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**NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA**

(An Autonomous Institute Affiliated to AKTU, Lucknow)

**MCA****SEM: III - THEORY EXAMINATION (2021 - 2022) (ONLINE)****Subject: Design Thinking****Time: 02:00 Hours****Max. Marks: 100****General Instructions:**

1. *All questions are compulsory. It comprises of two Sections A and B.*
- *Section A - Question No- 1 has 35 objective type questions carrying 2 marks each.*
- *Section B - Question No- 2 has 12 subjective type questions carrying 3 marks each. You have to attempt any 10 out of 12 question.*
- *No sheet should be left blank. Any written material after a Blank sheet will not be evaluated/checked.*

**SECTION A****35 x 2 = 70****1. Attempt ALL parts:-**

- |       |   |   |
|-------|---|---|
| 1.1.a | Design Thinking is: (CO1)   | 1 |
|       | (a) Thinking about design<br>(b) Designing ways in which people think<br>(c) Asking users to solve problems<br>(d) Defining, framing and solving problems from users' perspectives                              |   |
| 1.1.b | What are the steps of Design Thinking Process?  | 1 |
|       | (a) Understand > Draw > Ideate > Create > Test<br>(b) Empathise > Define > Ideate > Prototype > Test<br>(c) Empathise > Design > Implement > Produce > Test<br>(d) Understand > Define > Ideate > Produce > Try |   |
| 1.1.c | A college is redesigning its website. Current students are the main users of the website. Which one of the below elements should definitely be on the website?  | 1 |
|       | (a) College rules and regulations<br>(b) Information on faculty members<br>(c) Information about courses<br>(d) Alumni details  |   |
| 1.1.d | Design Thinking typically helps in _____  | 1 |
|       | (a) Innovation<br>(b) Data analytics<br>(c) Financial planning<br>(d) Operational efficiency  |   |
| 1.1.e | Which of the following well known consulting firms are offering Design Thinking as a solution?  | 1 |
|       | (a) McKinsey & Co<br>(b) BCG<br>(c) Bain & Co<br>(d) All of above   |   |
| 1.1.f | Which of the below is incorrect?  | 1 |
|       | (a) PepsiCo has turned Design Thinking into its strategy  |   |

- (b) GE Healthcare has built a MR scanner for children using Design Thinking
- (c) Google has a 3 step process to bring about new innovations
- (d) All of the above are correct
- 1.1.g Collecting \_\_\_\_\_ is an important portion of testing a prototype in the test stage of design thinking. 1
- (a) Pictures
- (b) Money
- (c) Feedback
- (d) Emails
- 1.2.a The third step in the design thinking process is: 1
- (a) Define
- (b) Ideate
- (c) Empathise
- (d) Test
- 1.2.b The fourth step in the design thinking process is: 1
- (a) Ideate
- (b) Define
- (c) Prototype
- (d) Test
- 1.2.c Which is NOT a good interview strategy for the Empathy step? 1
- (a) Encourage the person to talk about experiences.
- (b) Ask follow-up questions to get more information.
- (c) Try to uncover needs people may or may not be aware of.
- (d) Encourage short answers that get right to the point.
- 1.2.d Which is NOT an aspect of the Define step of design thinking? 1
- (a) Create a composite user to give perspective to the solution
- (b) Develop a Point of View statement to state user's need
- (c) Define as many possible solutions to the problem as possible
- (d) Recognise a challenge with a "How Might We" question
- 1.2.e Which is NOT a guideline for the Ideate step? 1
- (a) Consider the practicality of each idea before sharing it.
- (b) Generate as many ideas as possible.
- (c) Reference the How Might We question frequently.
- (d) Don't worry about how good other peoples' ideas are.
- 1.2.f Which is NOT true about the Test step? 1
- (a) It is an opportunity to refine the solution.
- (b) You should come up with new ideas during the Test step.
- (c) Only consider positive feedback to get the best result
- (d) You should assume that your solution can be made better.
- 1.2.g During which step do you explore the ways in which users experience your area of concern? 1
- (a) Prototype
- (b) Ideate
- (c) Define
- (d) Empathise
- 1.3.a You are a person with a high level of.....if you stand by your values even if others put pressure on you to do something that is wrong or if they make fun of you. (CO3) 1

