SRM VALLIAMMAI ENGINEERING COLLEGE

(An Autonomous Institution) SRM Nagar, Kattankulathur – 603 203

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

QUESTION BANK



VI SEMESTER

1908014- SOFTWARE TESTING

Regulation - 2019

Academic Year 2022–2023 (Even Semester)

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SUBJECT CODE & NAME: 1908014- - SOFTWARE TESTING

SEM / YEAR: VI / III

UNIT I - INTRODUCTION

Testing as an Engineering Activity – Testing as a Process – Testing Maturity Model -Testing axioms – Basic definitions – Software Testing Principles – The Tester's Role in a Software Development Organization – Origins of Defects – Cost of defects – Defect Classes – The Defect Repository and Test Design – Defect Examples – Developer/Tester Support of Developing a Defect Repository

PART - A

Q.no	Questions	BTL	Competence
1	List out the levels of the testing maturity model.	BTL-1	Remembering
2	Define fault and failure.	BTL-1	Remembering
3	What are the sources of defects?	BTL-2	Understanding
4	Mention the objective of software testing.	BTL-1	Remembering
5	Differentiate verification and validation.	BTL-4	Analyzing
6	Mention the role of process in software quality.	BTL-4	Analyzing
7	Point out the role of defect Repository.	BTL-4	Analyzing
8	How would you classify the types in defect classes?	BTL-3	Applying
9	Tell about test, test Oracle and Test Bed.	BTL-1	Remembering
10	List the members of the critical groups in testing process.	BTL-2	Understanding
11	List the element of the engineering disciplines.	BTL-1	Remembering
12	Compare the process of testing and debugging.	BTL-5	Evaluating
13	What is meant by feature defects?	BTL-2	Understanding
14	Why test cases should be developed for both valid and invalid inputs?	BTL-5	Evaluating
15	Mention the role of test engineer in software development organization.	BTL-2	Understanding
16	How would formulate the cost of defect?	BTL-6	Creating
17	Explain some of the quality metric attributes.	BTL-3	Applying
18	What is a defect? Give example?	BTL-1	Remembering
19	Summarize the major components in software development process.	BTL-3	Applying
20	Error Vs Defect Vs Failure. Discuss	BTL-4	Analyzing
21	Differentiate between testing and debugging.	BTL-2	Understanding
22	List out the Software testing axioms.	BTL-3	Applying
23	Write short notes on Test, Test Set, and Test Suite.	BTL-5	Evaluating
24	Explain the work of SQA group.	BTL-6	Creating

PART-R

PART-B				
Q.No	Questions	BTL	Competence	
1	Elaborate on the principles of software testing. (13)	BTL-4	Analyzing	
2	(a) Describe about the components of software development process. (7)(b) List and discuss the technological developments that are causing	BTL-1	Remembering	
3	organizations to revise their approach to testing.(6) Write short notes on the list given below (a) Cost of defect.(7) (b) Elements of Engineering disciplines(6)	BTL-5	Evaluating	
4	(a) Discuss in detail about the testing axioms.(7) (b) Explain defect classification in detail.(6)	BTL-2	Understanding	
5	 (a) Write short notes on Origins of defects.(7) (b) Explain the various origins of defects. Explain the major classes of defects in the software artifacts.(6) 	BTL-5	Evaluating	
6	Short notes on (a) Precision and accuracy.(7) (b) Verification and validation.(6)	BTL-2	Understanding	
7	(a) Explain in detail about defect repository.(7)(b) Analyze the Role of process in Software quality.(6)	BTL-4	Analyzing	
8	Why it is important to meticulously inspect test result and discover the drawbacks incase if you fail to inspect? Illustrate with example? (13)	BTL-3	Applying	
9	Give an Overview of the Testing Maturity Model (TMM) & the test related activities that should be done for V-model architecture. (13)	BTL-4	Analyzing	
10	(a) Describe the various software testing activities.(7)(b) Define correctness, reliability, integrity, interoperability.Discuss how these are related to testing.(6)	BTL-1	Remembering	
11	(a) Why it is necessary to develop test cases for both valid and invalid input condition?(7)(b) How important to document a product? How will you test requirement and design document?(6)	BTL-6	Creating	
12	Compare and contrast terms errors faults and failures using suitable examples. (13)	BTL-2	Understanding	
13	Write the major needs of testing and model of testing in details. (13)	BTL-1	Remembering	
14	Explain in detail processing and monitoring of the defects with defect repository?(13)	BTL-1	Remembering	
15	Elaborate on the principles of software testing and summarize the tester role in software development organization. (13)	BTL-2	Understanding	
16	Discuss the steps to be taken to monitor the defects with the help of defect repository? (13)	BTL-3	Applying	
17	Explain in detail about different Testing Maturity Model (TMM) levels. (13)	BTL-3	Applying	
	PART-C			
Q.No	Questions	BTL	Competence	

