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

MCA

SEM: II - THEORY EXAMINATION (2025 - 2026)

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:-

- (1.1) Out of following this is the first step of Design Thinking Process in IDEO approach. 1
 [CO1, K1]
- (a) Discovery
 - (b) Interpretation
 - (c) Ideation
 - (d) Feel
- (1.2) Which one is not an element of great design? [CO1, K2] 1
- (a) Experience
 - (b) Simplicity
 - (c) Efficiency
 - (d) Complexity
- (1.3) The feeling of ensuring right understanding and feelings in the other (my relative) is 1
 called _____. [CO1, K1]
- (a) guidance
 - (b) trust
 - (c) respect
 - (d) glory
- (1.4) Which one is a Secondary Source of information? [CO1, K1] 1
- (a) Focus Group
 - (b) Survey
 - (c) Magazines
 - (d) Interview

- (1.5) The customer in the customer journey map is one who(CO3,k2) 1
- (a) Uses a product/service and may need help
 - (b) Makes profits for the design thinkers
 - (c) Is a designer who wants to help with the project
 - (d) Helps build the prototypes that may be useful later on
- (1.6) How to nurture a Million Dollar Idea? (CO3,K1) 1
- (a) Question everything
 - (b) Brainstorm fearlessly
 - (c) Look for solutions
 - (d) All of the above
- (1.7) Identify the cognitive bias in which an individual relies heavily on the first piece of information received as a reference point for making subsequent judgments. (CO4,K1) 1
- (a) Availability Bias
 - (b) Bandwagon Effect
 - (c) Anchoring Bias
 - (d) Choice-supportive Bias
- (1.8) The statement that premises are intended to support is called...(CO4,K1) 1
- (a) A related premise
 - (b) An argument
 - (c) A description
 - (d) The conclusion
- (1.9) This fallacy assumes that a compromise between two extreme conflicting points is always true. Which fallacy does it refer? (CO5,K4) 1
- (a) The Middle Ground Fallacy
 - (b) The Burden of Proof Fallacy
 - (c) The Texas Sharpshooter Fallacy
 - (d) The Correlation/Causation Fallacy
- (1.10) A deductively valid argument with true premises is said to be (CO5,K4) 1
- (a) Strong
 - (b) Weak
 - (c) Sound
 - (d) Probable

2. Attempt all parts:-

- (2.1) Discuss barriers to listening. [CO2, K2] 2
- (2.2) Distinguish between intention and competence with examples. [CO4, K4] 2
- (2.3) Describe How Might We (HMW) questions. (CO3,K4) 2
- (2.4) Discuss rhetoric and its use. (CO4,K4) 2
- (2.5) Differentiate between valid and invalid arguments. (CO5,K4) 2

SECTION-B

30

Answer any one of the following:-

- (3.1) Explain Arcturus IV case study. [CO2, K2] 6
- (3.2) Describe frictional forces. [CO2, K2] 6

Answer any one of the following:-

- (3.3) Illustrate CATWOE analysis on the below scenario, A hospital wants to replace its physical walk-in triage desk with an **AI-driven "Symptom Checker" kiosk** and a tele-health portal. [CO3, K3] 6
- (3.4) How right understanding leads to ethical conduct? [CO3, K3] 6

Answer any one of the following:-

- (3.5) Describe the complete design thinking process with stages.(CO3,K3) 6
- (3.6) Analyze the process of identifying root causes using repeated questioning. Refer the scenario explained in question 3.3 and deep down the root cause for "Why are elderly patients avoiding the AI kiosks?"(CO3,K6) 6

Answer any one of the following:-

- (3.7) Describe confirmation bias and fundamental attribution error with example for each. (CO4,K2) 6
- (3.8) Discuss the pillars of critical thinking.(CO4,K2) 6

Answer any one of the following:-

- (3.9) Differentiate between deductive argument and an inductive argument. (CO5,K4) 6
- (3.10) Describe the Slippery Slope Fallacy and Appeal to Nature Fallacy with examples.(CO5,K2) 6

SECTION-C

50

4. Answer any one of the following:-

- (4.1) Explain case study of Gillette Guard, how it helps its brand to establish in India. [CO4, K4] 10
- (4.2) Discuss wicked problems and their characteristics. [CO2, K2] 10

5. Answer any one of the following:-

- (5.1) Explain Empathy Map. Refer Question 3.3 to understand the scenario and draw an empathy map of yourself using a AI-Kiosk installed in the hospital. [CO2, K2] 10
- (5.2) Explain universal human goal and its achievement. [CO3, K3] 10

6. Answer any one of the following:-

- (6.1) Discuss the Double Diamond approach in detail.(CO3,K3) 10
- (6.2) Explain the "How Might We" approach in problem solving.(CO3,K3) 10

7. Answer any one of the following:-

- (7.1) Compare and contrast between argumentation and rhetoric. (CO4,K4) 10
- (7.2) Discuss tribalism. Describe the negative impact on society. (CO4,K2) 10

8. Answer any one of the following:-

- (8.1) Differentiate between the following: (1) Valid and invalid Argument (2) Strong and Weak Argument (CO5,K4) 10
- (8.2) Explain with diagram the "Components of Scientific Reasoning". (CO5,K2) 10