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**PRESIDENCY UNIVERSITY**

**Bengaluru**

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| **End - Term Examinations – January 2025** |
| **Date:** 08 – 01- 2025 **Time:** 09:30 am – 12:30 pm |

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| **School:** SOIS | **Program:**BCA/BCD/BCG | |
| **Course Code :**CSA3010 | **Course Name :** HCI in Game Development | |
| **Semester**: V | **Max Marks**:100 | **Weightage**: 50% |

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| **CO - Levels** | **CO1** | **CO2** | **CO3** | **CO4** |
| **Marks** | **24** | **26** | **24** | **26** |

**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** Human-Computer Interaction (HCI) and User Experience (UX). | **2 Marks** | **L1** | **CO1** |
| **2** | **Define** recall and recognition in human memory. | **2 Marks** | **L1** | **CO1** |
| **3** | How the concept of designer bias and its impact on user interface design. | **2 Marks** | **L1** | **CO2** |
| **4** | **Define** the term 'significance level' in statistical analysis. | **2 Marks** | **L1** | **CO2** |
| **5** | **What is** a scatter plot? | **2 Marks** | **L1** | **CO2** |
| **6** | **What is** a confidence interval? | **2 Marks** | **L1** | **CO3** |
| **7** | **What is** heuristic evaluation? | **2 Marks** | **L1** | **CO3** |
| **8** | **Define** stereotype threat. | **2 Marks** | **L1** | **CO4** |
| **9** | **What is** the Hawthorne effect? | **2 Marks** | **L1** | **CO4** |
| **10** | **Define** multimodal interfaces. | **2 Marks** | **L1** | **CO4** |

**Part B**

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| **Answer the Questions Total 80 Marks.** | | | | | |
| **11.** | **a.** | **How can understanding human factors principles, such as perception, cognition, and memory, improve the design of user interfaces?. What are the different types of prototypes and when is it appropriate to use each type?** | **20 Marks** | **L2** | **CO1** |
| **Or** | | | | | |
| **12.** | **a.** | **Explain the concept of user-centered design (UCD).** Describe the stages of the UCD process, including user research, information architecture, interaction design, and visual design.**What is the relationship between HCI and UX?.** | **20 Marks** | **L2** | **CO1** |
|  |  |  |  |  |  |
| **13.** | **a.** | Explain the importance of considering cultural factors in universal design. **Explain** the four pillars of design. How can these principles be applied to create more inclusive user experiences? **Describe** the different approaches to implementing universal design. | **20 Marks** | **L2** | **CO2** |
| **Or** | | | | | |
| **14.** | **a.** | **Discuss** the role of Gestalt principles in user interface design. How can these principles be used to create more intuitive and visually appealing interfaces? What are some common data collection methods and sampling techniques used in user research? | **20 Marks** | **L2** | **CO2** |

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| **15.** | **a.** | **Discuss** the role of experimental methods in evaluating user interface design. What are the key steps involved in designing and conducting an experiment?. **Discuss** the importance of data analysis in user research. | **20 Marks** | **L2** | **CO3** |
| **Or** | | | | | |
| **16.** | **a.** | **Explain** the concept of user-centered design. How can user-centered design principles be applied to the design of user interfaces? **Discuss** the types of evaluation? Explain the usability test? | **20 Marks** | **L2** | **CO3** |

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| **17.** | **a.** | **Discuss** the importance of considering human factors in the design of multimodal interfaces. Explain the **Discuss** elements of visual design. **Explain** the role of semiotics in the design of visual symbols and icons. | **20 Marks** | **L2** | **CO4** |
| **Or** | | | | | |
| **18.** | **a.** | **Discuss** elements of visual design with BCI technology? **Explain** the concept of ambient intelligence. How can ambient intelligence be used to create more intuitive and responsive environments? **Discuss** the impact of wearable devices on human-computer interaction. What are some emerging trends in wearable technology? | **20 Marks** | **L2** | **CO4** |

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