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16CS/IS72

Seventh Semester B.E. Makeup Examination, January 2020
SOFTWARE TESTING

Time: 3 Hours | Max. Marks: 100

Instructions: *1.* **Answer one full question from each of the units.**

			L	CO	PO	M
		UNIT - I				
1	a.	List and explain IEEE error and fault taxonomy	(2)	(1)	(1)	(06)
	b.	With a neat diagram explain A testing life cycle.	(2)	(1)	(1)	(07)
	c.	With a neat diagram explain levels of testing.	(2)	(1)	(1)	(07)
		OR				
2	a.	Construct the flowchart for traditional triangle program implementation.	(3)	(2)	(2)	(10)
	b.	Explain i)Specification -Based testing ii)Code-based testing.	(2)	(2)	(1)	(10)
		UNIT – II	L	CO	PO	M
3	a.	With a neat sketch summarize currency convertor graphical user interface.	(2)	(2)	(1)	(06)
	b.	Illustrate the usage of boundary value analysis with function of two variables .	(2)	(2)	(2)	(07)
	c.	Explain robustness test cases for a function of two variables.	(2)	(2)	(1)	(07)
		OR				
4	a.	Generate Normal boundary value test cases for triangle problem.(minimum 10)	(3)	(2)	(2)	(10)
	b.	Generate Worst-Case Test cases for NextDate function. (minimum 10)	(3)	(2)	(2)	(10)
		UNIT - III	L	CO	PO	M
5	a.	Design the test cases in a appropriate format for a commission problem using equivalence class testing approach.	(3)	(3)	(2)	(10)
	b.	Explain the decision-table approach for the triangle program to device test cases.	(2)	(2)	(2)	(07)
	c.	List the guidelines and observations of a equivalence class testing.	(1)	(1)	(1)	(03)
		OR				
6	a.	Design the test cases in a appropriate format for a next date function using equivalence class testing approach.	(3)	(3)	(2)	(10)
	b.	Explain the decision-table approach for the commission problem to device test cases.	(2)	(2)	(2)	(07)
	c.	List the guidelines and observations of a decision table approach.	(1)	(1)	(1)	(03)

Note: L (Level), CO (Course Outcome), PO (Programme Outcome), M (Marks)

				L	C
			UNIT - IV		
7	a.	What is DD –path. Explain		(2)	(3
	b.	Identify and explain Graph-based Coverage metrics.		(2)	(2
	c.	Explain i) statement testing ii)DD-path testing.		(2)	(2
			OR		
8	a.	List and explain Define/Use Test coverage metrics.		(2)	(2
	b.	Generate Du-path for the following locks 13 Input(locks) 14 while NOT(locks=-1)'locks=-1 signals end of data 15 Input(stocks,barrels) 16 totalLocks= totalLocks+locks 17 totalStocks= totalStocks+stocks 18 totalBarrels =totalBarrels+barrels 19 Input(locks) 20 Endwhile		(3)	(3)
			UNIT -V	**L**	**CO**
9	a.	Explain good styles for generating slices.		(2)	(2)
	b.	Generate slices for Commission problem. (minimum 10)		(3)	(3)
			OR		
10	a.	Explain Rapps-Weyuker hierarchy of data flow coverage metrics.		(2)	(2)
	b.	Explain slice 1 of commission problem.		(2)	(2)

7th Sem IS & CS - B Set

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16CS/IS72

Seventh Semester B.E. Semester End Examination, Dec./Jan. 2019-20

SOFTWARE TESTING

Time: 3 Hours

Max. Marks: 100

Instructions: 1. *Answer one full question from each unit.*
2. *Assume missing data, if any*

