


VIT

 Vellore Institute of Technology
(Approved to be University under section 3 of the UGC Act 1956)
Final Assessment Test – April 2026

Course: CBS2003 - Design Thinking

Class NBR(s): 2073/3819

Time: Three Hours

Slot: B2

Max. Marks: 100

- KEEPING MOBILE PHONE/ANY ELECTRONIC GADGETS, EVEN IN 'OFF' POSITION IS TREATED AS EXAM MALPRACTICE
- DON'T WRITE ANYTHING ON THE QUESTION PAPER

COs	CO Statements
CO1	Understand the importance of design thinking and its different phases.
CO2	Empathize with user situations and be able to define clear problem statements.
CO3	Use different ideation methods and come up with feasible and viable ideas for solving problem statements.
CO4	Create prototypes for clear understanding of the problem statement.
CO5	Test the created prototypes and iterate if the design does not meet customer requirement.
CO6	Complement agile process with design thinking for efficient delivery.

BL – Blooms Taxonomy Level (1 – Remember, 2 – Understand, 3 – Apply, 4 – Analyse, 5 – Evaluate, 6 – Create)

 Answer ALL Questions

(10 X 10 = 100 Marks)

1. Explain the concept of Design Thinking. What is the significance of the Five-Stage model in Design Thinking? Also, briefly describe the non-linearity of the five-stage model with a suitable diagram. CO1 BL2
2. Describe any three real-world applications of Design Thinking across different domains (e.g., healthcare, education, business). How does Design Thinking differ from traditional problem-solving approaches? CO1 BL2
3. What is Empathy in the context of Design Thinking? Explain the steps involved in the Empathize phase. How does 'Assuming a Beginner's Mindset' help designers gain better insights from users? CO2 BL2
4. A product team is redesigning a food delivery app after receiving complaints from elderly users who find it difficult to navigate. As a Design Thinker, describe how you would conduct the Empathize phase for this project. Include the immersion activity and body storming techniques in your answer. CO5 BL3
5. A healthcare startup wants to improve patient experience in outpatient clinics. Using the Define phase of Design Thinking: (a) Create a Persona for a typical patient, (b) Draw an Empathy Map for that persona, and (c) Frame a meaningful Point of View (POV) statement. CO5 BL4
6. An ed-tech company is developing a smart learning platform for college students who struggle with self-paced learning. Apply the Define phase tools – Affinity Diagram and "How Might We" questions – to synthesise user research findings and reframe the problem. Provide at least three HMW – (HOW MIGHT WE) questions. CO2 BL4

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| 7. | A smart city project team is ideating solutions to reduce traffic congestion in a metro city. Conduct a Brainstorming session using the rules of brainstorming and generate at least eight ideas. Then apply the Six Thinking Hats method to evaluate two of those ideas. | CO3 | BL5 |
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| 8. | A team is designing an affordable smart home security system for middle-income households. (a) Draw a Mind Map for this problem space with at least three main branches and sub-ideas. (b) Suggest two ideation games that could help the team think more creatively, and explain how each would be applied in this context. | CO3 | BL4 |
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| 9.a) | A university has a serious waste segregation problem on its campus – students consistently dump dry waste, wet waste, and e-waste into the same bins, making recycling impossible. As a Design Thinker, create a Prototype plan for a smart waste segregation solution: specify the type of prototype, describe its key components and appearance, and write a Value Proposition statement for the target users (students and campus administration). | CO4 | BL5 |
| OR | | | |
| 9.b) | A team has built a prototype of an AI-powered mental health chatbot for college students. Describe how they should conduct user testing for this prototype. Include: (i) guidelines for planning the test, (ii) how to gather and interpret user feedback, and (iii) how to decide whether to iterate or finalise the design. | CO4 | BL5 |
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| 10.a) | A software product company is shifting from a traditional waterfall model to Agile. The design team proposes integrating Design Thinking with Agile. Explain the differences between Agile and Design Thinking, and describe with a diagram how they complement each other in a real software development project. | CO6 | BL6 |
| OR | | | |
| 10.b) | A fintech startup is building a mobile payment app for street vendors in semi-urban areas. Apply the complete Design Thinking process (Empathize → Define → Ideate → Prototype → Test) to this problem. For each phase, mention at least one key activity or output. | CO6 | BL6 |

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