

THE KAVERY ENGINEERING COLLEGE
(An Autonomous Institution)

MCA DEGREE END SEMESTER THEORY EXAMINATIONS, NOV /DEC 2024

Third Semester

Master of Computer Applications

MC4026 – Software Quality and Testing

Regulations - 2021

Duration : 3 Hrs

Maximum: 100 Marks

PART – A (ANSWER ALL QUESTIONS) (Marks 10*2=20)

<i>Q.No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
1.	Differentiate fault and failure in software testing.	UN	1	2
2.	What is the main objective of data flow testing?	RE	1	2
3.	List the key components of a software test plan?	RE	2	2
4.	Why is information gathering important in testing?	UN	2	2
5.	Name two modern software testing tools.	RE	3	2
6.	Mention the purpose of a test process assessment?	UN	3	2
7.	Differentiate between verification and validation.	UN	4	2
8.	What does PCMM focus on?	RE	4	2
9.	Specify the role of statistical methods in software quality.	UN	5	2
10.	What is the main focus of Deming's quality principles?	UN	5	2

PART – B (ANSWER ALL QUESTIONS) (Marks 5*13 = 65)

<i>Q.No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
11.	a Discuss the different types of control flow testing techniques. How do they help in improving the quality of the software? Or	UN	1	13
	b Illustrate the process and methodologies of System Integration Testing (SIT). Discuss the different integration testing strategies and their pros and cons.	UN	1	13
12.	a Describe the different types of technical reviews in software development and their benefits. Or	UN	2	13
	b Categorize the steps involved in Information gathering for software testing. How does effective information gathering contribute to the success of testing?	UN	2	13
13.	a Elaborate on agile testing and its principles in the agile methodology. Or	UN	3	13

	b i	What is the Onsite/Offshore model, and how is it implemented in software testing?	UN	3	7
	ii	Analyze the current trends in software testing and their significance.	UN	3	6
14.	a	Identify the key elements of an SQA plan and its significance in software projects.	UN	4	13
		Or			
	b	Infer the role of quality standards in software development with examples.	UN	4	13
15.	a	Analyze the integration of Deming's principles and PDCA for software quality improvement.	AN	5	13
		Or			
	b	Elucidate the process of transforming requirements into test cases.	AN	5	13

*PART – C (Marks 1*15 = 15)*

<i>Q.No</i>		<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
16.	a	Analyze the different types of data flow anomalies and provide examples of how they can be detected.	AN	1	15
		Or			
	b	Infer the spiral model of software development. How does it integrate testing activities throughout the development lifecycle?	AN	2	15