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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 (2023 - 2024)**

**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**

20

1. Attempt all parts:-

- 1-a. You would interview people to gain an understanding of how they feel during the ... Stage of Design thinking. (CO1) 1
- (a) Prototype
  - (b) Define
  - (c) Ideate
  - (d) Empathise
- 1-b. Which design thinking technique involves generating a large number of ideas in a short amount of time? (CO1) 1
- (a) Brainstorming
  - (b) Mind Map
  - (c) SWOT Analysis
  - (d) Six thinking Hats
- 1-c. One student can think of multiple ways of solving a problem and always bring some new idea to the discussion. This is a characteristics of (CO2) 1
- (a) Creativity
  - (b) Learned helplessness
  - (c) Egocentrism
  - (d) None of the above
- 1-d. Strong ..... means you have a high sense of moral and ethical behavior that 1

earns respect of others. (CO2)

- (a) Cooperation
- (b) Confidence
- (c) Attitude
- (d) Character

- 1-e. Empathy map can be helpful for (CO3) 1
- (a) Diving into the customer segments of a business model canvas
  - (b) Elaborating on user personas
  - (c) Capturing behaviors when pair interviewing a customer
  - (d) All of the above
- 1-f. Goals work best for building teams when (CO3) 1
- (a) They are clearly stated
  - (b) There are many goals to challenge the team
  - (c) The goals create competition within the group
  - (d) no goal is shared by every member on the team
- 1-g. What is meaning of the word "critical" in critical thinking (CO4) 1
- (a) A fault-finding ability
  - (b) The ability to effectively analyze information
  - (c) A careful judgment or judicious evaluation
  - (d) A lack of respect for other people
- 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) It is average revenue equals marginal revenue
  - (d) It experiences diminishing marginal returns
- 1-i. The fallacy of appeal(ad hominem) to the person is rejecting a claim by (CO5) 1
- (a) Using rhetoric
  - (b) Making false statements
  - (c) Ignoring the person
  - (d) Criticizing the person who makes it rather than a claim itself
- 1-j. Arguing that a lack of evidence proves something is the fallacy of design thinking. (CO5) 1
- (a) Appeal to ignorance
  - (b) Double negative
  - (c) Equivocation
  - (d) Burden of proof

2. Attempt all parts:-

- 2.a. Why are wicked problems difficult to solve? explain (CO1) 2

- 2.b. Describe the importance of ethical behavior in society. (CO2) 2
- 2.c. Discuss the advantages of 'defining the problem using Ice-Cream Sticks' method (CO3) 2
- 2.d. What are the main characteristics of critical thinkers (CO4) 2
- 2.e. Write short note on premises and conclusion (CO5) 2

### **SECTION-B**

30

3. Answer any five of the following:-

- 3-a. What is the difference between Traditional Thinking and Design Thinking (CO1) 6
- 3-b. Discuss the difference between immersion and observation with example (CO1) 6
- 3-c. What do you understand by Maslow's hierarchy of needs (CO2) 6
- 3-d. When CATWOE analysis is used and where it is applied? (CO2) 6
- 3.e. Write Short note on Double Diamond Approach. (CO3) 6
- 3.f. Is background knowledge important for critical thinking? Justify it. (CO4) 6
- 3.g. Differentiate between inductive argument and deductive argument. (CO5) 6

### **SECTION-C**

50

4. Answer any one of the following:-

- 4-a. What are five steps of design thinking? Explain role of Define tool in design process.(CO1) 10
- 4-b. What are 13 musical notes of Design mindset. How do they impact our thinking. (CO1) 10

5. Answer any one of the following:-

- 5-a. Discuss the relationship between body and self. (CO2) 10
- 5-b. Elaborate the role of education in human life. (CO2) 10

6. Answer any one of the following:-

- 6-a. Write the advantages of defining the problem statement, Explain Point of View (POV) statement. (CO3) 10
- 6-b. What do you understand with 6 Thinking Hats? Explain 6 thinking Hats with example.(CO3) 10

7. Answer any one of the following:-

- 7-a. Does critical thinking necessarily make one excessively critical or cynical? Why or why not? (CO4) 10
- 7-b. Elaborate cognitive bias. What are the causes related to it? (CO4) 10

8. Answer any one of the following:-

- 8-a. Write short note on following: (1) Logical fallacy (2) Proposition (CO5) 10
- 8-b. Differentiate between the Strong and Weak Argument (CO5) 10