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

B.Tech

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. Divergence involves: (CO1,K2)

1

(a) Ideate, What if & Brainstorm.

(b) What works and connecting the dots.

(c) To observe clearly what is happening around in any situation.

(d) The identification of the problem statement is key in the Design process.

1-b. Design Thinking typically helps in _____. (CO1,K1)

1

(a) Innovation

(b) Dialogue

(c) Role Play

(d) Observation

1-c. Sketches are beneficial because they: (CO2,K2)

1

(a) Make ideas easier to visualize

(b) can be done anywhere

(c) Always replace final drawings

(d) Have no relation to planning

1-d. Mind mapping is used to (CO2,K2)

1

(a) represent how ideas or other items are linked to a central idea

(b) generate, visualize, structure, and classify ideas

(c) look for patterns and insights that provide key design criteria

(d) All of the above

1-e. Feedback is any information collected mainly from..... (CO3,K1)

1

- (a) users
 (b) product manager
 (c) Hr manager
 (d) team lead
- 1-f. If the null hypothesis is false then which of the following is accepted? (CO3,K3) 1
 (a) Null Hypothesis
 (b) Statistical Hypothesis
 (c) Alternative Hypothesis
 (d) Composite Hypothesis
- 1-g. Leaders who make decisions without seeking input from anyone, are: (CO4,K2) 1
 (a) Autocratic
 (b) Democratic
 (c) Bureaucratic
 (d) None of these
- 1-h. In DMAIC, "M" stands for: (CO4,K1) 1
 (a) Measure
 (b) Manage
 (c) Magnitude
 (d) Mind
- 1-i. FIRO-B test includes _____ main areas (CO5,K2) 1
 (a) 1
 (b) 2
 (c) 3
 (d) 4
- 1-j. "façade" in Juhari Window is (CO5,K3) 1
 (a) open self
 (b) blind self
 (c) hidden self
 (d) unknown self
2. Attempt all parts:-
- 2.a. Explain Design Mindset? (CO1,K1) 2
 2.b. Discuss 10-100-1000 gm law of design thinking. (CO2,K2) 2
 2.c. Laura has a sampling frame of all the people who are members of a club. She gives each member a unique reference number and uses a random number generator to select the sample. Which sampling method is Laura using? Justify the answer. (CO3,K3) 2
 2.d. Discuss the concept of DPMO. (CO4,K2) 2
 2.e. Write five Valid knowledge according to Jain Darshan. (CO5) 2

SECTION-B

30

3. Attempt all parts:-

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

3.a.(i)	Discuss the whole story of McDonald's milkshakes. (CO1,K3)	6
3.a.(ii)	How does the Aravind Eye Care work. (CO1,K2)	6
3.b.	Answer any one of the following:-	
3.b.(i)	Explain the concept of active facilitation in Ideation step of design thinking. (CO2,K2)	6
3.b.(ii)	Which tools and techniques (such as paper models, storyboards, or pseudo-codes) can be used to create an effective prototype for your 1000gm idea, and how do these tools contribute to the convergence process?. (CO2,K3)	6
3.c.	Answer any one of the following:-	
3.c.(i)	Persona mapping is a key element of storytelling. Explain in detail. (CO3,K1)	6
3.c.(ii)	Discuss the classification of Defects in Quality Control. (CO3,K2)	6
3.d.	Answer any one of the following:-	
3.d.(i)	Describe the factors that can foster the innovation in economy. (CO4,K3)	6
3.d.(ii)	Discuss the proposed challenges in achieving the quality in production. (CO4,K2)	6
3.e.	Answer any one of the following:-	
3.e.(i)	How do you differentiate between society and crowd? (CO5,K1)	6
3.e.(ii)	Prove that Human is a Co-existence of Self and Body. (CO5,K2)	6
SECTION-C		50
4.	Answer any <u>one</u> of the following:-	
4-a.	Explain Visualization and it's importance in design thinking. (CO1,K2)	10
4-b.	Describe Simon Sinek's – Start with Why. (CO1,K2)	10
5.	Answer any <u>one</u> of the following:-	
5-a.	Explain Career buddy case study with the help of IDEO's design thinking steps (Don't use any other model). What was the higher purpose behind it.(CO2,K2)	10
5-b.	How value proposition design can be used to create new value propositions? (CO2,K3)	10
6.	Answer any <u>one</u> of the following:-	
6-a.	Explain the various steps in conducting user testing. (CO3,K2)	10
6-b.	Detail the process of testing a hypothesis, outlining each step involved, and illustrate with an example.(CO3,K3)	10
7.	Answer any <u>one</u> of the following:-	
7-a.	Opine yourself about the quality control strategy as a quality head of the company producing the baby care products. (CO4,K3)	10
7-b.	Describe the Leadership Situational model. (CO4,K2)	10
8.	Answer any <u>one</u> of the following:-	
8-a.	Mutual Fulfillment= Relatedness +Fulfillment. Justify it. (CO5,K3)	10
8-b.	Discuss the role of the self-regulation for the human being with examples from the real life. (CO5,K2)	10