Explain in detail how developer / tester support to develop a defect repository? (15)

BTL-6

Creating

2	Discuss the tester role in software development organization. (15)	BTL-6	Creating
3	Suppose you are testing defect coin problem artifacts, Identify the causes of various defects. What steps could have been taken to prevent the various classes of defects? (15)	BTL-5	Evaluating
4	Give the internal structure of TMM and explain about its maturity goals at each level. (15)	BTL-5	Evaluating
5	Explain in detail about various levels of Testing or Phases of testing and also explain What is alpha and beta testing? (15)	BTL-5	Evaluating

UNIT II - TEST CASE DESIGN STRATEGIES

Test case Design Strategies – Using Black Box Approach to Test Case Design – Boundary Value Analysis – Equivalence Class Partitioning – State based testing – Cause-effect graphing – Compatibility testing – use documentation testing – domain testing – Random Testing – Requirements based testing – Using White Box Approach to Test design – Test Adequacy Criteria – static testing vs. structural testing code functional testing – Coverage and Control Flow Graphs – Covering Code Logic – Paths – code complexity testing – Additional White box testing approaches – Evaluating Test Adequacy Criteria.

PART - A

Q.No	Questions	BTL	Competence
1	List the advantages of Equivalence class partitioning.	BTL-1	Remembering
2	Show the need of code functional testing in test case design.	BTL-3	Applying
3	Create the equivalence classes in testing the program for quadratic	BTL-6	Creating
	equation solution.		
4	Write the two basic testing strategies used to design test cases.	BTL-5	Evaluating
5	Define COTS components.	BTL-2	Understanding
6	List some of the advantages of documentation testing and domain	BTL-1	Remembering
	testing.		
7	Compare black box and white box testing.	BTL-2	Understanding
8	Tell the steps involved in developing test cases with a cause- and-	BTL-1	Remembering
	effect graph.		
9	Tabulate the black box methods and knowledge sources.	BTL-1	Remembering
10	Can you classify the compatibility testing and explain?	BTL-4	Analyzing
11	How mutation testing helpful in testing the software?	BTL-5	Evaluating
12	Define code complexity testing. How it is related to testing?	BTL-3	Applying
13	Point out the difference of static testing from structural testing.	BTL-4	Analyzing
14	What do you meant by test adequacy criteria?	BTL-2	Understanding
15	List white box knowledge source and testing methods.	BTL-1	Remembering
16	What is boundary value analysis?	BTL-1	Remembering
17	Discuss about Desk checking.	BTL-2	Understanding
18	Sketch the control flow graph for an ATM withdrawal system.	BTL-6	Creating
19	How would you calculate Cyclomatic complexity?	BTL-4	Analyzing
20	What are the factors affecting less than 100% degree of coverage.	BTL-4	Analyzing
21	What is the need for loop testing?	BTL-2	Understanding
22	What are the logic elements analyzed for coverage analysis?	BTL-3	Applying
23	Write short notes on Random testing and Equivalence class portioning	BTL-3	Applying

