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NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA
(An Autonomous Institute Affiliated to AKTU, Lucknow)

M.Tech Integrated

SEM: V - THEORY EXAMINATION (2025 - 2026)

Subject: Design Thinking-II

Time: 3 Hours

Max. Marks: 100

General Instructions:

IMP: Verify that you have received the question paper with the correct course, code, branch etc.

1. This Question paper comprises of **three Sections -A, B, & C**. It consists of Multiple Choice Questions (MCQ's) & Subjective type questions.
2. Maximum marks for each question are indicated on right -hand side of each question.
3. Illustrate your answers with neat sketches wherever necessary.
4. Assume suitable data if necessary.
5. Preferably, write the answers in sequential order.
6. No sheet should be left blank. Any written material after a blank sheet will not be evaluated/checked.

SECTION-A

20

1. Attempt all parts:-

- 1-a. CATWOE is used to identify (CO1, K2) 1
- (a) Stakeholders
 - (b) Prototypes
 - (c) Algorithms
 - (d) Data
- 1-b. The Golden Circle consists of Why, How, and (CO1, K1) 1
- (a) What
 - (b) When
 - (c) Where
 - (d) Whom
- 1-c. Minimum viable product aims to (CO2, K2) 1
- (a) Maximize features
 - (b) Test essentials
 - (c) Remove UI
 - (d) Skip validation
- 1-d. Sketching allows teams to (CO2, K2) 1
- (a) Code faster
 - (b) Visualize concept
 - (c) Hire designers
 - (d) Model data

1

- 1-e. Ideal duration of an elevator pitch is (CO3,K2)
- 10 minutes
 - 5 minutes
 - 30-60 seconds
 - 20 minutes
- 1-f. Testing as hypothesis means (CO3,K3) 1
- Ignoring assumptions
 - Validating assumptions
 - Random guessing
 - Skipping testing
- 1-g. Innovation refers to: (CO4, K1) 1
- New ideas & creative solutions
 - Copying competitors
 - Stopping new changes
 - Avoiding risks
- 1-h. Kaizen focuses on: (CO4, K2) 1
- Continuous improvement
 - Large changes
 - Job rotation
 - Employee layoffs
- 1-i. Education–Sanskar mainly focuses on (CO5, K2) 1
- Profit maximization
 - Right understanding and right living
 - Political stability
 - Market competition
- 1-j. Vinimaya–Kosh highlights (CO5, K2) 1
- Hoarding
 - Mutual sharing and storage
 - Price manipulation
 - Barter-based exploitation
2. Attempt all parts:-
- 2.a. Comment on “Start with Why”.(CO1, K3) 2
- 2.b. Discuss the contribution of a learning launch to design decision refinement. (CO2, K2) 2
- 2.c. Give two examples of successful storytelling campaigns.(CO3,K2) 2
- 2.d. Interpret Situational Leadership. (CO4, K2) 2
- 2.e. Importance of interconnectedness among natural systems for sustainability. (CO5, K4) 2

SECTION-B

30

3. Attempt all parts:-

3.a. Answer any one of the following:-

3.a.(i)	Analyze the higher purpose model. Comment how it helps to grow a organization? (CO1, K3)	6
3.a.(ii)	What is CATWOE analysis, assume you are chairman of BCCI apply it for IPL Cricket league Mumbai Franchise. (CO1, K5)	6
3.b.	Answer any one of the following:-	
3.b.(i)	Interpret the application of 3 Laws of design thinking in connections of prototyping for Study chair. (CO2, K5)	6
3.b.(ii)	Explore the role of 10-100-1000gm rule through an example that shows its importance in convergence stage. (CO2, K4)	6
3.c.	Answer any one of the following:-	
3.c.(i)	Write a detailed note on elevator pitch and discuss its importance in product communication.(CO3,K2)	6
3.c.(ii)	Discuss the steps involved in conducting a usability test with examples.(CO3,K3)	6
3.d.	Answer any one of the following:-	
3.d.(i)	Describe Six Sigma and its DMAIC methodology. (CO4, K2)	6
3.d.(ii)	Describe different leadership styles with examples. (CO4, K2)	6
3.e.	Answer any one of the following:-	
3.e.(i)	Analysis of Nyaya–Suraksha as a comprehensive approach to justice and preservation in human society. (CO5, K4)	6
3.e.(ii)	Identify the significance of enlarging the Open Area in Johari Window for healthy relationships. (CO5, K3)	6
<u>SECTION-C</u>		50
4.	Answer any <u>one</u> of the following:-	
4-a.	Explain the Golden Circle and its uses in leadership & design with example of Tesla or Apple. (CO1, K2)	10
4-b.	Compare and assess Litter of Light & Aravind Eye Care as innovation models. (CO1, K5)	10
5.	Answer any <u>one</u> of the following:-	
5-a.	Generate a research-backed evaluation of using the Vroom–Yetton Matrix within multi-stage convergence strategies. (CO2, K6)	10
5-b.	Appraise the usefulness of SWOT analysis, apply SWOT analysis on different ideas to spend a day with your friends. (CO2, K3)	10
6.	Answer any <u>one</u> of the following:-	
6-a.	Discuss the Taguchi method for quality improvement and analyze how it helps in optimizing system design.(CO3,K4)	10
6-b.	What guerrilla interview questions can the team ask and what behaviors should they observe during shadowing.(CO3,K4)	10
7.	Answer any <u>one</u> of the following:-	
7-a.	Describe Tuckman’s Team Building Model and Belbin’s Team Roles in detail with suitable illustrations.(CO4, K2)	10
7-b.	Develop a Kaizen improvement plan for a cold-drink production department facing productivity issues. (CO4, K6)	10

8. Answer any one of the following:-

- 8-a. Evaluate the of harmony between body, self, and environment through disciplined living and mindful choices (CO5, K5) 10
- 8-b. What is FIRO-B Test. Examine the FIRO-B test for diagnosing relational gaps and guiding methods to repair and strengthen interpersonal connections. (CO5, K5) 10

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