

THE KAVERY ENGINEERING COLLEGE*(An Autonomous Institution)***B.E/B.TECH DEGREE END SEMESTER THEORY EXAMINATIONS, APRIL-MAY
2025*****Fifth Semester******Computer Science and Engineering*****CCS366 – Software Testing and Automation
(Common to Artificial Intelligence and Data Science)*****Regulations - 2021******Duration : 3 Hrs******Maximum : 100 Marks******PART – A (ANSWER ALL QUESTIONS) (Marks 10*2=20)***

Q.No	Questions	BL T	CO	Marks
1.	Compare and contrast the objectives of Black-Box Testing and White-Box Testing.	L2	1	2
2.	In unit testing, assess the significance of "stub" and "driver" components, and how do they support testing?	L3	1	2
3.	What are the key test phases in the software testing life cycle?	L1	2	2
4.	List the essential components of a well-structured bug report.	L4	2	2
5.	Outline the boundary value testing.	L2	3	2
6.	When determining test design factors for a safety-critical software application? Justify.	L3	3	2
7.	Differentiate volume testing from load testing.	L2	4	2
8.	Identify the role of "Acceptance Criteria" in Agile user stories.	L3	4	2
9.	What is regression testing, and how does automation benefit it?	L1	5	2
10.	Identify the ways to handle JavaScript alert using Selenium Web Driver.	L3	5	2

PART – B (ANSWER ALL QUESTIONS) (Marks 5*16 = 80)

Q.No	Questions	BL T	CO	Marks
11.	a Illustrate the key phases and activities in the Software Testing Life Cycle (STLC) and their importance in ensuring a robust testing process.	2	1	16
	Or			
	b Classify the fundamental software testing principles and explain their concept and significance in the testing process.	2	1	16
12.	a How does a comprehensive test strategy impact the testing process and overall project success?	2	2	16
	Or			
	b Demonstrate the key testing metrics used to evaluate the quality of a software application. How can metrics like defect density and test coverage be used to make informed decisions	2	2	16

about the readiness of a software product for release?

13.	a	Examine the role of requirement identification in software testing, emphasizing the importance of clear and unambiguous requirements. How can discrepancies or ambiguities in requirements impact the quality of testing, and what steps can be taken to mitigate such issues?	4	3	16
Or					
	b	Inspect the methodology of data flow testing and its role in identifying defects related to data handling. Provide a practical example of data flow testing in a software system, including the identification of data flow paths and the creation of test cases.	4	3	16
14.	a i	Compare and contrast Load Testing and Stress Testing.	4	4	8
	ii	Analyze the importance of fail-over testing in ensuring high availability for critical applications.	4	4	8
Or					
	b i	Compare and contrast compatibility testing and usability testing.	4	4	8
	ii	Examine the role of documentation testing in the software development lifecycle, and how it contributes to a better user experience.	4	4	8
15.	a	Assess the role of test automation frameworks in automated software testing, and explain how they help structure and manage test suites.	5	5	16
Or					
	b	Explain the concept of parallel test execution in Selenium, including how it can be managed, the benefits of parallel testing.	5	5	16