24	Is it possible to achieve 100 automation?	BTL-5	Evaluating
	PART-B		
Q.No	Questions	BTL	Competence
1	Explain about the following methods of black box testing with	BTL-4	Analyzing
	example		
	(a) Equivalence class partitioning(7)		
	(b) Boundary value analysis(6)	200	
2	Write a note on the following	BTL-2	Understanding
	(a) Positive and Negative Testing (7)		
3	(b) Decision Tables.(6) Write short notes on the list given below	BTL-1	Damamharina
3	(a) Compatibility testing.(7)	DIL-I	Remembering
	(a) Companionity testing.(7) (b) Documentation testing.(6)		
4	With suitable example describe how cause-and-effect graphing and	BTL-1	Remembering
•	state transition testing is done. (13)	DIL 1	remembering
5	What approach would you use for testing strategies? Explain in detail.	BTL-3	Applying
-	Show how black box testing is performed in COTS components? (13)	5	FF 76
6	Describe the following	BTL-3	Applying
	(a) State based testing(7)		
	(b) Domain testing(6)		
7	What inference can you make from random testing, requirement based	BTL-4	Analyzing
	testing and domain testing explains? (13)		
8	Explain the various white box techniques with suitable test cases. (13)	BTL-4	Analyzing
9	Summarize the role of Oaths in white box testing and explain any two	BTL-5	Evaluating
	white box testing design. (13)		C
10	Explain the various axioms that allow testers to evaluate Test	BTL-5	Evaluating
	Adequacy Criteria. (13)		
11	(a) Outline the steps in constructing a control flow graph and	BTL-2	Understanding
	computing Cyclomatic complexity with an example. (7)		
1.2	(b) Explain about state transition testing.(6)	DEL 4	** 1
12	(a) Discuss in detail about code coverage testing. (7)	BTL-2	Understanding
1.2	(b) Explain various white box testing with suitable test cases. (6)	DTI (Constitute
13	Explain the significance of Control flow graph & Cyclomatic complexity in white box testing with a pseudo code for sum of positive numbers. Also	BTL-6	Creating
	mention the independent paths with test cases.(13)		
4.1		D	<u> </u>
14	Discuss in detail about static testing and structural testing. Also	BTL-1	Remembering
1.5	write the difference between these testing concepts.(13)	DTI 2	I Indonetas 1'
15	Suppose you are testing defect coin problem artefacts. Identify	BTL-2	Understanding
	the causes of various defects. What steps could have been taken to prevent the various classes of defects. (13)		
16	How data flow testing aid in identifying defects in variable	BTL-1	Remembering
10	declaration and its use. (13)	D1L-1	Kemembering
17	Explain mutation testing with an example. (13)	BTL-3	Applying
17	PART-C	BIL 3	- ippiying
() NT	0	Dar	Comment
Q.No		BTL 6	Creating
1	Demonstrate the various black box test cases using Equivalence class partitioning and boundary values analysis to test a module for payroll System. (15)	BTL-6	Creating

2	Explain how the covering code logic and paths are used in the role of	BTL-5	Evaluating
	white box design with suitable example. (15)		
3	Demonstrate the various black box test cases using Equivalence class	BTL-6	Creating
	partitioning and boundary values analysis to test a module for ATM		
	system. (15)		
4	Explain the basis path testing. State the principles of control flow	BTL-5	Evaluating
	graph and cyclomatic complexity. What are the formulas used in		
	cyclomatic complexity? (15)		
5	Demonstrate the static testing and structural testing in a Module of an	BTL-6	Creating
	Airline Booking System. (15)		

UNIT III - LEVELS OF TESTING

The need for Levels of Testing – Unit Test – Unit Test Planning – Designing the Unit Tests – The Test Harness – Running the Unit tests and Recording results – Integration tests – Designing Integration Tests – Integration Test Planning – Scenario testing – Defect bash elimination System Testing – Acceptance testing – Performance testing – Regression Testing – Internationalization testing – Ad-hoc testing – Alpha, Beta Tests – Testing OO systems – Usability and Accessibility testing – Configuration testing – Compatibility testing – Testing the documentation – Website testing.

