

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

Q.No	Questions	BTL	CO	Marks
1.	What is software testing?	L1	1	2
2.	How would you classify verification and validation?	L1	1	2
3.	What is the primary purpose of a bug report in software testing?	L1	2	2
4.	Show how Will you state the importance of well-defined tester assignments in software testing?	L2	2	2
5.	Name some factors that should be considered when designing a test for a software application.	L1	3	2
6.	What tools or software are commonly used for tracking test cases and their execution status?	L1	3	2
7.	How would you explain load testing?	L1	4	2
8.	What is a "user story" in Agile, and how does it relate to testing?	L1	4	2
9.	How would to describe the automated software testing?	L1	5	2
10.	Define Selenium Web Driver.	L1	5	2

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

Q.No	Questions	BLT	CO	Marks
11.	a i Explain the concepts of Black-Box Testing and White-Box Testing, highlighting their differences and use cases.	L2	1	8
	ii Classify the three stages of testing and their respective objectives and challenges.	L2	1	8
	Or			
	b i Summarize the fundamental reasons for testing software, and how do they contribute to the software development process?	L2	1	8

	ii	Explain the key phases and activities in the Software Testing Life Cycle (STLC) and their importance in ensuring a robust testing process.	L2	1	8
12.	a	Apply the concept of intergroup responsibilities in detail and explain how the development and testing team\ms coordinate during the defect life cycle.	L3	2	16
		Or			
	b	Build the concept of 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 about the readiness of a software product for release?	L3	2	16
13.	a	Illustrate and show your understanding in the context of a large-scale software testing project, discuss the interplay between test design factors like time, budget, and available resources. How can test managers make informed decisions to balance these factors and ensure successful testing?	L2	3	16
		Or			
	b	Explain how Will you state the principles and challenges of path testing, particularly in large and complex software systems? How does path testing ensure thorough code coverage, and what strategies can be employed to manage the complexity of path testing effectively?	L2	3	16
14.	a	Analyze how stress testing helps in identifying system bottlenecks and performance degradation. Provide with suitable example.	L4	4	16
		Or			
	b	Examine the different types of usability testing and analyze when each should be applied provide with an example.	L4	4	16
15.	a	Determine the key considerations when deciding which test cases to automate in a software testing project, including factors such as test case complexity, maintenance effort, and potential return on investment (ROI)	L5	5	16
		Or			
	b	Explain the concept of parallel test execution in Selenium, including how it can be managed, the benefits of parallel testing, and the challenges associated with running multiple tests concurrently.	L5	5	16