

**IMPORTANT QUESTIONS(UNITWISE)**

**SUBJECTNAME : STM SUB CODE:**

**COURSECODE : YEAR:2024-25 SEM: III-II**

**UNIT-I**

**PART-A**

| **S.No.** | **Coverage** | **Questions** |
| --- | --- | --- |
| 1 | UNIT-I | Define Integration Testing? |
| 2 | UNIT-I | Define Component Testing? |
| 3 | UNIT-I | Compare small vs large? |
| 4 | UNIT-I | Define the following : a) Environment b) Program |
| 5 | UNIT-I | Differentiate function versus structure testing? |
| 6 | UNIT-I | State Builder vs Buyer? |
| 7 | UNIT-I | Define the following : a) consequence cost b) installation cost |
| 8 | UNIT-I | Define path selection? |
| 9 | UNIT-I | Define structural bugs? |
| 10 | UNIT-I | Define nightmare |
|  |  | **PART B** |
| 11 | UNIT-I | Describe briefly about a model for testing? |
| 12 | UNIT-I | Explain about statement coverage (C1) and branch coverage (C2)? Explain with an example methods to select enough paths to achieve C1+C2? |
| 13 | UNIT-I | Demonstrate the phases in a tester’s mental life and Define testing and explain the purpose of testing? |
| 14 | UNIT-I | Describe about consequences of bugs? |
| 15 | UNIT-I | Explain about path testing with an example and effectiveness of path Testing? |
| 16 | UNIT-I | Define path sensitization and write heuristic the procedure used in path sensitization? |
| 17 | UNIT-I | Briefly discuss about dichotomies? |
| 18 | UNIT-I | Explain how concatenated loops can be tested? Discuss the three cases for single loop testing? |
| 19 | UNIT-I | Briefly explain about taxonomy of bugs and how the bugs are going to occur? |
| 20 | UNIT-I | Discuss in detail about path instrumentation with examples |

**UNIT-II**

**PART-A**

| **S.No.** | **Coverage** | **Questions** |
| --- | --- | --- |
| 1 | UNIT-II | Define mergers in transaction flow testing? |
| 2 | UNIT-II | Compare static versus dynamic anomaly detection |
| 3 | UNIT-II | Define path sensitization? |
| 4 | UNIT-II | State three types of data flow anomalies |
| 5 | UNIT-II | . Define all du-paths? |
| 6 | UNIT-II | Define the complications in Transaction Flows? |
| 7 | UNIT-II | Define mitosis? |
| 8 | UNIT-II | Define Absorption and mitosis of transaction flow testing? |
| 9 | UNIT-II | Define conjugation |
| 10 | UNIT-II | Define the following : a) Defined b)Killed |
|  |  | **PART B** |
| 11 | UNIT-II | Demonstrate an anomaly can be detected. Explain different types of data flow anomalies  and data flow anomaly state graphs? |
| 12 | UNIT-II | Explain with an example of data flow graphs and data flow anomalies |
| 13 | UNIT-II | Discuss the following strategies of data flow testing with suitable examples: i. All-predicate-uses (APU) strategy ii. All-computational (ACU) strategy |
| 14 | UNIT-II | Describe about the data flow testing techniques? |
| 15 | UNIT-II | Discuss briefly about data flow anomaly state graphs? |
| 16 | UNIT-II | List nine possible two-letter combinations of the object states of data Anomalies. Classify them as buggy, suspicious and ok? |
| 17 | UNIT-II | Differentiate between static vs dynamic anomaly detection |
| 18 | UNIT-II | Discuss in detail about slicing and dicing? |
| 19 | UNIT-II | Explain in detail about transaction flow testing techniques |
| 20 | UNIT-II | Demonstrate with an example of Data flow model by using a control flow graph |