PART - A

Q.No	Questions	BTL	Competence	
1	Give the most effective ad hoc testing techniques.		Understanding	
2	What is security testing? Give some examples.	BTL-2	Understanding	
3	Show the approaches you use to do website testing.	BTL-3	Applying	
4	Can you judge on the reason for system testing?	BTL-5	Evaluating	
5	List out the objectives of configuration testing.	BTL-1	Remembering	
6	Analyze on when to do the regression testing and smoke testing?	BTL-4	Analyzing	
7	Compare functional Testing from non-functional Testing.	BTL-4	Analyzing	
8	Define unit Test. Give example.	BTL-1	Remembering	
9	Show the test cases applied for acceptance testing.	BTL-3	Applying	
10	List out the types of system Testing	BTL-5	Evaluating	
11	Compare and contrast Alpha and Beta Testing.	BTL-2	Understanding	
12	How could you classify the methodology for performance testing?	BTL-4	Analyzing	
13	Can you prepare the role of test data generators in testing object oriented system?	BTL-6	Creating	
14	Classify the activities of defect bash.	BTL-3	Applying	
15	Define test harness and Why is it important to design test harness for testing?	BTL-4	Analyzing	
16	List the levels of Testing.	BTL-1	Remembering	
17	Summarize the importance to design a test harness for reusability.	BTL-5	Evaluating	
18	What is the advantage of Bottom up integration?	BTL-2	Understanding	
19	Based on what plan the scenario testing is done?	BTL-6	Creating	
20	What is stress testing?	BTL-2	Understanding	
21	What do you mean by load generator?	BTL-1	Remembering	
22	List the issues in class testing	BTL-1	Remembering	
23	What is AD HOC TESTING?	BTL-1	Remembering	
24	Is compatibility testing functional or nonfunctional?	BTL-3	Applying	
PART-B				

PART-B

Q.No	Questions	BTL	Competence

1	Explain the different integration testing strategies for procedures and functions with suitable diagrams. (13)	BTL-4	Analyzing
2	How would you identify the hardware and software for configuration testing and Explain what testing techniques applied for website testing?(13)		
3	State unit test and describe about planning and designing of unit test.(13)	BTL-2	Understanding
4	Explain the various units in a program considered for unit testing. (13)	BTL-4	Analyzing
5	Differentiate alpha testing from beta testing and discuss in detail about the phases in which alpha and beta testing is done, In what way it is related to milestone and deliverable. (13)	BTL-4	Analyzing
6	Summarize the issues that arise in class testing and explain about compatibility and documentation testing. (13)	BTL-2	Understanding
7	Determine and prepare the test cases for acceptance, usability and accessibility testing.(13)	BTL-6	Creating
8	(a) Describe in detail about the internationalization testing and its designing and planning. (7)(b) Present an outline of testing object oriented systems.(6)	BTL-2	Understanding
9	Discuss the need for various levels of testing. (13)	BTL-1	Remembering
10	How would you classify integration testing and system testing? (13)	BTL-3	Applying
11	Describe in detail about scenario testing and performance testing. (13)	BTL-1	Remembering
12	 (a) Why is it so important to design a test harness for reusability and show the approach you used for running the unit test and recording the results? (7) (b) Tabulate the key difference in integrating procedural oriented system as compared to object oriented systems. (6) 	BTL-3	Applying
13	(a) Describe "The Class as a Testable Unit" in detail. (7) (b) Explain the planning, design and execution of unit tests. (6)	BTL-1	Remembering
14	(a) Explain about the various types of System Testing and its importance with example. (7)(b) What is regression testing? Outline the issues to be addressed for developing test cases to perform regression testing. (6)	BTL-2	Understanding
15	Explain the black box testing techniques with example. (13)	BTL-1	Remembering
16	Explain ad hoc testing and Smoke testing techniques with an Example. (13)	BTL-3	Applying
17	Explain how test cases are applied for acceptance testing in a Website designing project. (13)	BTL-5	Evaluating
	PART-C		

Q.No	Questions	BTL	Competence	
1	(a) Write the importance of security testing and explain the consequences	BTL-5	Evaluating	
	of security breaches, also write the various areas which have to be focused			
	on during security testing. (8)			
	(b) State the need for integration testing in procedural code. (7)			

