K. K. Wagh Institute of Engineering Education & Research, Nashik

(An Autonomous Institute From A.Y. 2022-23)

WINTER-2025	
Exam Seat No.:	
Academic Year:2025-2026	Semester:III
Class:SYMCA	Program:MCA
Branch Code:M.C.A.	Pattern:2022
Name of Course:Software Project Management and Testing	Course Code:MCA223005
Max. Marks:60	Duration:2.30 Hrs.

Instructions: Candidates should read carefully the instructions printed on the Question Paper and on the cover page of the Answer Book, which is provided for their use.

1. This question paper contains ___TWO__page(s).
2. Answer to each new question is to be started on a new page.
3. Assume suitable data wherever required, but justify it.
4. Draw the neat labelled diagrams, wherever necessary.
5. The last columns indicates the Course Outcome and level of Blooms Taxonomy of the Question/sub-question.

		Marks	CO
Question No. 1			
1a)	Describe the key responsibilities of a project manager. How do these responsibilities contribute to the success of a project?	(6)	CO1
Question No. 2			
2a)	Illustrate the basis for software estimating in project management.	(6)	CO2
Question No. 3			
3a)	How a Gantt chart is used to monitor project progress and provide an example of its application in a software development project.	(8)	CO3
	OR		
3b)	How would you apply the concept of Earned Value Analysis (EVA) to assess project performance, and what steps are involved in its implementation?	(8)	CO3
3c)	How would you implement cost monitoring in a project to ensure financial control, and what tools can be used for this purpose?	(8)	CO3
	OR		
3d)	Demonstrate how you would use a Risk Management and Mitigation (RMMM) plan for a case study project. What key elements should be included in the plan?	(8)	CO3
Question No. 4			
4a)	Consider any real life example like Library Management System and prepared a test plan for the same.	(8)	CO4
	OR		
4b)	Compare Black-Box Testing and White-Box Testing methodologies. Highlight the main differences in terms of their approaches, advantages, and use cases.	(8)	CO4
4c)	Can you implement the concepts of Requirement-Based Testing to design test cases for a login functionality. How would you ensure that both positive and negative scenarios are covered?	(8)	CO4

OR

4d)	How Boundary Value Analysis (BVA) can be applied to test a field that accepts numerical input between 1 and 1000. Provide examples of test cases that would be used in this scenario.	(8)	CO4

Question No. 5

5a)	Illustrate the key components and benefits of a well-designed automation testing framework.	(8)	CO5

OR

5b)	Write down the challenges of implementing automation testing in a software project and propose strategies to overcome these challenges.	(8)	CO5
5c)	Compare the functionalities of Cypress, Testcafe, and Protractor. Provide examples of use cases for each tool.	(8)	CO5

OR

5d)	How would you the fulfil the role of Selenium Grid in automation testing. How does it enhance test execution efficiency?	(8)	CO5

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