client Server Testing
- 6) Interaction Testing Taxonomy of interaction
- 7) Structural Strategies for Thread Testing