Subject Code:- BCSE0103/ BCSEH0103

Roll. No:

NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA
(An Autonomous Institute Affiliated to AKTU, Lucknow)
B.Tech
SEM: I - THEORY EXAMINATION - (2023 - 2024)
Subject: Design Thinking-I

Time: 2 Hours   Max. Marks: 50

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   15

1. Attempt all parts:-

1-a.   _____ is about deep listening to each other without biases and judgement. (CO1)   1

    (a)   Observation

    (b)   Dialogue

    (c)   Debate

    (d)   Hearing

1-b.   Self exploration uses two mechanism, natural acceptance and _____. (CO2)   1

    (a)   Reason

    (b)   Experimental Validation

    (c)   Logical thinking

    (d)   Theoretical concepts

1-c.   A good problem statement should have the following traits: (CO3)   1

    (a)   Human-centered

    (b)   Broad enough for creative freedom

    (c)   Narrow enough to make it manageable

    (d)   All of the above

1-d.   People tend to divide themselves into groups, and then attribute positive attributes to their own group. Which bias does this refer? (CO4)   1

    (a)   Ingroup Preference Bias

(b) Confirmation Bias

(c) Anchoring Bias

(d) Choice-supportive Bias

1-e.   An argument intended to provide logically conclusive support for its conclusion is: (CO5)   1

(a) Inductive

(b) Valid

(c) Deductive

(d) Sound

2. Attempt all parts:-

2.a.	What are stated and unstated needs? (CO1)	2
2.b.	What do you understand by prosperity?(CO2)	2
2.c.	What are the traits of good problem statement? (CO3)	2
2.d.	What are the five pillars of critical thinking?(CO4)	2
2.e.	What is a premise and conclusion? (CO5)	2

SECTION-B   15

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

3-a.	What is a wicked problem? Why are they difficult to solve? State their characteristics. (CO1)	5
3-b.	Describe the empathy map and its application.(CO2)	5
3.c.	Apply the HMW on Question as assumption: HMW entirely remove the wait time at the airport? (CO3)	5
3.d.	Illustrate tribalism. Analyze with the example related to it. (CO4)	5
3.e.	What do you understand by the term logical fallacy and describe how to avoid logical fallacies using deductive reasoning. (CO5)	5

SECTION-C   20

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

| 4-a. | What are 3 laws of Design Thinking? Apply them to suggest an idea to make a Job search Portal. (CO1) | 4 |
| 4-b. | What are five frictional forces that drive design? (CO1) | 4 |

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

| 5-a. | Give an illustration of CATWOE analysis. (CO2) | 4 |
| 5-b. | What do you understand with Journey mapping? Create a Journey map of a IRCTC application user. (CO2) | 4 |

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

| 6-a. | What do you understand with Define Stage of Design Thinking? Explain 5 Whys tool with two examples. (CO3) | 4 |
| 6-b. | What do you understand with 6 Thinking Hats? Apply 6 thinking hats to solve the | 4 |

following problem: Customers at a pizzeria are complaining as the waiting time to get their pizzas has become longer. (CO3)

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

| 7-a. | How can you become a better critical thinker? (CO4) | 4 |

7-a.   How can you become a better critical thinker? (CO4)   4

7-b.   Elaborate Recency Effect and Zero-risk Bias with example. (CO4)   4

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

8-a.   Differentiate between deductive argument and an inductive argument. If a   4
          beverage is "drinkable through a straw" explain it in deductive and inductive way
          of argument. (CO5)

8-b.   What do you understand by logical fallacies? Enlist any five logical fallacies.   4
          (CO5)