Printed Page:- 03 **Subject Code:- ACSBS0503**

Roll. No:

NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute Affiliated to AKTU, Lucknow)

B.Tech

SEM: V - THEORY EXAMINATION (2024- 2025)

Subject: Design Thinking

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. Design Thinking is: (CO1 , K1) 1

(a) Thinking about design

(b) Designing ways in which people think

(c) Asking users to solve problems

(d) Defining, framing and solving problems from users' perspectives

1-b. A good problem statement should thus have the following traits: (CO 2, K2) 1

(a) Human-centered

(b) Broad enough for creative freedom

(c) Narrow enough to make it manageable

(d) All of the above

1-c. The customer in the customer journey map is one who: (CO3, K2) 1

(a) Uses a product/service and may need help

(b) Makes profits for the design thinkers

(c) Is a designer who wants to help with the project

(d) Helps build the prototypes that may be useful later on

1-d. The iterative design process helps the designers to: (CO4, K2) 1

(a) Involve clients and customers in meaningful ways

(b) think of unimaginable solutions

(c) make them not just feasible, but also viable

(d) All of the above

1-e. Goals of usability testing are: (CO5, K1) 1

(a) Performance

(b) Accuracy

(c) Recall -- How much does the person remember afterwards or after periods of non-use?

(d) All of above

2. Attempt all parts:-

2.a. Define wicked Problems. (CO1, K1) 2

2.b. Explain overall evaluation of the research design. (CO2, K2) 2

2.c. Enlist the characteristics of sketches. (CO3, K1) 2

2.d. Mention the significance of value proposition design. (CO4, K2) 2

2.e. Define reactive feedback.(CO2, K1) 2

SECTION-B 15

3. Answer any three of the following:-

3-a. Discuss how innovation and creativity plays a important role for any organization. (CO1, K2) 5

3-b. Explain the significance of primary data. What are the limitations of primary data? Explain in brief the stages in data processing. (CO2, K2) 5

3.c. Describe Lean Startup Machine Idea Validation Board and Idea Affinity Maps. (CO3, K2) 5

3.d. Interpret the ways by which prototype can be connected with 3 laws of design thinking. (CO4, K3) 5

3.e. Explain the concept of simple and systematic random sampling. (CO5, K2) 5

SECTION-C 20

4. Answer any one of the following:-

4-a. Describe frictional forces. How can we overcome them? (CO1, K2) 4

4-b. Differentiate between design mindset and traditional mindset (CO1, K3). 4

5. Answer any one of the following:-

5-a. Demonstrate the role of 4 Ws in define phase with illustration. (CO2, K4) 4

5-b. Explain LDO framework along with its importance to gather right data. (CO2, K2) 4

6. Answer any one of the following:-

6-a. Explain the importance of Inclusive Design with a suitable example. (CO3, K2) 4

6-b. Interpret the importance of Random Association Technique in Brainstorming sessions. (CO3, K3) 4

7. Answer any one of the following:-

7-a. Develop a plan to create prototype for your oncoming project of Design Thinking. (CO4, K6) 4

7-b.	Discuss the check-list for designing a good minimum viable product. (CO4, K2)	4
8. Answer any <u>one</u> of the following:-		
8-a.	Ctritically evaluate the Vroom Yetton Matrix. How it helps in decision making? (CO5, K5)	4
8-b.	Explain the core elements of usability testing. (CO5, K2)	4