Code No: R1632054 **R16** SET - 1

III B. Tech II Semester Supplementary Examinations, November -2019

SOFTWARE TESTING METHODOLOGIES

(**Common to** Computer Science and Engineering, Information Technology)

Time: 3 hours Max. Marks: 70

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B)**
2. Answer **ALL** the question in **Part-A**
3. Answer any **FOUR** Questions from **Part-B**

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PART –A (14 Marks)

1.	a)	Differentiate Beta testing from Alpha testing.	[2M]
	b)	Define Slicing.	[2M]
	c)	Compare open and closed domains.	[2M]
	d)	What is the possibility of getting unreachable states?	[3M]
	e)	What is the role of predicate in path expression?	[3M]
	f)	At what level non functional requirement testing is performed?	[2M]

PART –B (56 Marks)

2.	a)	List out various types of Bugs possible in executing a program and discuss their remedies.	[7M]
	b)	Describe the role of control flow graph in testing a software.	[7M]
3.	a)	Write about the components of transaction flow testing.	[7M]
	b)	What are the differences between static and dynamic anomaly detection? Explain.	[7M]
4.	a)	Relate Bug assumption with domain testing.	[7M]
	b)	Discuss the importance of regular expression in software testing.	[7M]
5.	a)	Represent the path expression: ab(cde)*(f+kba)*(a+acd)*(g+c)* using graph.	[7M]
	b)	How decision tables will be helpful in logic based testing gives various components of it? Explain.	[7M]
6.	a)	Demonstrate cyclomatic complexity with an example.	[7M]
	b)	How to identify good and bad state graphs? Explain.	[7M]
7.	a)	Explain the features of test automation. Give its merits and demerits over manual testing.	[7M]
	b)	How to record test and set check points in win runner? Explain.	[7M]

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Code No: R1632054 **R16** SET - 1

III B. Tech II Semester Regular Examinations, April/May- 2019

SOFTWARE TESTING METHODOLOGIES

(**Common to** Computer Science and Engineering, Information Technology)

Time: 3 hours Max. Marks: 70

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B)**
2. Answer **ALL** the question in **Part-A**
3. Answer any **FOUR** Questions from **Part-B**

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PART –A

1.	a)	What are integration bugs?	[2M]
	b)	What is meant by a program slice?	[2M]
	c)	What is Floating-Point Zero Check?	[2M]
	d)	Write short notes on delimiter errors.	[3M]
	e)	What is dead state?	[3M]
	f)	Write the benefits of automated testing.	[2M]

PART -B

2.	a)	What is control flow graph? Explain how to generate control flow graph with an example.	[7M]
	b)	Explain different types of testing and when they need to be carried out.	[7M]
3.	a)	What is data flow model? Explain the various components of data flow model.	[7M]
	b)	Write about static versus dynamic anomaly detection.	[7M]
4.	a)	Write the role of path expression and path predicates in testing.	[7M]
	b)	State and explain various restrictions at domain testing processes.	[7M]
5.	a)	Minimize the following function using KV charts: F(A,B,C,D) = P(1,2,3,8,9,10,11,14) + Pd(7,15)	[7M]
	b)	Write about Test Case Design process.	[7M]
6.	a)	What are the principles of state testing? Discuss advantages and disadvantages.	[7M]
	b)	What are the matrix operations used in tool building? Give their significance.	[7M]
7.	a)	Explain the different windows that are available in WinRunner and their usage in testing applications.	[7M]
	b)	What is checkpoint? Describe the role of checkpoints in testing.	[7M]

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Code No: R1632054 **R16** SET - 2

III B. Tech II Semester Regular Examinations, April/May- 2019

SOFTWARE TESTING METHODOLOGIES

(**Common to** Computer Science and Engineering, Information Technology)

Time: 3 hours Max. Marks: 70

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B)**
2. Answer **ALL** the question in **Part-A**
3. Answer any **FOUR** Questions from **Part-B**

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PART –A

1.	a)	What is integration testing?	[2M]
	b)	List the steps involved in transaction for an online information retrieval system.	[2M]
	c)	What are simple domain boundaries?	[2M]
	d)	Write about categories of string errors.	[3M]
	e)	What is unreachable state?	[3M]
	f)	What are factors to be considered before automate testing?	[2M]

