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NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute Affiliated to AKTU, Lucknow)

BCA

SEM: III - 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. What is not true for a wicked Problem (CO1, K1) 1
- (a) Wicked problems are problems with many interdependent factors making them seem impossible to solve
  - (b) They are easy to understand and solve
  - (c) There is no immediate test of a solution to a wicked problem.
  - (d) Every wicked problem can be considered a symptom of another problem.
- 1-b. The Empathize phase deals with: (CO1, K1) 1
- (a) Fine tune products or services till they are no more bugs in them
  - (b) Get in the shoes of the customers and understand the situation from their perspective
  - (c) Interviewing people to get their opinions, feedback and shortcomings of your current product/service
  - (d) Prototype a concept and check if it stands the test of the market
- 1-c. "To be assured that each human being inherently wants oneself and the other to be happy and prosperous" is known as \_\_\_\_\_. (CO2, K3) 1
- (a) Trust
  - (b) Respect
  - (c) Glory
  - (d) Reverence
- 1-d. \_\_\_\_\_ is the characteristics and knowledge of a particular group of people, 1

encompassing language, religion, cuisine, social habits, music and arts. (CO2, K2)

- (a) Culture
- (b) Material culture
- (c) Non-material culture
- (d) None of the above

1-e. The \_\_\_\_\_ entails dividing ideas according to their relative abstractness, ranging from the most rational choice to the 'long shot'. (CO3, K4) 1

- (a) Now Wow How Matrix
- (b) Post-it Voting or Dot Voting
- (c) Four Categories method
- (d) Bingo Selection

1-f. What is/are the advantages of sketches? (CO3, K3) 1

- (a) Think more openly and creatively about your ideas
- (b) Create abundant ideas without worrying about their quality
- (c) Invent and explore concepts by being able to record ideas quickly
- (d) All of the above

1-g. This bias leads you to believe that you are less likely to suffer from misfortune and more likely to attain success than your peers. Which bias does this refer? (CO4, K4) 1

- (a) Optimism Bias
- (b) Halo Effect
- (c) Anchoring Bias
- (d) Choice-supportive Bias

1-h. Which factors cannot contribute biases? (CO4, K2) 1

- (a) Emotions
- (b) Individual motivations
- (c) Social pressures
- (d) Roaming

1-i. Evolution is wrong because my grandfather was not a monkey. Which fallacy example does this refer? (CO5, K4) 1

- (a) Post hoc
- (b) False analogy
- (c) False dilemma
- (d) Straw man

1-j. Something is logically impossible if (CO5, K2) 1

- (a) It violates a law of science
- (b) It violates a principle of logic
- (c) It cannot be tested

(d) It is difficult to understand

2. Attempt all parts:-

- |      |   |   |
|------|---|---|
| 2.a. | Give one example of a great design. (CO1, K2)                         | 2 |
| 2.b. | What do you understand by basic needs of human being?(CO2, K3)        | 2 |
| 2.c. | Describe the role of Yellow hat in six thinking hat method? (CO3, K4) | 2 |
| 2.d. | Define fundamental concepts of critical thinking. (CO4, K2)           | 2 |
| 2.e. | How to Identify Arguments? (CO3)                                      | 2 |

**SECTION-B**

30

3. Answer any five of the following:-

- |      |   |   |
|------|---|---|
| 3-a. | Explain 3 laws of Design Thinking with examples. (CO1, K2)            | 6 |
| 3-b. | Differentiate between Listening and Hearing. Give examples. (CO1, K3) | 6 |
| 3-c. | Elaborate core feeling respect & affection.(CO2, K4)                  | 6 |
| 3-d. | Define the term stakeholder with their role in organization.(CO2, K3) | 6 |
| 3.e. | What is 5 Why tool? How it helps in root cause finding. (CO3, K3)     | 6 |
| 3.f. | Explain the fundamental concept behind critical thinking.(CO4)        | 6 |
| 3.g. | Demonstrate False dilemma fallacy with example. (CO5)                 | 6 |

**SECTION-C**

50

4. Answer any one of the following:-

- |      |   |    |
|------|---|----|
| 4-a. | Describe 13 musical notes of Design mindset. How do they impact our thinking? (CO1, K4)           | 10 |
| 4-b. | What is a wicked problem? Why are they difficult to solve? State their characteristics. (CO1, K3) | 10 |

5. Answer any one of the following:-

- |      |   |    |
|------|---|----|
| 5-a. | Describe the 9 Feelings in relationship.(CO2, K3)                       | 10 |
| 5-b. | How creativity can be fostered by culture in an organization? (CO2, K3) | 10 |

6. Answer any one of the following:-

- |      |   |    |
|------|---|----|
| 6-a. | Describe the three laws of design thinking? (CO3, K4)                                 | 10 |
| 6-b. | Create a journey map for a rural student taken admission into your college. (CO3, K4) | 10 |

7. Answer any one of the following:-

- |      |   |    |
|------|---|----|
| 7-a. | Describe cognitive bias, How they affect our thinking explain it with proper example(CO4, K3) | 10 |
| 7-b. | Compare critical thinking and ordinary thinking. (CO4, K4)                                    | 10 |

8. Answer any one of the following:-

- |      |   |    |
|------|---|----|
| 8-a. | Write short note on following: (1) Premise and conclusion (2) Truth and logic condition (CO5, K3) | 10 |
| 8-b. | Explain the concept of inductive & deductive argument with example. (CO5, K4)                     | 10 |