Reg. No.												

Question Paper Code	13600

M.E. - DEGREE EXAMINATIONS, APRIL / MAY 2025

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 Black box and White box testing.	2	K2	CO1
2.	Define Quality Assurance and give its uses.	2	K1	CO1
3.	Define system integration testing.	2	K1	CO2
4.	What is boundary value analysis?	2	K1	CO2
5.	What are interface tests?	2	K1	CO3
6.	What is regression testing?	2	K1	CO3
7.	What is a state-oriented model in software testing?	2	K1	CO4
8.	What is a Defect Causal Analysis?	2	K1	CO4
9.	List the four topics addressed by ISO 9001:2000.	2	K1	CO5
10.	What is a Quality Framework?	2	K1	CO5

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

			Marks	K – Level	CO
11.	a)	Explain about Verification and Validation techniques with an example.	13	K2	CO1
		OR			
	b)	Describe the importance of Quality assurance in Testing process and Team Building in detail.	13	K2	CO1
12.	a)	Describe the Decision table with diagram in detail and list the advantages of Decision table.	13	K2	CO2
		OR			
	b)	Explain the various system integration techniques and their applications in different testing scenarios.	13	K2	CO2
13.	a)	Describe how the defect leads to failure in project development.	13	K2	CO3
		OR			
	b)	Explain the different categories of system tests and explain their role in ensuring software quality.	13	K2	CO3

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

14. a) Demonstrate Finite State Machine model in detail. *13 K2 CO4*

OR

b) Describe the following in detail Acceptance testing with an example and Boundary Value Tests, Power Cycling Tests. *13 K2 CO4*

15. a) Explain ISO 9000:2000 Software Quality Standard in detail. *13 K2 CO5*

OR

b) Demonstrate the Quality cost of software engineering and Quality Framework in detail. *13 K2 CO5*

PART - C (1 × 15 = 15 Marks)

16. a) Explain hazard analysis in software QA and discuss its application in creating safer, more reliable systems. *15 K2 CO6*

OR

b) Explain the measurements available in defect management process. *15 K2 CO6*