Roll. No:

| | | | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|

## NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute Affiliated to AKTU, Lucknow)

### B.Tech

SEM: III - THEORY EXAMINATION (2022 - 2023)

Subject: Design Thinking-I

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.

<div align="center">SECTION A                    20</div>

1. Attempt all parts:-

1-a.      Which of the below is incorrect? (CO1)                                        1

         (a)   PepsiCo has turned Design Thinking into its strategy

         (b)   GE Healthcare has built a MR scanner for children using Design Thinking

         (c)   AirBnB avoided bankruptcy and turned profitable using Design Thinking

         (d)   All of the above are correct

1-b.      _____ is the type of thinking to be applied when the solution is known but the problem is relatively not known (CO1)      1

         (a) Lateral thinking

         (b) Design thinking

         (c) Lean thinking

         (d) Critical thinking

1-c.      Affinity clusters are related to…(CO2)                                             1

         (a) Ideation

         (b) Evaluation

(c) Analysis

(d) Prototyping

1-d. Breaking down a problem into its constituent parts during team discussion is which of the following steps in the Standard Agenda?(CO2)　　1

      (a) Analysing the problem

      (b) Identification of problem

      (c) Evaluation Problem Solutions

      (d) Criteria development

1-e. User Journey Map helps you to (CO3)　　1

      (a) Understand the touch points and pain points of the user

      (b) Iterate, iterate, iterate

      (c) Identify the users' credibility, expertise and skills

      (d) All of the above.

1-f. What is the main role of research in education? (CO3)　　1

      (a) To upsurge one's social status.

      (b) To increase one's job prospects.

      (c) To augment one's personal growth.

      (d) To help an applicant in becoming a renowned educationalist.

1-g. Your dad read that using cell phones can cause brain cancer. He refuses to buy a cell phone because he is afraid of contracting brain cancer from using one. No matter how much you try to persuade him with other information, he will not listen. This is an example of?(CO4)　　1

      (a) Confirmation Bias

      (b) Ostrich Bias

      (c) Blindspot Bias

      (d) Anchoring Bias

1-h. Arguing that a lack of evidence proves something is the fallacy of…(CO4)　　1

      (a) Appeal to ignorance

      (b) Double negative

      (c) Equivocation

      (d) Burden of proof

1-i. The scientific method cannot be identified with any particular set of experimental or observational (CO5)　　1

(a) Parameters

(b) Goals

(c) Formulas

(d) Procedures

1-j.      Words that frequently accompany arguments and signal that a premise or conclusion is present is called (CO5)    1

        (a) Inference words

        (b) Premise indicators

        (c) Indicator words

        (d) Equivalent words

2. Attempt all parts:-

| | | |
|---|---|---|
| 2.a. | Explain conflict element of DCAFE forces (CO1) | 2 |
| 2.b. | How ethical behaviour can be ensured by human being?(CO2) | 2 |
| 2.c. | Name few online tools available for Design thinking process (CO3) | 2 |
| 2.d. | Define rhetoric.(CO4) | 2 |
| 2.e. | Is critical thinking primarily about what you think or how you think? (CO5) | 2 |

<center>SECTION B      30</center>

3. Answer any <u>five</u> of the following:-

| | | |
|---|---|---|
| 3-a. | What are five forces of growth? (CO1) | 6 |
| 3-b. | Discuss the framework for Creativity and Innovation. (CO1) | 6 |
| 3-c. | How effective brainstorming session can be conducted?(CO2) | 6 |
| 3-d. | When CATWOE analysis is used and where it is applied?(CO2) | 6 |
| 3.e. | What are five steps of design thinking? Explain role of Define tool in design process. (CO3) | 6 |
| 3.f. | What is tribalism?What is an example of tribalism? (CO4) | 6 |
| 3.g. | What does it mean to say that critical thinking takes place in an "environment" that is often hostile to it? (CO5) | 6 |

<center>SECTION C      50</center>

4. Answer any <u>one</u> of the following:-

| | | |
|---|---|---|
| 4-a. | Give examples of 2 good design around you. Explain what made them a good design and how it helped people or the society (CO1) | 10 |
| 4-b. | Think of any wicked problem which our country is facing right now. Government of India | 10 |

has appointed you as a consultant to work on this problem. List down the observations, form and refine a problem statement and list down feasible and sustainable idea (CO1)

5. Answer any <u>one</u> of the following:-

| | | |
|---|---|---|
| 5-a. | Discuss the agents of Socialization.(CO2) | 10 |
| 5-b. | Explain the culture in organizatin and its various types.(CO2) | 10 |

6. Answer any <u>one</u> of the following:-

| | | |
|---|---|---|
| 6-a. | An all weather bicycle has been proposed by a company. Apply mind mapping technique. Applying six hat technique develop a mind map for a business strategy (CO3) | 10 |
| 6-b. | How does design thinking contribute to the implementation of innovations? (CO3) | 10 |

7. Answer any <u>one</u> of the following:-

| | | |
|---|---|---|
| 7-a. | Explain difference between Ostrich effect and recency effect.(CO4) | 10 |
| 7-b. | Describe the Jerk factor with example.(CO4) | 10 |

8. Answer any <u>one</u> of the following:-

| | | |
|---|---|---|
| 8-a. | Define logical reasoning and explain its various types with suitable examples. (CO5) | 10 |
| 8-b. | Define absolute probability judgment and how it is useful in evaluating the probability of human error. (CO5) | 10 |