- (a) Communication
  - (b) Cooperation
  - (c) Honesty
  - (d) Integrity
- 1.3.b If you can keep things at work in order and have a neat workplace, then you have great..... 1
- (a) Loyalty
  - (b) Organizational Skills
  - (c) Productivity
  - (d) Respect
- 1.3.c It is always important to..... yourself, others and the place where you work. 1
- (a) Appearance
  - (b) Cooperate
  - (c) Communicate
  - (d) Respect
- 1.3.d In the opening case study, Lee and colleagues illustrate the use of which method in cultural research? 1
- (a) surveys
  - (b) experiments
  - (c) ethnographic interviewing
  - (d) observation
- 1.3.e Oliver is pursuing a study that explores whether sleep affects academic performance. This is an example of: 1
- (a) a hypothesis
  - (b) a qualitative research question
  - (c) a theory
  - (d) a method
- 1.3.f Thomas is exploring whether gender has an effect on spatial rotational skills. Because he cannot randomly assign his participant, Thomas is pursuing: 1
- (a) an experiment
  - (b) a priming experiment
  - (c) a quasi-experiment
  - (d) a confounding experiment
- 1.3.g What is an empathy map? 1
- (a) A tool used by pilots to guide their direction.
  - (b) A tool used by psychologists to analyze patients.
  - (c) A tool used by designers to understand customers.
  - (d) A tool used by teachers to support students.
- 1.4.a Majority rule has which of the following disadvantages? 1
- (a) it is time consuming to arrive at a majority decision
  - (b) majorities make slow methodological decisions
  - (c) a dominance power dynamic can emerge
  - (d) all of the above
- 1.4.b Consensus decision making means that 1
- (a) every group member's preferred choice will be selected by the group
  - (b) all members agree to the final decision or group choice
  - (c) all legitimate concerns of group members are addressed

- (d) both b and c
- 1.4.c Breaking down a problem into its constituent parts during team discussion is which of the following steps in the Standard Agenda? 1
- (a) Criteria development
  - (b) Identification of the problem
  - (c) Analyzing the problem
  - (d) Evaluating problem solutions
- 1.4.d Cognitive dissonance occurs in which stage of the buyer decision process model? 1
- (a) Need recognition
  - (b) Information search
  - (c) Evaluation of alternatives
  - (d) Post purchase behavior
- 1.4.e A is a good offered either free or at low cost as an incentive to buy a product 1
- (a) patronage reward
  - (b) spiff
  - (c) price pack
  - (d) premium
- 1.4.f Yahoo, Info seek, and Excite are all called 1
- (a) browsers
  - (b) Webcasters
  - (c) search engines
  - (d) software
- 1.4.g What is the definition of critical thinking? 1
- (a) Higher level thinking that aims to solve a problem.
  - (b) Finding faults and weaknesses in other people's arguments.
  - (c) Logically analyzing arguments in a critical way
  - (d) Disciplined thinking and judgment
- 1.5.a What percentage of employers say critical-thinking skills are essential in the workplace? 1
- (a) 0.45
  - (b) 0.55
  - (c) 0.65
  - (d) 0.75
- 1.5.b Critical thinking can help beyond the classroom as in which of the following: 1
- (a) how seriously involved you should get with relationships
  - (b) how to think with imagination
  - (c) how to identify the real problem
  - (d) how seriously involved you should get with relationships and how to identify the real problem
- 1.5.c Steps for critical-thinking skill development involve. (CO5) 1
- (a) looking at things differently
  - (b) analyzing information
  - (c) solving problems
  - (d) All of the above
- 1.5.d Tips to keep emotions from affecting your objectivity in decision making include which of the following: 1
- (a) Don't let yourself become engaged in "I'm right, you're wrong" situations.

- (b) Let your self-talk or inner voice control the situation.
  - (c) Let your emotions guide your decision.
  - (d) Don't deliberate when making a decision as it only prolongs the inevitable
- 1.5.e How does questioning help us explore, develop, and acquire new knowledge? 1
- (a) Questioning helps us gain insight where we may have limited knowledge
  - (b) Questioning challenges us to look at issues from many different angles.
  - (c) Questioning is not a factor in developing new knowledge.
  - (d) Questioning helps us gain insight where we may have limited knowledge and challenges us to look at issues from many different angles.
- 1.5.f Guidelines for trying to distinguish fact from opinion include which of the following: 1
- (a) Listen for everything that is said in a statement
  - (b) Listen for what is not said in a statement
  - (c) Don't bother asking for documentation to support the statement as they probably don't have it with them
  - (d) Follow your intuition regarding those whom you trust.
- 1.5.g Strategies for creative thinking include 1
- (a) Never be afraid to ask any question, even those you think may be silly.
  - (b) Take risks and dream big.
  - (c) Force yourself to do something old in a new way
  - (d) All of the above

## SECTION B

10 X 3 = 30

2. Answer any TEN of the following:-

- 2.1.a Give examples of 2 good design around you. Explain what made them a good design and how it helped people or the society. 2
- 2.1.b Think of any wicked problem which our country is facing right now. Government of India has appointed you as a consultant to work on this problem. List down the observations, form and refine a problem statement and list down feasible and sustainable idea. 2
- 2.2.a Discuss the ways to overcome the negative sentiments. 2
- 2.2.b Describe the importance of ethical behaviour in society. 2
- 2.2.c Describe the socialization process in detail. 2
- 2.3.a Elaborate the role of critical thing in scientific reasoning. Also enlist five components of scientific reasoning. (CO3) 2
- 2.3.b Define argument and differentiate between inductive argument and deductive argument. 2
- 2.3.c How to diagram Arguments in Logic, Premise and Conclusion. 2
- 2.4.a What are Ideation method to spark innovative ideas: (CO4) 2
- 2.4.b Write short note on following: (1) Logical fallacy (2) Proposition 2
- 2.5.a The scientific method cannot be identified with any particular set of experimental or observational 2
- 2.5.b Propositional logic uses symbols to stand for statements and 2