Reg. No.													

Question Paper Code	13002

M.E. / M.Tech. - DEGREE EXAMINATIONS, NOV / DEC 2024
Third Semester
M.E. - Computer Science and Engineering
20PCSEL305 - SOFTWARE QUALITY ASSURANCE AND TESTING
Regulations - 2020

Duration: 3 Hours   Max. Marks: 100

PART - A (10 × 2 = 20 Marks)
Answer ALL Questions

		Marks	K-Level	CO
1.	Differentiate between verification and validation.	2	K2	CO1
2.	Define Software Quality.	2	K1	CO1
3.	List the types of testing.	2	K1	CO2
4.	What is a Decision table?	2	K1	CO2
5.	What is the focus of GUI tests?	2	K1	CO3
6.	How do robustness tests differ from stress tests?	2	K1	CO3
7.	What is a Defect Report?	2	K1	CO4
8.	What is a Finite State Machine model?	2	K1	CO4
9.	List the various quality factors of Software.	2	K1	CO5
10.	How is a software quality measured?	2	K1	CO5

PART - B (5 × 13 = 65 Marks)
Answer ALL Questions

11.	a)	Explain White-Box and Black testing, test Planning and design.	13	K2	CO1
		OR			
	b)	Describe the structure and organization of a test team, and analyze how team management impacts the testing process.	13	K2	CO1
12.	a)	Explain in detail System Integration techniques.	13	K2	CO2
		OR			
	b)	Describe boundary value analysis and decision tables as techniques for functional testing including examples of each.	13	K2	CO2
13.	a)	Explain the taxonomy of system tests and the purpose of categorizing tests within system testing.	13	K2	CO3
		OR			
	b)	Explain how the defect leads to failure in project development.	13	K2	CO3

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create

14. a) Explain FSM model in detail. 13 K2 CO4

OR

b) Explain the following techniques used in testing : 13 K2 CO4

   (i)Load and Stability testing (ii) Regression and Regulatory testing.

15. a) Explain the McCall's Quality Factors with its criteria. 13 K2 CO5

OR

b) Explain the ISO 9000:2000 Software Quality Standard in detail. 13 K2 CO5

PART - C (1 × 15 = 15 Marks)

16. a) Summarize in detail about FSM-Based Testing of Web-Based Applications. 15 K2 CO6

OR

b) Explain the role of hazard analysis in software QA and discuss its application in creating safer, more reliable systems. 15 K2 CO6