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NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute Affiliated to AKTU, Lucknow)

MCA

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. Which of the below firm is associated the most with Design Thinking approach? 1
(CO1)
- (a) Ikea
 - (b) Ideo
 - (c) Idea
 - (d) Ikei
- 1-b. Collecting _____ is an important portion of testing a prototype in the test stage of design thinking. (CO1) 1
- (a) Pictures
 - (b) Money
 - (c) Feedback
 - (d) Emails
- 1-c. Which of the following is not a characteristic of design thinking? (CO2) 1
- (a) Linear process
 - (b) Human-centered
 - (c) Collabrative
 - (d) Iterative
- 1-d. During which step do you create a physical, interactive representation of your solution? (CO2) 1

- (a) Prototype
 - (b) Ideate
 - (c) Test
 - (d) Define
- 1-e. Which is an empathy tool (CO3) 1
- (a) Managing tools
 - (b) CATWOE
 - (c) LDO
 - (d) DEO
- 1-f. Team creativity can be promoted in which of the following ways? (CO3) 1
- (a) Establishing a competitive environment to promote creative ideas
 - (b) Establishing challenges for the team
 - (c) Evaluating ideas during the idea generation stage
 - (d) Flexible deadlines to encourage intensity and focus
- 1-g. Which is not the characteristic of a critical thinker? (CO4) 1
- (a) He uses logical skills in reasoning.
 - (b) He refuses to recognize the limitations of his mind and consistently pursues excellence.
 - (c) He thinks independently and does not always succumb to peer pressure.
 - (d) He upholds the standards of critical thinking.
- 1-h. What is the meaning of current information? (CO4) 1
- (a) The topic is hot.
 - (b) It is up to date
 - (c) It is complete information
 - (d) None of the above.
- 1-i. A deductively valid argument cannot have. (CO5) 1
- (a) True premises and a false conclusion
 - (b) False premises and a true conclusion
 - (c) True premises and a true conclusion
 - (d) False premises and a false conclusion
- 1-j. Fallacies can be psychologically persuasive even though they are. (CO5) 1
- (a) Psychologically impotent
 - (b) Logically flawed
 - (c) Deductively valid
 - (d) Inductively valid

2. Attempt all parts:-

- 2.a. Give examples of 2 good designs around you. Explain what made them a good design and how it helped people or the society. 2

- 2.b. Describe the 9 feelings in relationship. 2
- 2.c. Describe the 5 Whys in define stage of design thinking process. (CO3) 2
- 2.d. Differentiate between the following: Strong and Weak Argument 2
- 2.e. What do you understand by Argument? Explain valid and invalid argument. (CO5) 2

SECTION-B

30

3. Answer any five of the following:-

- 3-a. What are different types of thinking? Explain difference between Lean Thinking and Lateral Thinking. (CO1) 6
- 3-b. Elaborate Arcturtus IV case study. (CO1) 6
- 3-c. When CATWOE analysis is used and where it is applied? (CO2) 6
- 3-d. Discuss the role of empathy in understanding the customer requirement. (CO2) 6
- 3.e. What do you understand by personas ? Explain Point of view statements (CO3) 6
- 3.f. Is background knowledge important for critical thinking? Justify it. (CO4) 6
- 3.g. Your dad read that using cell phones can cause brain cancer. He refuses to buy a cell phone because he is afraid of contracting brain cancer from using one. No matter how much you try to persuade him with other information, he will not listen. This is an example of? Explain (CO5) 6

SECTION-C

50

4. Answer any one of the following:-

- 4-a. Design Thinking is core medium of innovation and creativity. Explain. (CO1) 10
- 4-b. Explain how IT culture support the design thinking mindset? (CO1) 10

5. Answer any one of the following:-

- 5-a. Discuss the relationship between body and self. (CO2) 10
- 5-b. In CATWOE Analysis C stands for customer? What is it explain. (CO2) 10

6. Answer any one of the following:-

- 6-a. Write Short note on Double Diamond Approach. (CO3) 10
- 6-b. What is 5 Why tool? How it helps in root cause finding. (CO3) 10

7. Answer any one of the following:-

- 7-a. Elaborate cognitive bias. What are the causes related to it? (CO4) 10
- 7-b. Explain ideation methods to spark innovative ideas. (CO4) 10

8. Answer any one of the following:-

- 8-a. What is logical fallacies? explain any three logical fallacies with example (CO5) 10
- 8-b. There is a technical conference going to be held at your college. A very nice display is to be put on at entrance incorporating important features. Apply Critical thinking process for your college welfare. (CO5) 10