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Subject Code:- BMICA0204

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NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute Affiliated to AKTU, Lucknow)

MCA (Integrated)

SEM: II - THEORY EXAMINATION (20..... - 20....)

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. Design Thinking typically helps in _____ (CO1, K2) 1
- (a) Innovation
 - (b) Data analytics
 - (c) Financial planning
 - (d) Operational efficiency
- 1-b. An expected decline in the prices of consumer goods will: (CO1, K2) 1
- (a) decrease aggregate demand
 - (b) increase the quantity of real domestic output demanded
 - (c) increase aggregate demand.
 - (d) decrease the quantity of real domestic output demanded.
- 1-c. The "Diverge" Phase in design thinking is related to: (CO2, K2) 1
- (a) Analyzing data
 - (b) Narrowing down idea
 - (c) Generating multiple ideas
 - (d) Testing prototyping
- 1-d. During which step do you explore the ways in which users experience your area of concern? (CO2, K2) 1
- (a) Prototype
 - (b) Ideate

- (c) Define
- (d) Empathise
- 1-e. It is always important to.....yourself, others and the place where you work. 1
(CO3, K2)
 - (a) Appearance
 - (b) Cooperate
 - (c) Communicate
 - (d) Respect
- 1-f. Empathy map can be used to: (CO3, K2) 1
 - (a) Detect the target market
 - (b) All of the above
 - (c) Whenever you find a need to immerse yourself in a user's environment
 - (d) Develop a new product
- 1-g. According to the text, critical thinking complements: (CO4, K2) 1
 - (a) Our prejudices
 - (b) Our emotions
 - (c) Peer pressure
 - (d) Our unconscious desires
- 1-h. The statements (reasons) given in support of another statement are called... (CO4, K2) 1
 - (a) An argument
 - (b) The conclusion
 - (c) The premises
 - (d) The complement
- 1-i. A deductively valid argument cannot have (CO5, K2) 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. The best way to learn how to assess long passages containing an argument is to... (CO5, K1) 1
 - (a) Practice
 - (b) Look for premises first
 - (c) Use the five-step method
 - (d) Look for false premises first

2. Attempt all parts:-

- 2.a. Give two real time examples of power of observation and how it can help in understanding the problem. (CO1, K3) 2

2.b.	Describe the nine feelings in relationship. (CO2, K2)	2
2.c.	Elaborate the role of critical thing in scientific reasoning. Also enlist five components of scientific reasoning. (CO3, K2)	2
2.d.	Write short note on following: (1) Logical fallacy (2) Proposition (CO4, K2)	2
2.e.	Define the four logical connectives in detail. (CO5, K2)	2

SECTION-B

30

3. Answer any five of the following:-

3-a.	Discuss the difference between immersion and observation with example (CO1, K2)	6
3-b.	Elaborate Arcturtus IV case study. (CO1, K3)	6
3-c.	Define different perspectives of ethical behaviour. (CO2, K2)	6
3-d.	Describe the brainstorming with its benefits. (CO2, K2)	6
3.e.	Write Short note on Double Diamond Approach. (CO3, K2)	6
3.f.	Distinguish between various types of cognitive biases. (CO4, K2)	6
3.g.	List the five step process of critical thinking. (CO5, K2)	6

SECTION-C

50

4. Answer any one of the following:-

4-a.	Describe the key elements of design thinking. Also, explain LDO. (CO1, K2)	10
4-b.	What are five steps of design thinking? Explain role of Define tool in design process.(CO1, K2)	10

5. Answer any one of the following:-

5-a.	Elaborate the role of education in human life. (CO2, K2)	10
5-b.	Children tends to learn important values and behaviors from their family by observing them. Explain. (CO2, K3)	10

6. Answer any one of the following:-

6-a.	Explain what do you understand by Sketching. How it is different from Prototyping? (CO3, K2)	10
6-b.	What do you understand with Ideation stage of Design Thinking. Explain Brainstorming tool with example. (CO3, K2)	10

7. Answer any one of the following:-

7-a.	Describe structure of an argument. Is premises and conclusion both are important in argument? (CO4, K2)	10
7-b.	Define the role of probability and judgment in critical thinking with appropriate example.(CO4, K2)	10

8. Answer any one of the following:-

8-a.	Apply the mind mapping technique on water management. (CO5, K3)	10
8-b.	Explain how the questioning techniques builds a deeper understanding. (CO5, K2)	10