

Reg.No.:



VIVEKANANDHA COLLEGE OF ENGINEERING FOR WOMEN

[AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY, CHENNAI]

Elayampalayam – 637 205, Tiruchengode, Namakkal Dt., Tamil Nadu.

Question Paper Code: 50020

B.E. / B.Tech. DEGREE END-SEMESTER EXAMINATIONS – NOV. / DEC. 2025

Seventh Semester

Computer Science and Engineering

U19CSV51 – DESIGN THINKING

(Regulation 2019)

Time: Three Hours

Maximum: 100 Marks

Answer ALL the questions

Knowledge Levels (KL)	K1 – Remembering	K3 – Applying	K5 - Evaluating
	K2 – Understanding	K4 – Analyzing	K6 - Creating

PART – A

(10 x 2 = 20 Marks)

Q.No.	Questions	Marks	KL	CO
1.	Define Design Thinking and state its primary objective.	2	K2	CO1
2.	List any four phases of Design Thinking.	2	K2	CO1
3.	What is Journey Mapping? State its purpose.	2	K2	CO2
4.	Differentiate between User Persona and Empathy Mapping.	2	K2	CO2
5.	Define Brainstorming in the context of idea generation.	2	K2	CO3
6.	What is the significance of Prototyping during the ideation stage?	2	K2	CO3
7.	Define Rapid Prototyping.	2	K2	CO4
8.	What is Assumption Testing? Why is it essential?	2	K2	CO4
9.	Define Customer Co-Creation.	2	K1	CO5
10.	List any two strategic requirements for successful design implementation.	2	K1	CO5

PART – B

(5 x 13 = 65 Marks)

Q.No.	Questions	Marks	KL	CO
11. a)	Explain the Phases of Design Thinking in detail with suitable examples.	13	K2	CO1

(OR)

	b)	Describe STEEP Analysis and Stakeholder Mapping. How do they help in framing opportunities?	13	K2	CO1
12.	a)	Explain the process of Journey Mapping and Value Chain Analysis in understanding user needs.	13	K3	CO2
		(OR)			
	b)	Describe Mind Mapping and User Persona development with a real-world example.	13	K3	CO2
13.	a)	Illustrate the steps involved in Brainstorming and Concept Development.	13	K3	CO3
		(OR)			
	b)	Discuss the Ideation process and explain how Prototyping aids in idea refinement.	13	K3	CO3
14.	a)	Explain the methods of Assumption Testing and its role in validating design ideas.	13	K3	CO4
		(OR)			
	b)	What is Storyboarding? Explain its role in rapid prototyping with an example.	13	K3	CO4
15.	a)	Describe the concept of Customer Co-Creation Learning Launch. How does it help in innovation?	13	K3	CO5
		(OR)			
	b)	Explain Leading Growth and Innovation and discuss the idea of Quick Wins in design evolution.	13	K3	CO5

PART – C

(1 x 15 = 15 Marks)

Q.No.	Questions	Marks	KL	CO
16. a)	As part of a smart city initiative , design a public transport experience using Design Thinking principles. Explain how you will apply each phase — from empathizing to testing — in your solution.	15	K3	CO5
	(OR)			
b)	A startup wants to launch a health tracking wearable for elderly users. Prepare a case study applying design thinking tools (Stakeholder Mapping, Mind Mapping, Prototyping, and Customer Co-Creation) to develop this product.	15	K3	CO5