

JK Lakshmipat University Jaipur
INSTITUTE OF ENGINEERING AND TECHNOLOGY
B.Tech., Theory Exam-III Examination, December, 2025
Design Thinking

Roll No.....

Course Code : IL1105

Time: 2 Hours

Max. Marks: 30

Instructions to students:

Do not write anything other than your roll number on question paper.

Avoid unnecessary details. Write concise and to the point answers to score well.

Writing appropriate units, nomenclature, and drawing neat sketches/schematics/ flow chart wherever, required are an integral part of the answer.

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|------|---|-----------------------|
| Q.1 | Your city has recently introduced a public bicycle-sharing system, but usage remains very low. Many bicycles are left unused at docking stations, and several users have complained about difficulties in locating available bicycles, poor maintenance, and lack of clear instructions for first-time users. Describe how you would empathize with different stakeholders. | 10
LO1,
LO2 |
| Q. 2 | You observed that people frequently get confused while using vending machines. Write one user need, one pain point, and one insight based on this scenario. | 05

LO1,
LO2 |
| Q. 3 | The university wants to redesign its online course registration system because many students face difficulties during peak registration days. However, the IT team collects feedback only from faculty members and administrative staff, not from students who actually use the system the most. Explain why this approach violates Design Thinking principles, especially the principles of empathy and defining real user needs. | 05

LO1,
LO2 |
| Q. 4 | Your team has been working on designing a solution to improve the grocery shopping experience for elderly people. After generating several creative ideas, you selected one concept: a smart shopping trolley that helps users track items, navigate aisles, and avoid heavy lifting. Describe how you would create a prototype of this smart shopping trolley using simple and low-cost materials. Define the user sample you would choose for testing the prototype. Explain how you would conduct the initial testing of your solution with this sample. | 10
LO3 |