2	Case Study: Several kinds of tests for a web application. Abstract: A UK based company entrusted us to test this project. It's a web application for government to collect data and calculate them to prioritize all the tasks. Description: This client is from Hertfordshirts in UK, the project is an application for the government. In fact it includes two parts: web site for data collection and presentation purpose, in parallel a windows application for administration purpose. Here the task is ensuring the quality of the web application, includes many aspects, such as function correctness performance acceptance, UI appropriateness and so on. Moreover, for testing function, we had to use the windows application to edit user's services and other data. The client only gave us the software requirement specification and the applications tested, there was not any test plan, test strategy, test cases, even test termination criterion. On the one hand, we had to spend much time in communicating with client to make clearly about some important points; on the other hand we had to get familiar with the application via operating it and reading	BTL-6	Creating
	requirements. Then, how to improve the efficiency of regression test? (15)		
3	(a) What is security testing? Explain its importance. (8)(b) List the tasks that must be performed by the developer or tested during the preparation fort unit testing.(7)	BTL-5	Evaluating
4	Describe the top-down and bottom-up approaches in integration testing discuss about the merits and limitation of these approaches.(15)	BTL-5	Evaluating
5	Suppose you are developing an online system for a specific vendor of the electronic equipment with all the necessary features to run the Shop. Write down a detailed test plan by including the necessary components.(15)	BTL-6	Creating

UNIT IV - TEST MANAGEMENT

People and organizational issues in testing – Organization structures for testing teams – testing services – Test Planning – Test Plan Components – Test Plan Attachments – Locating Test Items – test management – test process – Reporting Test Results – Introducing the test specialist – Skills needed by a test specialist

- Building a Testing Group-The Structure of Testing Group- .The Technical Training Program.

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Q.no	Questions	BTL	Competence
1	Mention the duties of component-wise testing teams.	BTL-1	Remembering
2	Analyze the requirement in forming the test group.	BTL-4	Analyzing
3	Analyze on few typical resources that are considered when test	BTL-4	Analyzing
	planning.		, c
4	Give the need of test plan components	BTL-2	Understanding
5	Point out the five stages in a test plan process.	BTL-4	Analyzing
6	Classify various approaches to test cost estimation.	BTL-3	Applying
7	What is the function of Test Transmittal report or Locating Test Items?	BTL-1	Remembering
8	Can you make a distinction between structures of single- product	BTL-2	Understanding
	companies and multi-product?		
9	What is the need of Test incident Report?	BTL-3	Applying

10	Name the test plan components.	BTL-1	Remembering
11	What is test log?	BTL-1	Remembering
12	Show test case specification.	BTL-3	Applying
13	Can you judge the three essential elements of test infrastructure management?	BTL-5	Evaluating
14	Summarize the success factors for testing organization.	BTL-2	Understanding
15	Analyze the role of manager in support of test group.	BTL-4	Analyzing
16	List the various skills needed by a test specialist.	BTL-1	Remembering
17	How would you estimate the measurements for monitoring error, faults and failures?	BTL-5	Evaluating
18	Write the reason to create Work Breakdown Structure (WBS).	BTL-6	Creating
19	How would you prepare testing and development function?	BTL-6	Creating
20	Define Test Summary Report	BTL-2	Understanding
21	What is cost driver	BTL-1	Remembering
22	Write the WBS elements for testing.	BTL-2	Understanding
23	What is test effectiveness?	BTL-3	Applying
24	What is Test Plan?	BTL-5	Evaluating
	PART-B		1
Q.no	Questions	BTL	Competence
1	Compare and contrast the role of debugging goals and policies in testing.(13)	BTL-5	Evaluating
2	(a) What factors would organization take into account to decide the fitness of a product for release? (7)(b) Can the Defect Repository be accessible by customers? If so, What security aspects would you have to take into account? (6)	BTL-4	Analyzing
3	Demonstrate the test management based on standards infrastructure,	BTL-3	Applying
	people and product. (13)		117 8
4	people and product. (13) Differentiate between the effect of globalization and geographically distributed team in product testing? (13)	BTL-4	Analyzing
	Differentiate between the effect of globalization and geographically		11.0
4	Differentiate between the effect of globalization and geographically distributed team in product testing? (13)	BTL-4	Analyzing
5	Differentiate between the effect of globalization and geographically distributed team in product testing? (13) Illustrate various components of test plan with example. (13) What are the role of groups in policy development and test reporting.	BTL-4	Analyzing Understanding
4 5 6 7	Differentiate between the effect of globalization and geographically distributed team in product testing? (13) Illustrate various components of test plan with example. (13) What are the role of groups in policy development and test reporting. (13) (a) Name the reports of the test results and the contents available in each test reports. (7)	BTL-4 BTL-2 BTL-4	Analyzing Understanding Analyzing
4 5 6 7	Differentiate between the effect of globalization and geographically distributed team in product testing? (13) Illustrate various components of test plan with example. (13) What are the role of groups in policy development and test reporting. (13) (a) Name the reports of the test results and the contents available in each test reports. (7) (b) What is Test Status Report? And How to report test status? (6) Identify the role user/client play in the development of test plan for a project? Should they be present at any of the test plan reviews?	BTL-4 BTL-2 BTL-4 BTL-6	Analyzing Understanding Analyzing Creating
4 5 6 7	Differentiate between the effect of globalization and geographically distributed team in product testing? (13) Illustrate various components of test plan with example. (13) What are the role of groups in policy development and test reporting. (13) (a) Name the reports of the test results and the contents available in each test reports. (7) (b) What is Test Status Report? And How to report test status? (6) Identify the role user/client play in the development of test plan for a project? Should they be present at any of the test plan reviews? Justify your answer. (13) (a) Discuss the advantages and disadvantages of having an independent test group, that is one that is a separate organizational entity with its own reporting structure. (7) (b) Why is it so important to integrate testing activities into the	BTL-4 BTL-4 BTL-6 BTL-5	Analyzing Understanding Analyzing Creating Evaluating