				L	CO	PO	M
			UNIT - I				
1	a.	Define the following terms with respect to testing. i)Fault ii) Incident iii)Test		(1)	(1)	(1)	(03)
	b.	Explain the levels of abstractions and testing in the waterfall model with neat diagram.		(2)	(2)	(1)	(07)
	c.	Explain in detail the functional and structural testing.		(2)	(2)	(1)	(10)
			OR				
2	a.	List out the six logical faults.		(1)	(1)	(1)	(03)
	b.	Explain testing life cycle with a neat diagram.		(2)	(5)	(1)	(07)
	c.	State the definition of triangle problem. Explain the flow chart for the traditional triangle program implementation.		(2)	(2)	(2)	(10)
				L	CO	PO	M
			UNIT – II				
3	a.	Describe the features of SATM System with the appropriate display screens.		(2)	(1)	(2)	(10)
	b.	Explain the boundary value analysis for the followings with graph i) Input domain of a function of two variables ii) BVA test cases for a function of two variables.		(2)	(2)	(2)	(10)
			OR				
4	a.	Explain the boundary value analysis for the followings with graph i) Robustness test cases for a function of two variables ii) Worst case test case for a function of two variables		(2)	(2)	(2)	(10)
	b.	Design the test cases in an appropriate format for a triangle problem using BVA approach.		(3)	(3)	(2)	(05)
	c.	Explain the currency converter program with a proper GUI.		(2)	(2)	(2)	(05)
				L	CO	PO	M
			UNIT - III				
5	a.	Illustrate the Traditional equivalence class test cases with function of two variables.		(2)	(2)	(1)	(07)
	b.	Illustrate with examples Equivalence Class Test Cases for the Commission Problem.		(2)	(2)	(1)	(07)
	c.	Explain weak normal equivalence class test cases.		(2)	(2)	(1)	(06)
			OR				

Note: L (Level),CO (Course Outcome), PO (Programme Outcome), M (Marks)

			L	CO	PO	M
6	a.	Explain the portions of a decision table.	(2)	(2)	(1)	(07)
	b.	Generate test cases for the Triangle problem using decision table.	(3)	(3)	(2)	(07)
	c.	List the guidelines and observations for decision table testing.	(2)	(3)	(1)	(06)

UNIT - IV

			L	CO	PO	M
7	a.	Define D-D path graph. Write a structured triangle program and draw the D-D path graph.	(3)	(3)	(5)	(12)
	b.	Illustrate the McCabe's basis path method using graph theory.	(2)	(2)	(2)	(08)

OR

			L	CO	PO	M
8	a.	Write the binary search algorithm and carry out the basis path testing.	(3)	(3)	(2)	(12)
	b.	List and give the description of structural test coverage metrics of E.F.Miller.	(2)	(2)	(2)	(08)

UNIT -V

			L	CO	PO	M
9	a.	Write a pseudocode for a commission problem and draw corresponding D-D graph.	(3)	(3)	(2)	(12)
	b.	Explain about slice-based testing in a dataflow testing.	(2)	(2)	(1)	(08)

OR

			L	CO	PO	M
10	a.	Write a pseudo code for a commission problem and explain the followings: i) du-path for stocks ii)du-paths for locks iii) du-paths for total Locks.	(3)	(3)	(2)	(12)
	b.	List the guidelines and observations of a data flow testing method.	(2)	(2)	(1)	(08)

7th CS

Note: L (Level),CO (Course Outcome), PO (Programme Outcome), M (Marks)

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15CS/IS72

Seventh Semester B.E. Semester End Examination, Dec/Jan 2018-19

SOFTWARE TESTING

Time: 3 Hours

Max. Marks: 100

Instructions:
1. *Unit –IV and V are compulsory Units*
2. *Attempt any full question from the remaining units.*
3. *Draw the flow diagram and graph wherever required*
4. *Each question carry 20 marks*

UNIT - I

			L	CO	PO	M
1	a.	Draw the life cycle model for testing. Define the following (i)Error (ii) Fault (iii)Failure (iv) Incident	(2)	(1)	(1)	(05)
	b.	Discuss code based testing and specification based testing methods.	(2)	(1)	(2)	(05)
	c.	Explain the improved version of the triangle problem statement in detail. Write the pseudo code for same problem.	(2,3)	(1)	(2)	(10)

OR

2	a.	Explain the SATM System in detail.	(2)	(1)	(2)	(05)
	b.	Discuss in detail the working of Garage Door Opener.	(2)	(1)	(2)	(05)
	c.	Explain the NextDate Function in detail. Draw the flowchart for the same problem.	(2,3)	(1)	(2)	(10)

