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NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA
(An Autonomous Institute Affiliated to AKTU, Lucknow)

B.Tech

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

Subject: Design Thinking-I

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. _____ enables one to step above the knowledge cluster plane. (CO1, K1) 1
- (a) Perspective
 - (b) Skill
 - (c) Expertise
 - (d) None of the above
- 1-b. Which one is a Secondary Source of information? (CO2, K1) 1
- (a) Focus Group
 - (b) Survey
 - (c) Magazines
 - (d) Interview
- 1-c. _____ are fictional characters, which you create based upon your research in order to represent the different user types that might use your service, product, site, or brand in a similar way. (CO3, K1) 1
- (a) Synthesis
 - (b) Analysis
 - (c) Empathy Map
 - (d) Personas
- 1-d. Preferring the choice that provides certainty of a smaller benefit as opposed to an alternative with more risk and greater potential benefit. Which bias does this refer? 1

(CO4, K1)

- (a) Zero-risk Bias
- (b) Ingroup Preference Bias
- (c) Confirmation Bias
- (d) Anchoring Bias

1-e. Evolution is wrong because my grandfather was not a monkey. Which fallacy example does this refer? (CO5, K1) 1

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

2. Attempt all parts:-

2.a. Summarize the patterns and anti-patterns with example? (CO1, K2) 2

2.b. Compare between intention and competence with example of your best friend.(CO2, K2, K3) 2

2.c. Apply Edward De Bono's "Red hat" on Operation Sindoor by Indian Army? (CO3, K3) 2

2.d. What is meant by recognizing incongruences? Analyze the situation when you feel it. (CO4, K2, K4) 2

2.e. What is a deductive argument? (CO5, K1) 2

SECTION-B 15

3. Answer any three of the following:-

3-a. What are the steps involved in the design thinking? Explain the process of Design thinking. (CO1, K1) 5

3-b. What are 9 feelings in relationship? Explain in brief (CO2, K2) 5

3.c. Explain Edward De Bono's six thinking hats. Apply them to analyze use of "AI enabled Autonomous Drones in war". (CO3, K3) 5

3.d. Analyze the case studies involved in critical thinking. Summarize any one case study discussed in class. (CO4, K2) 5

3.e. Differentiate between the following: (1) Deductive and Inductive Argument (2) Implicit premises and Implicit conclusion (CO5, K2) 5

SECTION-C 20

4. Answer any one of the following:-

4-a. Elaborate capacity levers. How they effect the person? (CO1, K2) 4

4-b. What do you understand the Wicked Problem? Apply design thinking solve any such problem? (CO1, K3) 4

5. Answer any one of the following:-

5-a. Make a persona of your father deciding NIET as your college. (CO2, K5) 4

- 5-b. Define CATWOE Analysis. Apply CATWOE analysis for our college. (CO2, K3) 4
6. Answer any one of the following:-
- 6-a. What do you understand with Ideation Stage of Design Thinking. Explain Brainstorming tool with example. (CO3, K2) 4
- 6-b. What is 5 Why tool? How it helps in root cause finding. (CO3, K2) 4
7. Answer any one of the following:-
- 7-a. What are cognitive biases? Elaborate Halo Effect and Choice Supportive Biases with example. (CO4, K3) 4
- 7-b. Demonstrate tribalism and give any example related to it. How it is handled by critical thinking? (CO4, K3) 4
8. Answer any one of the following:-
- 8-a. Demonstrate Argument with validation diagram. (CO5, K2) 4
- 8-b. Explain the following logical fallacies with example: a) Ad hominem b) Slippery slope. (CO5, K2) 4

REG:JAN_JUN-2025