Reg. No.												

Question Paper Code	12211

M.E. / M.Tech. - DEGREE EXAMINATIONS, NOV / DEC 2023

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.	Define Software Quality.	*2,K1,CO1*
2.	What is meant by a test case?	*2,K1,CO1*
3.	Define Fault based testing	*2,K1,CO2*
4.	What is integration testing?	*2,K1,CO2*
5.	List the different types functional tests.	*2,K1,CO3*
6.	What is acceptance testing?	*2,K1,CO3*
7.	What is a Defect Report?	*2,K1,CO4*
8.	What is a FSM model?	*2,K1,CO4*
9.	Differentiate quality control and quality assurance.	*2,K2,CO5*
10.	What is a Quality Framework?	*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)	Discuss the importance of Quality assurance in Testing process and Team Building in detail.	*13,K2,CO1*
12.	a)	Explain Hardware and Software Compatibility Matrix Test Plan for System Integration and built- in testing.	*13,K2,CO2*
		OR	
	b)	Discuss in detail System Integration techniques	*13,K2,CO2*
13.	a)	Explain the following techniques used in testing : (i) Load and Stability testing. (ii) Boundary Value Tests and Power Cycling Tests.	*6,K2,CO3* *7,K2,CO3*
		OR	

b) Explain the following techniques used in testing :
(i) Acceptance testing with an example. *6,K2,CO3*
(ii) Regression and Regulatory testing. *7,K2,CO3*

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

OR

b) Discuss the Metrics for Monitoring Test Execution. *13,K2,CO4*

15. a) Discuss McCall's Quality Factors with its criteria and discuss about the Quality Framework. *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) Demonstrate in detail about Defect taxonomy and Defect management. *15,K3,CO6*

OR

b) Illustrate briefly on Fault Tolerance, Failure Containment, Safety Assurance and Damage Control. *15,K3,CO6*