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:V
Class:TY	Program:B.Tech
Branch Code:COM	Pattern:2023
Name of Course:Software Testing and Quality Assurance	Course Code:2301306C
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 2 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			
1	Describe the Software Testing Life Cycle (STLC) with its phases.	(6)	CO1
Question No. 2			
2	Explain Black-Box Testing with techniques Equivalence Class Partitioning and Boundary Value Analysis.	(6)	CO2
Question No. 3			
3.a)	What is Selenium? Explain its components and advantages.	(6)	CO3
	OR		
3.b)	Explain Jenkins and its role in Continuous Integration (CI).	(6)	CO3
3.c)	What are automation frameworks? Explain different types with examples.	(5)	CO3
	OR		
3.d)	What is TestNG? Compare it with JUnit.	(5)	CO3
3.e)	Explain the use of JUnit and TestNG in automation testing.	(5)	CO3
	OR		
3.f)	Write a short note on generating and analyzing test reports in Selenium using TestNG and Jenkins.	(5)	CO3
Question No. 4			
4.a)	Define Software Quality. Explain the goals of Software Quality Assurance (SQA).	(6)	CO4
	OR		
4.b)	Explain various Software Quality Assurance (SQA) activities. How do these activities help in maintaining software quality?	(6)	CO4
4.c)	What are software reviews and audits? Explain their types, objectives, and significance in ensuring software quality.	(5)	CO4

OR

4.d) Explain the software quality metrics – Defect Density, MTTF, and Code Coverage with examples. (5) CO4

4.e) What is Code Coverage? Describe its types and significance in testing. (5) CO4

OR

4.f) A software project reports 25 defects after testing 5000 lines of code. Calculate the defect density and interpret its meaning. Give another example (5) CO4

Question No. 5

5.a) Explain Web Application Testing. What challenges are faced during web testing? (6) CO5

OR

5.b) What is Mobile Application Testing? Explain its types and importance. (6) CO5

5.c) What is Security Testing? Explain its objectives and common techniques. (5) CO5

OR

5.d) Describe Test Strategy Design with a case study (5) CO5

5.e) Explain the concept of Defect Management with its life cycle. (5) CO5

OR

5.f) Write short notes on Emerging Trends: AI in Testing and DevTestOps. (5) CO5

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