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NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute Affiliated to AKTU, Lucknow)

B.Tech

SEM: V - THEORY EXAMINATION (2024 - 2025)

Subject: Design Thinking-II

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**

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1. Attempt all parts:-

1-a. Six Key Steps to a Design Thinking Mindset involves: (CO1,K1)

1

- (a) Frame a Question
- (b) Gather Inspiration
- (c) Generate Ideas
- (d) All of the above

1-b. Divergence involves: (CO1,K2))

1

- (a) Ideate, What if & Brainstorm.
- (b) What works and connecting the dots.
- (c) To observe clearly what is happening around in any situation.
- (d) The identification of the problem statement is key in the Design process.

1-c. Brainstorming rules includes: (CO2,K1)

1

- (a) Time limit
- (b) Topic focussed
- (c) No criticism
- (d) All of the above

1-d. Convergent thinking can be examined through which lenses- (CO2,K1)

1

- (a) Desirability
- (b) Viability
- (c) Feasibility

- (d) All of the above
- 1-e. Taguchi's method also known as..... (CO3,K2) 1
- (a) user acceptance testing
- (b) user interface model
- (c) robust design methods
- (d) all of the above
- 1-f. Guerrilla research is a quick andway of learning about and understanding experiences (CO3,K1) 1
- (a) low cost
- (b) high cost
- (c) different
- (d) boring
- 1-g. Tuckman propounded the model for: (CO4,K2) 1
- (a) Group behaviour
- (b) General management
- (c) Effective communication
- (d) Team building
- 1-h. In DMAIC, "C" stands for: (CO4,K1) 1
- (a) Control
- (b) Compare
- (c) Collect
- (d) Confirm
- 1-i. Human Centered Approach deals with:(CO5,K1) 1
- (a) Nature
- (b) Community
- (c) Individual
- (d) All of these
- 1-j. In the Johari Window, the things that we know about ourselves and keep to ourselves represent our (CO5,K2) 1
- (a) blind self.
- (b) unknown self
- (c) hidden self.
- (d) open self.
2. Attempt all parts:-
- 2.a. How does the McDonald's Milkshakes improved customer experience? (CO1,K1) 2
- 2.b. Discuss 10-100-1000 gm law of design thinking. (CO2,K2) 2
- 2.c. Laura has a sampling frame of all the people who are members of a club. She gives each member a unique reference number and uses a random number 2

generator to select the sample. Which sampling method is Laura using? Justify the answer. (CO3,K3)

- 2.d. Describe the durability in reference to quality. (CO4,K1) 2
- 2.e. Define FIRO-B Test. (CO5,K1) 2

SECTION-B

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3. Answer any five of the following:-

- 3-a. Elaborate the following term as per wheel of life: (1) Spiritual (2) Physical (CO1,K2) 6
- 3-b. Analyze "The Golden Circle" with help of Apple example. (CO1,K3) 6
- 3-c. Explain the role of the Vroom Yetton Matrix in refinement and prototyping. (CO2,K2) 6
- 3-d. Which tools and techniques (such as paper models, storyboards, or pseudo-codes) can be used to create an effective prototype for your 1000gm idea, and how do these tools contribute to the convergence process?. (CO2,K3) 6
- 3.e. Describe the elements of storytelling proposed by Aristotle. (CO3,K2) 6
- 3.f. Explain the different traits and qualities of the leaders with an example.. (CO4,K2) 6
- 3.g. Explain darshan according to Jain Darshan. (CO5,K2) 6

SECTION-C

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4. Answer any one of the following:-

- 4-a. Why is the concept of the "Higher Purpose" important in Design Thinking, and how can it impact the design process and final outcome of a project?. (CO1,K2) 10
- 4-b. Studying the case studies like DBS Singapore and Bank of America's Keep the Change campaign, how did they apply Design Thinking principles to create customer-centered innovations?. (CO1,K3) 10

5. Answer any one of the following:-

- 5-a. Why is it essential to gather user feedback during prototyping, and how can it guide the revision of your brainstormed ideas during the 1000gm stage?. (CO2,K2) 10
- 5-b. Identify the insights that can be drawn from case studies like Careerbuddy, You-Me-Health, and IBM Learning Launch, and how can these lessons be applied to your 1000gm prototype to create a user-centered solution?. (CO2,K3) 10

6. Answer any one of the following:-

- 6-a. Explain the importance of observation and Dialogue in design thinking. (CO3,K1) 10
- 6-b. Explain various types of usability testing methods. (CO3,K2) 10

7. Answer any one of the following:-

- 7-a. Discuss the team building models: Tuckman and Belbin and importance of the spatial elements for innovation. (CO4,K2) 10
- 7-b. Describe the 6 Sigma and Kaizen importance in design thinking and also discuss the case study of the Mumbai Dabbawallas. (CO4,K3) 10

8. Answer any one of the following:-

- 8-a. Define the Interconnectedness and mutual fulfilment among the four orders of nature recyclability and self-regulation in nature. Explain the shifting the Thinking .(CO5,K3) 10
- 8-b. Define the importance of the behaviour skills in design thinking . Explain the term ENFJ in terms of MBTI test .Justify with an example(CO5,K3) 10

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