BTL-3

Applying

12

(a) Demonstrate on various stages of test plan. (7)

(b) Illustrate the role of testing.(6)

13	Explain the following test related documents and its components. (a)Test Case Specification(7) (b)Test Incident Report.(6)	BTL-1	Remembering
14	Explain the concepts of test planning in detail .Also mention the way of defining test plan.(13)	BTL-2	Understanding
	List out the five stages in a test plan process. Explain the concepts of test planning in detail. Also mention the way of defining test plan. (13)	BTL-1	Remembering
16	Write the reason to create work break down structure.(13)	BTL-1	Remembering
17	How would you estimate the measurements for monitoring error, faults and failures? (13)	BTL-2	Understanding

PART-C			
Q.No	Questions	BTL	Competence
1	Write the technological development that causes organizations to revise their approach to testing, also write the criteria and methods involved while establishing a testing policy. (15)	BTL-5	Evaluating
2	a) Discuss testing team structures for a single product companies.(8)b) What are the skills needed for test specialist.(7)	BTL-6	Creating
3	Develop the challenges and issues faced in testing service organization also write how we can eliminate challenges.(15)	BTL-6	Creating
4	(a) Write any four recommended test related documents in details. (8)(b) Discuss the different process activities of software testing in detail. (7)	BTL-5	Evaluating
	Analyze the various steps in forming the test group. How will you build a testing group discuss with an example. (15)	BTL-5	Evaluating

UNIT V - TEST AUTOMATION

Software test automation – skills needed for automation – scope of automation – design and architecture for automation – requirements for a test tool – challenges in automation – Test metrics and measurements – project, progress and productivity metrics.

PART	-	A
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Q.no	Questions	BTL	Competence
1	Express the framework for test automation	BTL-2	Understanding
2	Discover the objectives of testing.	BTL-3	Applying
3	Classify the types of test defect metrics.	BTL-3	Applying
4	Mention the challenges in automation.	BTL-1	Remembering
5	Mention the criteria's for selecting test tools.	BTL-1	Remembering
6	What are the goals of Reviewers?	BTL-1	Remembering
7	Outline the need for test metrics & Give any two metrics	BTL-2	Understanding
8	Define test automation	BTL-1	Remembering
9	Can you show on the reason why metrics in testing?	BTL-3	Applying
10	Distinguish between milestone and deliverable.	BTL-3	Applying
11	What is Walk Through?	BTL-1	Remembering

