



SIDDHARTH GROUP OF INSTITUTIONS::PUTTUR
Siddharth Nagar, Narayanavanam Road – 517583
QUESTION BANK (DESCRIPTIVE)

Subject with Code: Software Testing (16CS525)

Course & Branch: B.Tech - CSE

Year & Sem: III B.Tech & II Sem

Regulation: R16

UNIT –I

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|--|-----------------|
| 1. State and Explain various Dichotomies in Software Testing | [L5][CO1][12M] |
| 2. a) What is meant by statement testing and branch testing? Explain with examples | [L1][CO1] [6M] |
| b) What are the Path Testing Criteria? | [L1][CO1] [6M] |
| 3. a) Explain about Model for Testing with the diagram. | [L5][CO1] [6M] |
| b) Explain about achievable and un-achievable paths through Path Testing | [L5][CO1] [6M] |
| 4. a) What is predicate, compound predicate and path predicate? | [L1][CO1] [6M] |
| b) Define Control flow graph. Write any one application of flow graph? | [L1][CO1] [6M] |
| 5. a) Explain about testing blindness? | [L5][CO1] [6M] |
| b) What is static & dynamic anomaly detection? Give one example? | [L1][CO2] [6M] |
| 6. Explain about Path Instrumentation with example? | [L5][CO1][12M] |
| 7. Explain about consequences of bugs | [L5][CO1][12M] |
| 8. Explain about taxonomy of bugs in detail with its functionalities | [L5][CO1][12M] |
| 9. a) What is meant by path sensitization, explain with an example? | [L1][CO1] [6M] |
| b) List out the different types of test bugs? | [L1][CO1] [6M] |
| 10. Write in detail about applications of path testing. | [L3][CO1] [12M] |

UNIT –II

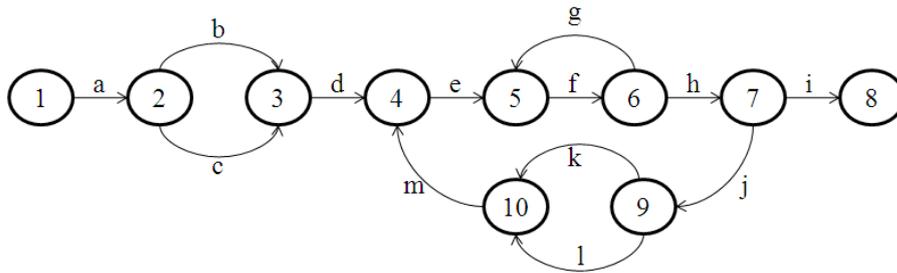
1. a) What is transaction? Write about biosis and mitosis? [L1][CO2] [6M]
b) What are the elements of flow graphs draw the elements with suitable example?[L1][CO2] [6M]
2. a) Explain about applications of data flow testing? [L5][CO1] [6M]
b) Write about Data Flow Machines. [L2][CO2] [6M]
3. How do we find dataflow anomalies explain about suitable example? [L1][CO2][12M]
4. Explain about transaction flow testing techniques? [L5][CO2] [12M]
5. What is transaction? Explain about testing blindness in detail. [L1][CO2] [12M]
6. a) Write few applications of TFT and DFT. [L2][CO2] [6M]
b) Define Slicing and Dicing and explain how it is used for DFT? [L1][CO2] [6M]
7. Explain about testing strategies in data flow testing? [L5][CO2] [12M]
8. Explain about basic concepts of transaction flow and data flow? [L5][CO1] [12M]
9. Explain about different complications of transactions with suitable examples? [L5][CO2] [12M]
10. a) Differentiate Dynamic Vs. Static Anomaly detection [L4][CO2] [6M]
b) Explain about Data Objects State and usage [L5][CO2] [6M]