**UNIT-III**

**PART-A**

| **S.No.** | **Coverage** | **Questions** |
| --- | --- | --- |
| 1 | UNIT-III | Define Boundary Point? |
| 2 | UNIT-III | . Define shifted boundary |
| 3 | UNIT-III | Define ambiguous bug? |
| 4 | UNIT-III | Write three bug assumptions for Domain Testing |
| 5 | UNIT-III | What is nonlinear boundary |
| 6 | UNIT-III | Define nice domains? |
| 7 | UNIT-III | . Define domain closure? |
| 8 | UNIT-III | What are on points and off points |
| 9 | UNIT-III | Define titled boundaries and missing boundaries |
| 10 | UNIT-III | What is closure compatibility |
|  |  | **PART B** |
| 11 | UNIT-III | . Describe short notes on i. Ambiguities and contradictions ii. Simplifying the topology |
| 12 | UNIT-III | Describe about testing one dimensional and two dimensional domains? |
| 13 | UNIT-III | Explain briefly about bug assumption in domain testing |
| 14 | UNIT-III | . Explain about the span compatibility of domain testing |
| 15 | UNIT-III | Describe briefly about ugly domains |
| 16 | UNIT-III | Discuss in detail about testing n-dimensional domains? |
| 17 | UNIT-III | . Describe about domain bugs and how to test them |
| 18 | UNIT-III | . Explain in detail about nice domains |
| 19 | UNIT-III | Explain the testing strategy for two-dimensional domains? |
| 20 | UNIT-III | . Explain briefly about bug assumption in domain testing |

**UNIT-IV**

**PART-A**

| **S.No.** | **Coverage** | **Questions** |
| --- | --- | --- |
| 1 | UNIT-IV | Give an example of Cross-Term step and Parallel Term? |
| 2 | UNIT-IV | Define path product? |
| 3 | UNIT-IV | What is path expression? |
| 4 | UNIT-IV | Compare and Contrast between condition stub and action stub? |
| 5 | UNIT-IV | Define Distributive law? |
| 6 | UNIT-IV | List the steps in reduction procedure? |
| 7 | UNIT-IV | Define absorption law? |
| 8 | UNIT-IV | State loop removal operation? |
| 9 | UNIT-IV | Write down the formula for maximum path count arithmetic? |
| 10 | UNIT-IV | Define maximum path count arithmetic |
|  |  | **PART B** |
| 11 | UNIT-IV | Explain the push/pop arithmetic with an example? And explain the get/return arithmetic with an example |
| 12 | UNIT-IV | Explain about decision table as a basis for test case design and also give an example of immaterial cases? |
| 13 | UNIT-IV | Explain about the mean processing time of a routine with an example? |
| 14 | UNIT-IV | Explain with an example of mean processing? |
| 15 | UNIT-IV | Demonstrate decision table and how is a decision table useful in Testing? Explain with the help of an example |
| 16 | UNIT-IV | Describe briefly about probability application with example |
| 17 | UNIT-IV | Explain about the Reduction procedure with an example? |
| 18 | UNIT-IV | Explain with an example of maximum path count arithmetic and lower path count arithmetic? |
| 19 | UNIT-IV | Discuss in detail about lower path count arithmetic and structured flow graph? |
| 20 | UNIT-IV | Explain briefly about regular expression and flow anomaly detection |

**UNIT-V**

**PART-A**

| **S.No.** | **Coverage** | **Questions** |
| --- | --- | --- |
| 1 | UNIT-V | Define transition? |
| 2 | UNIT-V | Define Inputs and transitions |
| 3 | UNIT-V | Define graph matrix |
| 4 | UNIT-V | What is a power of a matrix? |
| 5 | UNIT-V | Define good and bad state graphs? |
| 6 | UNIT-V | Define unreachable state? |
| 7 | UNIT-V | Define dead state |
| 8 | UNIT-V | Define Asymmetric Relation |
| 9 | UNIT-V | State matrix properties |
| 10 | UNIT-V | Give two examples of improper state graphs |
|  |  | **PART B** |
| 11 | UNIT-V | Demonstrate an algorithm for node reduction (general)? And Illustrate the applications of node reduction algorithm |
| 12 | UNIT-V | Explain the following? a) Impossible states b) Equivalent state |
| 13 | UNIT-V | Explain with an example how an unspecified and contradictory transitions seen in transition bugs |
| 14 | UNIT-V | Define graph matrices and evaluate graph matrix with pictorial graph explains the basic algorithms? |
| 15 | UNIT-V | Describe briefly about the application of GET/RETURN problem |
| 16 | UNIT-V | Demonstrate maximum element and minimum element of a graph? |
| 17 | UNIT-V | Explain briefly about Partitioning algorithm in graph matrix with example |
| 18 | UNIT-V | Discuss in brief about the state graphs with an example? And control recovery routine state graph? |
| 19 | UNIT-V | Demonstrate power of a matrix with an example? |
| 20 | UNIT-V | Describe briefly about matrix of a graph with suitable example |