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**NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA**

(An Autonomous Institute Affiliated to AKTU, Lucknow)

**MCA (Integrated)**

**SEM: II - THEORY EXAMINATION (2024 - 2025)**

**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.

**SECTION-A**

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1. Attempt all parts:-

- |      |   |   |
|------|---|---|
| 1-a. | Which stage of design thinking involves understanding the needs and wants of the end-users? (CO1, K2) | 1 |
|      | (a) Ideation  |   |
|      | (b) Prototyping   |   |
|      | (c) Empathize   |   |
|      | (d) Define  |   |
| 1-b. | In Design Thinking the process of creating a tangible representation of ideas is known as: (CO1, K3)  | 1 |
|      | (a) Ideation  |   |
|      | (b) Prototyping   |   |
|      | (c) Testing   |   |
|      | (d) Refinement  |   |
| 1-c. | Who developed creativity process (CO2, K1)  | 1 |
|      | (a) Robert Frankin  |   |
|      | (b) Graham Wallis   |   |
|      | (c) Paul Torrance   |   |
|      | (d) Gorge   |   |
| 1-d. | Which is not a innovative idea (CO2, K3)  | 1 |
|      | (a) Furniture Store   |   |

- (b) Paytm
  - (c) Byju's
  - (d) Flipkart
- 1-e. What is the name of the conceptual framework in which the research is carried out? (CO3, K2) 1
- (a) Research hypothesis
  - (b) Synopsis of Research
  - (c) Research paradigm
  - (d) Research design
- 1-f. Creating Personas will help you to: (CO3, K3) 1
- (a) Understand your users' needs, experiences, behaviours and goals.
  - (b) Help you step out of yourself.
  - (c) Help you to recognise that different people have different needs and expectations.
  - (d) All of the above
- 1-g. Critical thinking can help beyond the classroom as in which of the following: (CO4, K4) 1
- (a) how seriously involved you should get with relationships
  - (b) how to think with imagination
  - (c) how to identify the real problem
  - (d) how seriously involved you should get with relationships and how to identify the real problem
- 1-h. Statements backed by good reasons are... (CO4, K3) 1
- (a) Worthy of strong acceptance
  - (b) To be believed with certainty
  - (c) Never false
  - (d) Beyond all possible doubt
- 1-i. Which of the following principles follows from text's discussion of science and its limitations? (CO5, K4) 1
- (a) Scientific theory is a product of the times.
  - (b) Scientific theories can be proven beyond a doubt.
  - (c) Scientific data are free from bias and error.
  - (d) Scientific inquiry eliminates the possibility of serendipity.
- 1-j. A deductively valid argument with true premises is said to be (CO5, K2) 1
- (a) Strong
  - (b) Weak
  - (c) Sound
  - (d) Probable

2. Attempt all parts:-

|      |   |   |
|------|---|---|
| 2.a. | Give any 2 instances of importance of listening over hearing. Illustrate with real time examples. (CO1, K3) | 2 |
| 2.b. | Discuss the needs of self and body (CO2, K3))   | 2 |
| 2.c. | Discuss the role of ideation in problem solving. (CO3, K2)  | 2 |
| 2.d. | Write the significance of argument and statement in design thinking. (CO4, K4)                              | 2 |
| 2.e. | Define Conclusion with example. (CO5, K3)   | 2 |

## **SECTION-B**

30

3. Answer any five of the following:-

|      |   |   |
|------|---|---|
| 3-a. | Differentiate between Listening and Hearing. Give examples. (CO1, K2)                                     | 6 |
| 3-b. | Give examples of 3 bad design around you. (CO1, K3)   | 6 |
| 3-c. | Illustrate your present vision of a happy and prosperous life? (CO2, K5)                                  | 6 |
| 3-d. | Explain the term stakeholder with their role in organization. (CO2, K3)                                   | 6 |
| 3.e. | Discuss the role of Ideation Stage of Design Thinking. Explain Brainstorming tool with example. (CO3, K4) | 6 |
| 3.f. | How does ordinary thinking differ from critical thinking? (CO4, K3)                                       | 6 |
| 3.g. | Explain The Hasty Generalization Fallacy with example. (CO5, K4)  | 6 |

## **SECTION-C**

50

4. Answer any one of the following:-

|      |  |    |
|------|--|----|
| 4-a. | How can design help solve the traffic problem in Bangaluru? Come up with a strategy. (CO1, K4) | 10 |
| 4-b. | Describe 13 musical notes of Design mindset. How do they impact our thinking? (CO1, K4)        | 10 |

5. Answer any one of the following:-

|      |   |    |
|------|---|----|
| 5-a. | Explain the concept of CATWOE Analysis with appropriate example. (CO2, K3)                                      | 10 |
| 5-b. | Describe the process from basic need to actualization needs with the help of a neat and clean diagram.(CO2, K4) | 10 |

6. Answer any one of the following:-

|      |   |    |
|------|---|----|
| 6-a. | We have to make my coffee shop friendly for non-English speaking customers. Use 5 Why tool and create a HMW question. (CO3, K4) | 10 |
| 6-b. | How does the Six Thinking Hats method improve thinking and decision-making (CO3, K4)  | 10 |

7. Answer any one of the following:-

|      |  |    |
|------|--|----|
| 7-a. | Discuss in detail the pillars of critical thinking. (CO4, K3)                              | 10 |
| 7-b. | Explain the Halo Effect and Ingroup Preference Bias. Explain both with examples. (CO4, K3) | 10 |

8. Answer any one of the following:-

|      |   |    |
|------|---|----|
| 8-a. | Write short note on: (1) Claim and Proposition (2) Argument and statement (CO5, K3) | 10 |
|------|---|----|

- 8-b. Explain The Tu quoque Fallacy and Slippery Slope fallacy with example. (CO5, K3) 10

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