UNIT – II

			L	CO	PO	M
3	a.	Discuss the various levels of software testing for embedded device like SATM (Simple Automatic Teller Machine) .	(2)	(3)	(2)	(10)
	b.	Discuss with graph the usage of boundary value analysis with function of two variables. Highlight the limitations of Boundary Value Analysis.	(2)	(1)	(2)	(10)

OR

4	a.	Discuss in brief , with suitable examples (i) Special Value Testing (ii) Random Testing	(2)	(2)	(2)	(05)
	b.	Design test case table for Boundary Value Analysis of the Triangle problem.	(3)	(3)	(2)	(05)
	c.	Discuss the following with graph i. Robustness Testing ii. Worst case Testing	(2)	(1)	(1)	10

UNIT - III

			L	CO	PO	M
5	a.	Explain Weak Normal Equivalence Class Testing in brief.	(2)	(2)	(1)	(05)
	b.	Explain Strong Normal Equivalence Class Testing in brief.	(2)	(2)	(1)	(05)
	c.	Identify Equivalence Class Test Cases for the Triangle Problem.	(4)	(2)	(2)	(10)

Note: L (Level), CO (Course Outcome), PO (Programme Outcome), M (Marks)

OR

6	a.	List observations and guidelines for equivalence class testing.	(1)	(3)	(2)	(08)
	b.	Explain decision tables technique for the triangle problem.	(2)	(2)	(3)	(12)
			L	CO	PO	M

UNIT - IV

7	a.	Define DD-path. Design and develop the Pseudo code for the Triangle program and Draw the corresponding DD-graph.	(3)	(3)	(5)	(12)
	b.	Explain Basis path testing with an example.	(2)	(1)	(1)	(04)
	c.	Define predicate node, du-paths and dc-paths.	(2)	(1)	(1)	(04)
			L	CO	PO	M

UNIT -V

8	a.	Briefly explain Data flow testing. And define the following (i) defining node (ii) usage node (iii) predicate use (iv) clear path	(1,2)	(2)	(2)	(10)
	b.	Draw DD-path graph for commission problem. Derive the statement fragments associated with DD-paths for the same.	(3)	(2)	(3)	(10)

Note: L (Level), CO (Course Outcome), PO (Programme Outcome), M (Marks)

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15CS/IS72

Seventh Semester B.E. Makeup Examination, January 2019

SOFTWARE TESTING

Time: 3 Hours

Max. Marks: 100

Instructions: 1. *UNIT IV and UNIT V are compulsory*
2. *Answer One complete question from remaining UNITS*
3. *Assume the missing data if any*

UNIT - I

			L	CO	PO	M
1	a.	Explain why do we test software? Discuss its importance in Software Development Life Cycle (SDLC)?	(2)	(1)	(1)	(04)
	b.	Discuss testing life cycle with a diagram.	(2)	(5)	(1)	(08)
	c.	Sketch the flowchart for traditional triangle program implementation	(3)	(3)	(2)	(08)

OR

2	a.	Explain with an example Error, Fault and Failure.	(2)	(1)	(1)	(04)
	b.	Discuss two fundamental approaches which are used to identify test cases.	(2)	(1)	(1)	(06)
	c.	Design the pseudo code for the commission calculation problem where the salesperson has to sell minimum of 5 items of each type (Locks, Stocks and Barrels) to earn the commission. The company is able to manufacture 40 Locks, 70 Stocks and 90 Barrels. Commission 10% is to be calculated for the first total sales of $3500, 15% commission is to be calculated for the next total sale of $1500, 20% commission is to be calculated for the total sale greater than $5000. The price of Lock is $25, Stock is $30 and Barrel is $35. Also analyze it from the perspective of software testing	(5)	(2)	(2)	(10)

UNIT – II

			L	CO	PO	M
3	a.	Explain normal boundary value testing with function of two variables. And infer the limitations for normal boundary value testing.	(2)	(2)	(2)	(08)
	b.	Explain Robust Boundary Value Testing and Worst-Case Boundary Value Testing. Compute a formula for the number of robust worst-case test cases for a function of n variables.	(2,4)	(2)	(2)	(12)

