



SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY :: PUTTUR
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QUESTION BANK (DESCRIPTIVE)

Subject with Code : Software Testing(19MC9123)

Course & Branch: MCA

Year & Sem: II & II

Regulation: R19

UNIT –I

INTRODUCTION OF FLOW GRAPH AND PATH TESTING

1	Define integration testing. List and explain goals of integration testing.	[L1][CO1]	[12M]
2	Explain white-box testing and behavioral testing.	[L2][CO1]	[12M]
3	Discuss the following concepts. a) Model for Testing b) Path Predicates c) Path Sensitizing	[L2][CO1]	[12M]
4	State and explain various dichotomies in software testing.	[L1][CO3]	[12M]
5	Illustrate about requirements, features and functionality bugs.	[L3][CO1]	[12M]
6	(a) Analyze the control and sequence bugs by explaining how they can be caught. (b) Explain achievable paths with suitable examples.	[L4][CO2] [L2][CO2]	[06M] [06M]
7	(a) Describe taxonomy of bugs. (b) Generate the goals for testing and model for testing in software testing.	[L2][CO2] [L5][CO2]	[06M] [06M]
8	Summarize the following. (a) The Consequences of Bugs (b) Testing and Design Style (c) The Role of Models (d) Pesticide Paradox	[L6][CO1]	[12M]
9	(a) Contrast Interface, Integration and System Bugs. (b) Describe phases in tester's mental life and state Complexity Barrier.	[L4][CO1] [L2][CO1]	[06M] [06M]
10	Illustrate the application of Path Testing and Link Markers.	[L3][CO2]	[12M]

UNIT –II**TRANSACTION FLOW TESTING AND DATA FLOW TESTING**

1	(a) Define transaction flow graph and explain with an example. (b) Illustrate all c-uses/some p-uses strategies and discuss all p-uses/some causes strategies.	[L1][CO3] [L3][CO3]	[06M] [06M]
2	(a) Explain births and mergers in a transaction flow testing. (b) Explain various loops with an example.	[L2][CO1] [L2][CO1]	[06M] [06M]
3	Discuss in detail data - flow testing strategies	[L2][CO3]	[12M]
4	Distinguish Control Flow and Transaction flow testing.	[L4][CO3]	[12M]
5	(a) Write about data-flow anomalies. How data flow testing can explore them. (b) State in details about the slicing and dicing. Discuss about static and dynamic program slicing.	[L3][CO1] [L1][CO3]	[06M] [06M]
6	Discriminate the terms Dicing, Data-flow and Debugging.	[L6][CO3]	[12M]
7	Explain data-flow testing with an example. Explain its generalizations and limitations.	[L5][CO6]	[12M]
8	Illustrate the Data-Flow Testing Strategies	[L3][CO3]	[12M]
9	Criticize motivation and assumptions of Data Flow Testing.	[L4][CO1]	[12M]
10	Summarize the transaction-flow testing techniques.	[L6][CO6]	[12M]

UNIT-III**DOMAIN TESTING**

1	Interpret with example the equal - span range and domain compatibility bugs.	[L6][CO1]	[12M]
2	Discuss in detail about testability of Domains.	[L2][CO3]	[12M]
3	Explain in detail domain dimensionality.	[L2][CO3]	[12M]
4	Write about nice - domain. Give an example for nice two - dimensional domain.	[L3][CO2]	[12M]
5	Discuss in detail. a) Linear domain boundaries b) Non-linear domain boundaries c) Complete domain boundaries d) Incomplete domain boundaries	[L2][CO3]	[12M]
6	Examine the various properties related to Ugly-domains.	[L4][CO3]	[12M]
7	State and explain various restrictions at domain testing processes.	[L1][CO2]	[12M]
8	Summarize what is meant by domain testing. Discuss the various applications of domain testing.	[L6][CO5]	[12M]
9	With a neat diagram, explain the schematic representation of domain testing.	[L4][CO4]	[12M]
10	Explain how one-dimensional domains are tested.	[L5][CO3]	[12M]

UNIT-IV**PATHS, PATH PRODUCTS AND REGULAR EXPRESSIONS**

1	Explain Regular Expressions and Flow Anomaly detection.	[L2][CO1]	[12M]
2	Discuss with an example of Huang's theorem.	[L2][CO1]	[12M]
3	Evaluate the reduction procedure algorithm assuming an example.	[L6][CO2]	[12M]
4	Write Short Notes on: a) Distributive Laws b) Absorption Rule c) Loops d) Identity elements	[L3][CO3]	[12M]
5	Analyse about Path Sums and Path Product.	[L4][CO3]	[12M]
6	Illustrate the applications of paths.	[L3][CO6]	[12M]
7	Justify "Whether the predicates are restricted to binary truth-values or not".	[L6][CO3]	[12M]
8	State what is mean by decision tables? Illustrate the applications of decision tables with an example.	[L3][CO1]	[12M]
9	Explain how we can determine paths in domains in Logic based testing.	[L2][CO3]	[12M]
10	Summarize how the boolean expression can be used in test case design.	[L5][CO3]	[12M]

UNIT-V**STATE, STATE GRAPHS AND TRANSITION TESTING**

1	The behaviour of a finite state machine is invariant under all encodings. Justify.	[L6][CO5]	[12M]
2	Write and explain testers' comments about state graphs.	[L5][CO3]	[12M]
3	Analyze the types of bugs that can cause state graphs.	[L4][CO4]	[12M]
4	List the principles of state testing. Discuss its advantages and disadvantages.	[L1][CO3]	[12M]
5	Generate the design guidelines for building finite state machine into code.	[L5][CO4]	[12M]
6	Describe the software implementation issues in state testing.	[L2][CO4]	[12M]
7	Contrast about good state and bad state graphs.	[L4][CO3]	[12M]
8	Explain with an example how to convert specification into state-graph and how to handle contradictions.	[L2][CO2]	[12M]
9	Illustrate the following: a) Transition Bugs Dead States b) State Bugs c) Encoding Bugs	[L3][CO3]	[12M]
10	Describe about the graph matrices and their applications.	[L6][CO6]	[12M]

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