

K. J. Somaiya Institute of Technology, Sion, Mumbai-22
(Autonomous College Affiliated to University of Mumbai)

May-June 2026		
B.Tech Program: AI-DS		Scheme IIB
Regular Examination: LY Semester: VIII		
Course Code: AIDLC 8022 and Course Name: Design Thinking and Innovation		
Date of Exam: 21/05/2026	Duration: 2.5 Hours	Max. Marks: 60

Instructions: (1) All questions are compulsory. (2) Draw neat diagrams wherever applicable. (3) Assume suitable data, if necessary.				
Q. No.	Questions	Max. Marks	CO	BT level
Q 1	Solve any two questions out of three:	10		
i)	List different challenges in using AI for Design Thinking	5	5	U
ii)	Compare Innovation and Creativity	5	1	U
iii)	Why is the "Fail Fast" approach often recommended in Design Thinking?	5	3	U
Q.2	Solve any two questions out of three.	10		
i)	What is the need of Prototyping?	5	6	U
ii)	Explain the double diamond approach for Design Thinking	5	1	U
iii)	What are basic rules for ideation or brainstorming?	5	2	U
Q.3	Solve any two questions out of three.	20		
i)	An ed-tech company wants to improve student engagement in online learning platforms. Analyze the role of ideation in developing user-centered solutions during the Design Thinking process. Discuss how diverse team collaboration, creative constraints, and idea evaluation methods influence the quality of innovative outcomes.	10	3	An
ii)	An AI-based virtual learning platform received mixed responses during prototype testing, where some users appreciated the features while others found the interface complex. Analyze how the Design Thinking testing phase can help the development team refine the solution. Suggest suitable testing methods and justify how iterative testing improves innovation outcomes.	10	4	An
iii)	A university observed that students face difficulties in accessing mental health support services due to lack of awareness and hesitation in communication. Analyze the problem and frame	10	2	An

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	suitable "How Might We" (HMW) questions that can guide the ideation process toward innovative and user-centered solutions. Justify how the framed HMW questions encourage creativity and problem-solving.			
Q.4	Solve any two questions out of three.	20		
i)	What are the various stages involved in design thinking from finding the problem to finding the solution? Explain with an example?	10	1	U
ii)	Explain different ways in which user testing can be improved	10	4	U
iii)	Describe the ideation technique of Round Robin used in Design Thinking using an example	10	3	U
