Code No:**R4205C** **R10** **Set No. 1**

IV B.Tech II Semester Regular Examinations, April/May - 2014

SOFTWARE TESTING METHODOLOGIES

(Common to Computer Science & Engineering and Information Technology)

Time : 3 hours **Max. Marks:75**

Answer any Five Questions
All Questions carry equal marks
*****

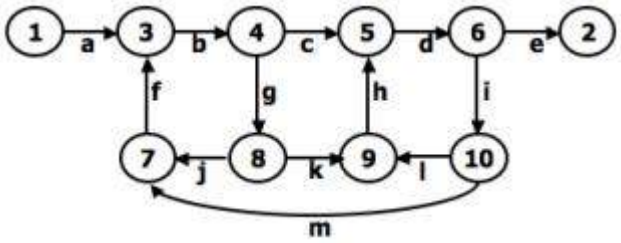
1 Is prevented bug better than a detected and corrected bug? Justify. What is the purpose of Testing? [15]

2 a) What is meant by program's control flow? How is it useful for path testing? [8]
b) State and explain various path selection rules? [7]

3 a) Write a short notes on the following
(i) Slicing & Dicing (ii) Data flow (iii)Debugging [10]
b) Distinguish Control Flow and Transaction flow. [5]

4 a) What is meant by domain testing? Discuss about Nice and Ugly domains. [10]
b) Write a short note on Domain Dimensionality. [5]

5 Apply Reduction procedure algorithm to the following graph



[15]

6 a) What are decision tables? Do you think decision tables as a basis for test case design justify? [8]
b) Define
i) Hardware logic testing
ii) Knowledge based systems [7]

7 a) Explain about good state and bad state graphs. [8]
b) Write in detail about Equivalent States. [7]

8 a) Discuss node reduction algorithm. [10]
b) How can a node reduction optimization be done [5]

Code No:**R4205C** **R10** **Set No. 2**

IV B.Tech II Semester Regular Examinations, April/May - 2014

SOFTWARE TESTING METHODOLOGIES

(Common to Computer Science & Engineering and Information Technology)

Time : 3 hours **Max. Marks: 75**

Answer any Five Questions
All Questions carry equal marks
*****

1 State and Explain various Dichotomies in Software Testing? [15]

2 a) Discuss Traversal marker with an example. [8]

b) Write in detail about heuristic procedure for sensitizing paths [7]

3 a) Define Transaction & Transaction flow Testing with an example. [5]

b) What is meant by transaction flow testing? Discuss its significance. [10]

4 Discuss in detail the Domains and Interface testing. [15]

5 a) Explain Path Sums and Path Product [8]

b) Discuss in brief applications of paths [7]

6 What are the rules for Boolean Algebra? Illustrate the rules to the following expression and explain. [15]

$$N6 = A + \bar{A}\bar{B}\bar{C}$$
$$N8 = (N6)B + \bar{A}B = AB + \bar{A}\bar{B}\bar{C}B + \bar{A}B$$
$$N11 = (N8)C + (N6)\bar{B}C$$
$$N12 = N11 + \bar{A}\bar{B}C$$
$$N2 = N12 + (N8)\bar{C} + (N6)\bar{B}\bar{C}$$

7 Explain the following in connection to State Graphs
a) Inputs and Transitions
b) Outputs
c) State Tables
[15]

8 a) Write a partition algorithm [8]

b) Write about loops in matrix representation [7]

Code No:**R4205C** **R10** **Set No. 3**

IV B.Tech II Semester Regular Examinations, April/May - 2014

SOFTWARE TESTING METHODOLOGIES

(Common to Computer Science & Engineering and Information Technology)

Time : 3 hours **Max. Marks: 75**

Answer any Five Questions

All Questions carry equal marks

*****

1 a) Write in detail about Structural and Data bugs [10]

b) Write a short notes on requirements, features and functionality of bugs [5]

2 a) State and Explain various kinds of predicate blindness with examples? [8]

b) Write in detail about Predicate Interpretation and Predicate Coverage? [7]

3 What is ment by data-flow anomalies? How data flow testing will explore them? [15]

4 a) Explain

i). Linear domain boundaries

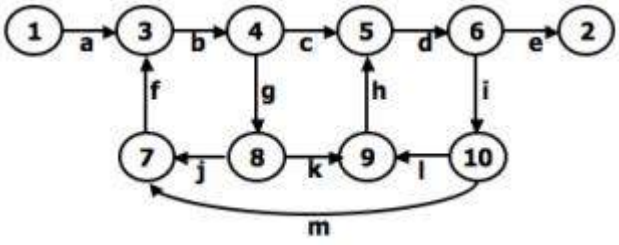
ii). Non linear domain boundaries

iii). Complete domain boundaries

iv). Incomplete domain boundaries [10]

b) With a neat diagram, explain the schematic representation of domain testing. [5]

5 Apply Reduction procedure algorithm to the following graph



[15]

6 a) How can we determine paths in domains in Logic based testing? [8]

b) How can we cast the specifications into sentences of the following form explain?

" IF predicate THEN action" [7]

7 The behavior of a finite state machine is invariant under all encodings. Justify? [15]

8 a) Write about matrix powers and products. [8]

b) Explain cross-term reduction and node term reduction optimization. [7]

Code No:**R4205C** **R10** **Set No. 4**

IV B.Tech II Semester Regular Examinations, April/May - 2014

SOFTWARE TESTING METHODOLOGIES

(Common to Computer Science & Engineering and Information Technology)

Time : 3 hours **Max. Marks: 75**

Answer any Five Questions
All Questions carry equal marks
*****

1	a)	Draw and Explain model of testing. Is complete testing possible?	[8]
	b)	What is the importance and consequences of bugs?	[7]
2	a)	Explain the process of achieving (C1 + C2) Coverage	[8]
	b)	Explain various loops with an example?	[7]
3	a)	What is meant by data flow model? Discuss various components of it?	[8]
	b)	Write about Data flow testing strategies in detail?	[7]
4	a)	Many different bugs can result in domain errors? Explain.	[8]
	b)	Write about domain closure and domain dimensionality.	[7]
5		Explain Regular Expressions and Flow Anomaly detectionwith an example	[15]
6		Reduce the following functions using K-Maps **F(A,B,C,D) = P(4,5,6,7,8,12,13)+d(1,15)**	[15]
7	a)	Explain Unreachable States and Dead States in detail?	[10]
	b)	Define State Testing? What is the impact of Bugs in State Testing	[5]
8	a)	Write about equivalence relation and partial ordering relation	[8]
	b)	.What are graph matrices and write a short note on their applications?	[7]