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

SEM: II - CARRY OVER THEORY EXAMINATION - JUNE (2021 - 2022)

Subject: Design Thinking-I

Time: 3 Hours

Max. Marks: 100

General Instructions:

1. The question paper comprises three sections, A, B, and C. You are expected to answer them as directed.
2. Section A - Question No- 1 is 1 marker & Question No- 2 carries 2 mark each.
3. Section B - Question No-3 is based on external choice carrying 6 marks each.
4. Section C - Questions No. 4-8 are within unit choice questions carrying 10 marks each.
5. 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 is: (CO1) | 1 |
| | (a) Thinking about design | |
| | (b) Designing ways in which people think | |
| | (c) Asking users to solve problems | |
| | (d) Defining, framing and solving problems from users' perspectives | |
| 1-b. | Design thinking is often also called (CO1) | 1 |
| | (a) Intellectual property | |
| | (b) Human Centred design | |
| | (c) Ecological sustainability | |
| | (d) Alien diversity | |
| 1-c. | Self exploration uses two mechanism, natural acceptance and.....(CO2) | 1 |
| | (a) Reason | |
| | (b) Experimental Validation | |
| | (c) Logical thinking | |
| | (d) Theoretical concepts | |
| 1-d. | Falling in one to one discussion is...(CO2) | 1 |
| | (a) Ideation | |
| | (b) Immersion | |
| | (c) Observation | |
| | (d) Dialogue | |
| 1-e. | What is a customer journey map? (CO3) | 1 |
| | (a) It is a map to locate where the customer has travelled | |
| | (b) This only applies to the travel industry, since it involves maps | |
| | (c) It is a typical journey of a customer who goes through a certain experience | |
| | (d) The map that leads us to a profit making enterprise | |
| 1-f. | People Centered Design Methodology involves (CO3) | 1 |
| | (a) A problem solving approach for people that is linear and convergent | |
| | (b) A problem solving approach which is abstract and results in making people buy products | |
| | (c) A problem solving approach for people that both diverges and converges | |
| 1-g. | The statements (reasons) given in support of another statement are called...(CO4) | 1 |

	(a) An argument	
	(b) The conclusion	
	(c) The premises	
	(d) The complement	
1-h.	The statement that premises are intended to support is called...(CO4)	1
	(a) A related premise	
	(b) An argument	
	(c) A description	
	(d) The conclusion	
1-i.	An inductive argument that succeeds in providing probable, but not conclusive, logical support for its conclusion is said to be (CO5)	1
	(a) Inductive	
	(b) Cogent	
	(c) Weak	
	(d) Strong	
1-j.	The best approach to identifying implicit premises is to treat moral arguments as (CO5)	1
	(a) Inductive	
	(b) Deductive	
	(c) Nonmoral statements	
	(d) Theories	
2. Attempt all parts:-		
2.a.	What are wicked Problems? (CO1)	2
2.b.	Discuss the needs of self and body(CO2)	2
2.c.	How "Random Association Technique" helps in Brainstorming session? (CO3)	2
2.d.	List the five step process of critical thinking.(CO4)	2
2.e.	Differentiate between Valid and invalid arguments. (CO5)	2
SECTION B		30
3. Answer any <u>five</u> of the following:-		
3-a.	How design thinking is different from traditional thinking? (CO1)	6
3-b.	Elaborate Arcturtus IV case study (CO1)	6
3-c.	How empathy can be playing an important role in understanding the problem?(CO2)	6
3-d.	Explain the term stakeholder with their role in organization.(CO2)	6
3.e.	Apply the mind mapping technique on water management (CO3)	6
3.f.	Differentiate between critical and ordinary thinking. (CO4)	6
3.g.	Differentiate between deductive argument and an inductive argument? (CO5)	6
SECTION C		50
4. Answer any <u>one</u> of the following:-		
4-a.	What are 13 musical notes of Design mindset. How do they impact our thinking (CO1)	10
4-b.	What are desirability, feasibility and viability? Why do we need to strike a balance between them? (CO1)	10
5. Answer any <u>one</u> of the following:-		
5-a.	Examine yourself as co-existence of self and body? Describe.(CO2)	10
5-b.	Discuss the care & guidance.(CO2)	10
6. Answer any <u>one</u> of the following:-		
6-a.	An all weather bicycle has been proposed by a company. Apply mind mapping technique.	10

- Applying six hat technique develop a mind map for a business strategy (CO3)
- 6-b. Attempt a journey map of a first-year student who comes from a rural background and enters your classroom- 10
- Draw the persona
- Identify various touch points
- Capture journey map elements at each touch point and rate them by plotting a graph (CO3)
7. Answer any one of the following:-
- 7-a. Elaborate cognitive bias. What are the causes related to it? (CO4) 10
- 7-b. Describe structure of an argument? Is premises and conclusion both are important in argument?(CO4) 10
8. Answer any one of the following:-
- 8-a. What do you understand by the term logical fallacy and describe how to avoid logical fallacies using deductive reasoning. (CO 5) 10
- 8-b. Differentiate between the following: (1) Valid and invalid Argument (2) Strong and Weak Argument (CO 5) 10