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

**(An Autonomous Institute Affiliated to AKTU, Lucknow)**

**MCA**

**SEM: II - THEORY EXAMINATION (2022-2023 )**

**Subject: Design Thinking**

**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**

**20**

**1. Attempt all parts:-**

- 1-a. Which of the below firm is associated the most with Design Thinking approach? (CO1) 1
- (a) Ikea  
(b) Ideo  
(c) Idea  
(d) Ikei
- 1-b. What is a prototype as it relates to design thinking? (CO1) 1
- (a) A model used to help define the problem that needs solved.  
(b) A planning stage for designers to empathize with users.  
(c) A model that end users can test and give feedback on.  
(d) A method of brainstorming to come up with various ideas.
- 1-c. Which is NOT true about the Test step? (CO2) 1
- (a) It is an opportunity to refine the solution.  
(b) You should come up with new ideas during the Test step.

- (c) Only consider positive feedback to get the best result
- (d) You should assume that your solution can be made better.
- 1-d. \_\_\_\_\_ is a group creativity technique by which efforts are made to find a conclusion for a specific problem by gathering a list of ideas spontaneously contributed by its members. (CO2) 1
- (a) Brainstorming
  - (b) Generating
  - (c) Invention
  - (d) Conceptualization
- 1-e. What is one advantage of using experiments that no other method has? (CO3) 1
- (a) establishing correlational relationship between variables
  - (b) establishing a cause and effect relationship between variable
  - (c) construct equivalence
  - (d) measurement equivalence
- 1-f. Group thinking can be combatted in which of the following ways? (CO3) 1
- (a) the team leader could withhold his or her viewpoint during team discussion
  - (b) the devil's advocate role could be assigned to a specific team member
  - (c) team members could engage in cohesiveness-building training
  - (d) both a and b
- 1-g. For developing critical thinking among students, which type of question should be asked by teacher? (CO4) 1
- (a) Open ended and Subjective questions.
  - (b) Multiple Choice Questions.
  - (c) Short answer type questions.
  - (d) Closed ended questions.
- 1-h. A purely competitive firm can be identified by the fact that: (CO4) 1
- (a) there are other firms in the industry producing close substitutes
  - (b) it is making only normal profits in the short run
  - (c) its average revenue equals marginal revenue
  - (d) it experiences diminishing marginal returns
- 1-i. Choose the best answer to fill in the blank: \_\_\_\_\_ is group-centered thinking; group bias or conformism. (CO5) 1

- (a) Unwarranted assumptions
- (b) Egocentrism
- (c) Wishful Thinking
- (d) Sociocentrism

- 1-j. The essence of the scientific process is: (CO5) 1
- (a) carefully controlled observations that eliminate investigator bias.
  - (b) the construction of deductively valid theories.
  - (c) the continuous interplay between theory and data.
  - (d) the particular methods and techniques that each science uses.

**2. Attempt all parts:-**

- 2.a. Explain each one of the three Capacity Levers that drive the design mind. (CO1) 2
- 2.b. Explain the love as a complete value. (CO2) 2
- 2.c. What do you understand by the term logical fallacy and describe how to avoid logical fallacies using deductive reasoning. (CO3) 2
- 2.d. What is absolute probability judgment and how it is useful in evaluating the probability of human error. (CO4) 2
- 2.e. Explain propositional logics with an example. (CO5) 2

**SECTION B**

**30**

**3. Answer any five of the following:-**

- 3-a. How is Design Thinking different from the way we've always solved problems? (CO1) 6
- 3-b. List the difference between Dialogue and Debate. (CO1) 6
- 3-c. Differentiate between intention and competence. (CO2) 6
- 3-d. Discuss the activities of body and self. (CO2) 6
- 3.e. What are five steps of design thinking? Explain role of Ideation tool in design process. (CO3) 6
- 3.f. What is a deductive statement? Explain. (CO4) 6
- 3.g. Describe Zero-risk Bias. (CO5) 6

**SECTION C**

**50**

**4. Answer any one of the following:-**

- 4-a. Which are the steps of Design thinking Process in IDEO approach? Explain. (CO1) 10
- 4-b. This is about deep listening to each other without biases and judgement. 10

Explain. (CO1)

**5. Answer any one of the following:-**

- 5-a. What do you understand with persona? Create a persona of your favourite teacher. (CO2) 10
- 5-b. Explain Self Exploration with example. Why Self Exploration is important in human values? (CO2) 10

**6. Answer any one of the following:-**

- 6-a. What do you understand with Sketching? How it is different from Prototyping? (CO3) 10
- 6-b. Design Customer journey map and explain it. (CO3) 10

**7. Answer any one of the following:-**

- 7-a. What are case studies? Why are they important in different scenario in critical thinking? (CO4) 10
- 7-b. Illustrate examples related to Tribalism. (CO4) 10

**8. Answer any one of the following:-**

- 8-a. Questioning Techniques that can trigger the imagination? Explain. (CO5) 10
- 8-b. How do you find time in your schedule to use design thinking? Explain. (CO5) 10