UNIT –III

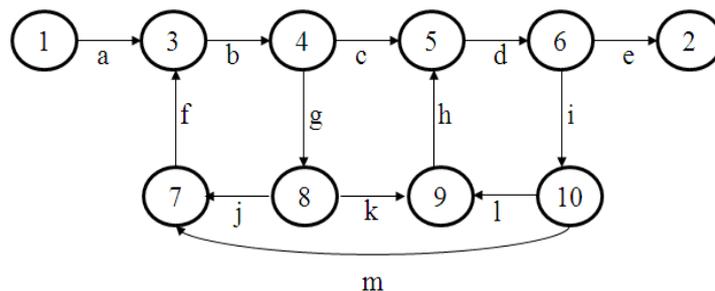
1. Explain about Interface Testing in detail with examples [L5][CO3][12M]
2. a) Define Domain Testing with an example [L4][CO3] [6M]
b) Explain about Domain Dimensionality [L5][CO3] [6M]
3. Explain briefly about Ugly Domains with its properties [L5][CO3][12M]
4. Explain about encoding bugs in Domain testing. [L5][CO2][12M]
5. Explain about Domain Closure and its types [L5][CO3][12M]
6. a) Explain about Ambiguities and contradictions [L5][CO3] [6M]
b) Explain about Domain Testing Strategy and how it is used while testing a Code [L5][CO2] [6M]
7. Explain about the properties of Nice Domains [L5][CO3][12M]
8. a) Write about systematic boundaries with diagram. [L3][CO3] [6M]
b) Explain about the types of Domain errors. [L5][CO3] [6M]
9. What is meant by Pairs, Quads, and Octets? [L1][CO3][12M]
10. Explain about Closure Compatibility and Span Compatibility [L5][CO3][12M]

UNIT –IV

1. a) What is Path Products and Path Sums, discuss with an example for each [L1][CO4] [6M]
 b) What is Flow Anomaly Detection, discuss with an example [L1][CO4] [6M]
2. Explain the steps in Node Reduction Procedure and get a Path Expression from the following flow graph [L5][CO4] [6M]



3. Discuss about what LBT Testing. Explain various methods to deal with it [L4][CO4] [12M]
4. Minimize the following expression by using K-Map [L6][CO5] [12M]
 $A'B'C'D'E'+A'B'CD'E'+A'BCD'E'+A'BC'D'E'+A'B'C'D'E+A'BCD'E+A'BCDE+B'C'D'E'+A$
 $B'C'D'E+ABCD'E+ABCDE+AB'CDE$
5. What is a KV chart? Explain its usage with an example. [L1][CO4] [12M]
6. Explain about Flow Anomaly Detection with forgiving and un-forgiving graphs [L5][CO4] [12M]
7. What is decision table and how does it is useful in testing? Explain with an example [L1][CO4] [12M]
8. a) Minimize the function $F(A,B,C,D) = \sum m(0,1,2,5,8,9,10)$ using K-Map [L6][CO5] [6M]
 b) Minimize the function $F(A,B,C,D) = \pi M(0,1,2,5,8,9,10)$ using K-Map [L6][CO5] [6M]
9. Write the Applications of Node Reduction Procedure with a suitable example. [L3][CO4] [12M]
10. Explain the steps in Node Reduction Procedure and get a Path Expression from the following flow graph [L5][CO4] [12M]



UNIT –V

1. a) Explain about State testing with its example graph [L5][CO5] [6M]
b) What is Connection Matrix and how Cyclomatic complexity is calculated from it.[L1][CO5] [6M]
2. a) Explain about State testing and its principle. [L5][CO4] [6M]
b) Explain about the advantages and Dis-advantages of State Testing. [L5][CO5] [6M]
3. Write down the steps in Node Reduction Algorithm and solve it with an example [L3][CO5][12M]
4. Explain about the relations of graph matrix and the properties in it. [L5][CO5][12M]
5. Explain about the Properties of Good and Bad State Graphs [L5][CO5][12M]
6. Explain about Graph matrices and its Applications [L5][CO5][12M]
7. Explain about Power of Matrix with its algorithm and explain how a matrix can be reduced from a path expression [L5][CO4][12M]
8. Explain about Matrix of Graph with a 4X4 and reduce it. [L5][CO4][12M]
9. Explain in detail about Transition Bugs [L5][CO5][12M]
10. a) Write in details about Relations and its properties [L3][CO5] [6M]
b) What is FSM. Explain with an example of State table [L1][CO5] [6M]