OR

4	a.	Identify any 5 Test Cases of the Triangle Problem for (i) Normal Boundary Value Test (ii) Worst-Case Boundary Value test.	(1)	(2)	(2)	(10)
	b.	Discuss in brief , with suitable examples (i) Special Value Testing (ii) Random Testing	(2)	(2)	(2)	(10)

UNIT – III

			L	CO	PO	M
5	a.	Explain the following with graph. i. Weak Normal Equivalence class Testing and Strong Normal Equivalence Class Testing. ii. Weak Robust Equivalence class Testing and Strong Robust Equivalence Class Testing.	(3)	(4)	(5)	(10)
	b.	Discuss and Design the decision table for the Triangle Problem.	(3)	(3)	(2)	(10)

Note: L (Level), CO (Course Outcome), PO (Programme Outcome), M (Marks)

OR

6	a.	Explain the concept of Decision Table Based Testing.	(2)	(1)	(1)	(04)
	b.	Discuss the guidelines and observations of Equivalence Class Testing. Write Equivalence Classes for the two variables item code which ranges from 99-200 and item_quantity which ranges from 1-100	(3)	(3)	(5)	(08)
	c.	Design Weak Robust and Strong Robust equivalence class test case table for the NextDate Function.	(3)	(4)	(5)	(08)
			L	CO	PO	M

UNIT - IV

7	a.	Derive the program graphs for programming constructs (i) if then else (ii) switch (iii) while (iv) do while.	(3)	(2)	(3)	(08)
	b.	Explain DD path in brief. Derive DD-path graph for triangle program.	(2,3)	(2)	(3)	(12)
			L	CO	PO	M

UNIT - V

8	a.	Explain Data flow testing.	(2)	(1)	(1)	(04)
	b.	Explain Slice based Testing. Write the guidelines and observations of Slice based testing.	(2)	(1)	(1)	(08)
	c.	Discuss du-Path Test Coverage Metrics with diagram.	(3)	(1)	(2)	(08)

Note: L (Level), CO (Course Outcome), PO (Programme Outcome), M (Marks)

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10CS842

Eighth Semester B.E. Degree Examination, June/July 2016
Software Testing

Time: 3 hrs. Max. Marks:100

Note: *Answer FIVE full questions, selecting at least TWO questions from each part.*

PART – A

1 a. With a neat diagram of a testing life cycle explain following : (10 Marks)
i) Fault ii) Failure iii) Incident iv) Test case
b. With a neat sketch, explain the features of 'The SATM' system. (10 Marks)

2 a. Explain the following : (08 Marks)
i) Robustness testing ii) Worst – case testing.
b. Describe the equivalence class test cases for 'The triangle problem'. (12 Marks)

3 a. Define the program graph. Write a structured triangle program and the program graph. (10 Marks)
b. For the program graph G(P) and a set of program variable, define the terms 'Defining node of a variable', 'Definition use path with respect to a variable 'All-Defs criterion', 'All C-uses/some p-used and 'All du-paths criterion'. (10 Marks)

4 a. Briefly explain the specification – based life – cycle models in levels of testing. (10 Marks)
b. What is decomposition based integration? Define the different types of decomposition based integration. (10 Marks)

PART – B

5 a. Briefly explain the basic concepts for requirements specification in system testing. (10 Marks)
b. Write a short note on: 'taxonomy of interactions' and 'Client/ Server testing'. (10 Marks)

6 a. List and explain any four principles that characterize various approaches and techniques for analysis and testing. (10 Marks)
b. Explain how does the goals of quality process improvement can be accomplished for analysis and testing of a software. (10 Marks)

7 a. What is fault – based testing? Define the terminologies 'Program location' and 'Alternate expression'. (06 Marks)
b. Define scaffolding? Mention the purposes of scaffolding. (04 Marks)
c. What is a test oracle? With a neat diagram explain the comparison based test oracle. (10 Marks)

8 a. Discuss the risks generic to process management and risks specific to quality management with a suitable example. (10 Marks)
b. Discuss the basic elements of analysis and test plan. (10 Marks)

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