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**PRESIDENCY UNIVERSITY**

**Bengaluru**

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| **End - Term Examinations – JANUARY 2025** |
| **Date:** 09 – 01- 2025 **Time:** 09:30 am – 12:30 pm |

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| **School:** School of Engineering | **Program:** B. Tech (EEE) | |
| **Course Code:** DES2001 | **Course Name:** Design Thinking | |
| **Semester**: VII | **Max Marks**: 100 | **Weightage**: 50% |

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| **CO - Levels** | **CO1** | **CO2** | **CO3** | **CO4** | **CO5** |
| **Marks** | **18** | **45** | **37** |  |  |

**Instructions:**

1. *Read all questions carefully and answer accordingly.*
2. *Do not write anything on the question paper other than roll number.*

**Part A**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Answer ALL the Questions. Each question carries 2marks. 10Q x 2M=20M** | | | | |
| **1** | Define “prototype testing.” | **2 Marks** | **Remembering** | **CO1** |
| **2** | List two tools for user data analysis in design thinking. | **2 Marks** | **Remembering** | **CO1** |
| **3** | What is meant by “problem framing”? | **2 Marks** | **Remembering** | **CO1** |
| **4** | Define “User journey mapping.” | **2 Marks** | **Remembering** | **CO1** |
| **5** | Name two techniques used in the ideate phase. | **2 Marks** | **Remembering** | **CO2** |
| **6** | Name an example of a “How Might We” question. | **2 Marks** | **Remembering** | **CO2** |
| **7** | Name two benefits of collaborative brainstorming. | **2 Marks** | **Remembering** | **CO2** |
| **8** | List two differences between explicit and latent user needs. | **2 Marks** | **Remembering** | **CO2** |
| **9** | What does “continuous improvement” mean in design thinking? | **2 Marks** | **Remembering** | **CO2** |
| **10** | Explain briefly “role-playing” as a prototyping tool. | **2 Marks** | **Understanding** | **CO3** |

**Part B**

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| **Answer the Questions Total 80 Marks** | | | | | |
| **11.** | **a.** | Explain the concept of empathy maps in user-centered design. | **5 Marks** | **Understanding** | **CO1** |
|  | **b.** | How do empathy maps help in identifying user needs? | **5 Marks** | **Remembering** | **CO1** |
| **or** | | | | | |
| **12.** | **a.** | Explain the phases of the EDIPT model. | **5 Marks** | **Understanding** | **CO1** |
|  | **b.** | Illustrate the interconnections between the phases of the EDIPT model. | **5 Marks** | **Understanding** | **CO1** |
|  |  |  |  |  |  |
| **13.** | **a.** | Explain the relationship between design challenges and the need for innovative solutions. | **5 Marks** | **Analysing** | **CO2** |
|  | **b.** | How do innovative solutions help address design challenges? | **5 Marks** | **Remembering** | **CO2** |
| **or** | | | | | |
| **14.** | **a.** | Why are feedback sessions important in the prototype refinement process? | **5 Marks** | **Understanding** | **CO2** |
|  | **b.** | How does feedback from these sessions improve prototypes? | **5 Marks** | **Remembering** | **CO2** |

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| **15.** | **a.** | How does the SCAMPER technique demonstrate adaptability in problem-solving? | **5 Marks** | **Evaluating** | **CO2** |
|  | **b.** | Identify some examples of SCAMPER’s application in various industries. | **5 Marks** | **Applying** | **CO2** |
| **Or** | | | | | |
| **16.** | **a.** | What is the concept of user-centered design, and why is it important? | **5 Marks** | **Remembering** | **CO2** |
|  | **b.** | Show some examples of user-centered design in practice. | **5 Marks** | **Understanding** | **CO2** |

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| **17.** | **a.** | What is brainstorming, and how does it work in generating ideas? | **5 Marks** | **Creating** | **CO2** |
|  | **b.** | What is brainwriting, and how does it differ in process from brainstorming? | **5 Marks** | **Remembering** | **CO2** |
|  | **c.** | Compare the advantages and limitations of brainstorming and brainwriting. | **5 Marks** | **Evaluating** | **CO2** |
| **Or** | | | | | |
| **18.** | **a.** | What are the key stages in a user’s journey when booking movie tickets online? | **5 Marks** | **Remembering** | **CO2** |
|  | **b.** | What touchpoints and user emotions are associated with each stage of the journey? | **5 Marks** | **Remembering** | **CO2** |
|  | **c.** | What improvements can be made to enhance the user experience during this journey? | **5 Marks** | **Remembering** | **CO2** |

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| **19.** | **a.** | What is the concept of “aesthetic and functional balance” in design, and why is it important? | **10 Marks** | **Remembering** | **CO3** |
|  | **b.** | Analyze how “aesthetic and functional balance” impacts user experience with examples. | **5 Marks** | **Analysing** | **CO3** |
| **Or** | | | | | |
| **20.** | **a.** | What are the essential features of a smart home app for managing energy consumption? | **10 Marks** | **Remembering** | **CO3** |
|  | **b.** | Design a low-fidelity prototype for the app, outlining its layout and user flow. | **5 Marks** | **Creating** | **CO3** |

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| **21.** | **a.** | What are the key stages of the design thinking process, and how can they be applied to enhancing patient experience in hospitals? | **10 Marks** | **Remembering** | **CO3** |
|  | **b.** | Propose specific design thinking solutions to improve the patient experience in hospitals. | **10 Marks** | **Creating** | **CO3** |
| **Or** | | | | | |
| **22.** | **a.** | How does the iterative design process work, and why is it well-suited to addressing environmental challenges? | **10 Marks** | **Remembering** | **CO3** |
|  | **b.** | Relate some examples of how the iterative design process has been applied to environmental challenges. | **10 Marks** | **Understanding** | **CO3** |

**\*\*\*\*\* BEST WISHES \*\*\*\*\***