12	Summarize the reasons for selecting the test tool for automation	BTL-5	Evaluating
13	Classify the skills needed for automation.	BTL-4	Analyzing
14	Can you make the comparison between metrics and measurement?	BTL-5	Evaluating
15	What is the need of Automated testing?	BTL-1	Remembering
16	Compare product development and automation.	BTL-4	Analyzing
17	Give the formula for defects per 100 hours of testing.	BTL-6	Creating
18	Name any two software testing tools.	BTL-0	Understanding
19	What is the main plan of Test framework?	BTL-6	Creating
20	Define progress Metrics.	BTL-0	Understanding
21	What is Walk through.	BTL-2	Understanding
22	What are the benefits of testing tools and automation	BTL-4	Analyzing
23	What are Drivers tool?	BTL-4	Analyzing
24	What are stubs?	BTL-5	Evaluating
	PART-B		
Q.no	Questions	BTL	Competence
1	Describe briefly about various types of test automation and scope	BTL-4	Analyzing
	of automation.(13)		
2	Discuss in detail about selecting the test tool in test automation. (13)	BTL-1	Remembering
3	Developing software to test the software is called test automation. Test	BTL-5	Evaluating
	automation can help address several problems,		
	Justify. Draw the Framework for test automation. (13)		
4	(a) List the generic requirements for test tool. Explain with suitable	BTL-4	Analyzing
	examples. (7)		
	(b) Why testing in metrics? Analyze about Productivity metrics. (6)		
5	What are the challenges faced in test automation? Explain.(13)	BTL-2	Understanding
6	(a) Identify what are the key benefits in using metrics in product	BTL-3	Applying
	development and testing?(7)		
	(b) What are the steps involved in a metrics program. Briefly explain		
	each step.(6)		
7	How do you calculate defect density and defect removal rate?	BTL-6	Creating
	Discuss ways to improve these rates for a better Quality product? (13)		
8	Explain the different types of Test defect metrics under Progress metrics	BTL-4	Analyzing
	based on what they measure and what area they focus on.(13)		
9	Explain the various generations of automation and the required	BTL-2	Understanding
	skills for each.(13)		
10	What are metrics and measurements? Illustrate the types of product	BTL-3	Applying
	metrics.(13)		
11	What is the purpose of progress metrics? Describe in detail.(13)	BTL-1	Remembering
12	Describe about the various components of Test automation.(13)	BTL-1	Remembering
13	Write short notes on following.	BTL-2	Understanding
	(a) Classifications of automation testing.(7)		
	(b) Scope of an automation.(6)		
14	Outline project, product and productivity metrics with relevant	BTL-3	Applying
	examples.(13)	·	
15	Explain Key Performance Indicator and Progress metrics in testing with	BTL-1	Remembering
	proper examples.(13)		
16	What is test effectiveness and Code Walk Through review with relevant	BTL-2	Understanding
	examples.(13)		
17	Give some examples of test metrics. How many defects are existed	BTL-5	Evaluating
	within the module? How many test cases are executed per person? What		
	is the Test coverage %?(13)		

	PART-C			
Q.No	Questions	BTL	Competence	
1	(a) Explain the design and architecture for automation.(8)(b) List and discuss ,how the metrics that can be used for defect prevention.(7)	BTL-6	Creating	
2	(a) List the requirements for test tool. Explain any five requirements with a suitable example.(8)(b) Explain the components of review plans.(7)	BTL-6	Creating	
3	Assume you are working in an on-line fast food restaurant system. The system reads customer orders. Relays orders to the kitchen, calculates the customer's bill and give change. It also maintains inventory information. Each wait person has a terminal. Only authorized wait persons and a system administrator can access the system. Describe the tests that are suitable to the test the application. (15)	BTL-6	Creating	
4	(a) Explain the five stop test criteria that are based on quantitative approach.(8) Narrate about the metrics/parameters to be considered for evaluating the software quality.(7)	BTL-5	Evaluating	
5	Explain a Banking Project, What are the various types of Reviews and List out the members present in the Review Team with proper example. (15)	BTL-5	Evaluating	