PART -B

2.	a)	Explain the model of testing with neat sketch.	[7M]
	b)	How to go about selecting paths for testing? Explain with an example.	[7M]
3.	a)	What is meant by transaction flow testing? Explain it with an example.	[7M]
	b)	Explain data-flow testing with an example. Give its generalizations and limitations.	[7M]
4.	a)	What is bug assumption? Elaborate different bugs that can result in domain errors.	[7M]
	b)	Explain the important properties of boundaries. How they will be used in identifying test cases?	[7M]
5.	a)	Use KV chart to minimize F= B'C'D'+A'B'C'D'+ABC'D+A'BCD+ABD+B'CD'+A'BC'D	[7M]
	b)	Explain in detail problems related to delimiter in path expressions.	[7M]
6.	a)	Write short notes on: (i) Transition Bugs (ii) Dead States	[7M]
	b)	Discuss node reduction algorithm with suitable example.	[7M]
7.	a)	Explain different menus and toolbars that exist within WinRunner and the functionality that these items provide.	[7M]
	b)	How do analyze the results provided by WinRunner and load runner tools? Explain.	[7M]

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Code No: R1632054 **R16** SET - 3

III B. Tech II Semester Regular Examinations, April/May- 2019

SOFTWARE TESTING METHODOLOGIES

(**Common to** Computer Science and Engineering, Information Technology)

Time: 3 hours Max. Marks: 70

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B)**
2. Answer **ALL** the question in **Part-A**
3. Answer any **FOUR** Questions from **Part-B**

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PART –A

1.	a)	What is component testing?	[2M]
	b)	Define dynamic slicing.	[2M]
	c)	What is path sum?	[2M]
	d)	Write about BNF operators.	[3M]
	e)	What are equivalent states? Give an example.	[3M]
	f)	Describe the steps involved in manual testing.	[2M]

PART -B

2.	a)	Write about remedies for test bugs.	[7M]
	b)	What are the different kinds of loops? Explain the different test cases for a single ‘for’ loop.	[7M]
3.	a)	Explain in detail the transaction flow testing techniques.	[7M]
	b)	What are data-flow anomalies? Write about data flow anomalies that may occur in a flow graph.	[7M]
4.	a)	Explain with example node-by-node removal algorithm.	[7M]
	b)	Explain various properties related to Ugly-domains.	[7M]
5.	a)	Demonstrate reduction of the following functions using KV chart: $F(A, B, C, D) = \pi (4,5,6,7,8,12,13) + d(1,15)$	[7M]
	b)	Write about (i) Execution Automation (ii) Design Automation	[7M]
6.	a)	What are the software implementation issues in state testing? Explain how to handle them.	[7M]
	b)	Write about equivalence relation and partial ordering relation.	[7M]
7.	a)	Explain the steps involved in automated testing process.	[7M]
	b)	Explain the features of Jmeter Testing environment.	[7M]

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Code No: R1632054 **R16** SET - 4

III B. Tech II Semester Regular Examinations, April/May- 2019

SOFTWARE TESTING METHODOLOGIES

(**Common to** Computer Science and Engineering, Information Technology)

Time: 3 hours Max. Marks: 70

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B)**
2. Answer **ALL** the question in **Part-A**
3. Answer any **FOUR** Questions from **Part-B**

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PART –A

1.	a)	What is correction cost?	[2M]
	b)	What is data flow testing?	[2M]
	c)	What is ambiguous domain and over specified domain?	[2M]
	d)	List the steps in syntax testing.	[3M]
	e)	How to identify a state? List appropriate testing tools for them.	[3M]
	f)	What are different types of software applications?	[2M]

PART -B

2.	a)	Explain the consequences of bugs.	[7M]
	b)	Write about path-selection and path-testing criteria.	[7M]
3.	a)	Illustrate the differences between Control Flow and Transaction flow.	[7M]
	b)	Explain the terms slicing, dicing, data flow and debugging with reference to testing.	[7M]
4.	a)	Discuss Path Sums and Path Product with examples.	[7M]
	b)	Discuss with example the equal - span range/Doman compatibility bugs.	[7M]
5.	a)	Illustrate the following functions using K-Maps F(A,B,C,D) = P(4,5,6,7,8,12,13) + d(1,15)	[7M]
	b)	Explain the test case design for ATM example.	[7M]
6.	a)	Explain about good state and bad state graphs. How to handle bad state graphs.	[7M]
	b)	How can a relation be represented and what are the properties of relations?	[7M]
7.	a)	Explain the process to be followed when doing testing using WinRunner.	[7M]
	b)	Explain about Rapid Test Script Wizard. How will it assist the tester?	[7M]

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