


Name: Enrolment No:			
<p style="text-align: center;">UPES End Semester Examination, May 2025</p> <p> Course: Software Quality Assurance Semester: VIII Program: B.Tech (All CSE-H/NH) Time : 03 hrs. Course Code: CSEG4015P Max. Marks: 100 </p> <p>Instructions: Please attempt according to the time provided and given weightage.</p>			
SECTION A (5Qx4M=20Marks)			
S. No.		Marks	CO
Q 1	Define software fault, error and failure with examples from real-life software systems.	4	CO1
Q 2	What are the various software quality factors? Explain them.	4	CO1
Q 3	Explain the purpose of contract review in pre-project SQA components.	4	CO2
Q 4	What is the role of defect removal efficiency in lifecycle quality assurance?	4	CO3
Q 5	List the quality assurance activities handled by department management.	4	CO2
SECTION B (4Qx10M= 40 Marks)			
Q 6	Describe the architectural components of a standard SQA system. Include the role of each component.	10	CO2
Q 7	Explain how verification, validation and qualification contribute to the reliability of safety-critical software.	10	CO3
Q 8	Discuss the role of SQA standards and system certification in ensuring process conformance. Give two industry examples.	10	CO4
Q 9	(a) Compare expert opinions and formal reviews as quality control techniques in software projects. OR (b) Explain the structure and purpose of an SQA project process standard with relevant illustrations.	10	CO3
SECTION-C (2Qx20M=40 Marks)			
Q 10	Explain the organizational structure and responsibilities of the SQA unit. How does it interact with other actors in the SQA system to maintain compliance and quality?	20	CO4

Q 11	<p>(a) Analyze the impact of software development methodologies (Agile, V-Model, Waterfall) on the effectiveness of SQA lifecycle components.</p> <p style="text-align: center;">OR</p> <p>(b) Discuss the roles and responsibilities of top management, department management, and project management in establishing and maintaining software quality assurance. Highlight how their coordinated efforts influence software quality outcomes.</p>	20	CO4
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