UPES
End Semester Examination, May 2024

Programme Name : BTech_CSE **Semester   : 4**
Course Name   : Human Computer Interface **Time   : 03 hrs**
Course Code   : CSEG 2038P **Max. Marks : 100**
Nos. of page(s)   : 2

Instructions:

SECTION A
(4 Marks * 5 = 20 Marks)
Answer all questions. Each question carries 4 marks.

S. No.		Marks	CO
Q 1	Define Direct Manipulation and give an example of how it is used in graphical user interfaces.	4	CO4
Q 2	What are the characteristics of a Graphical User Interface (GUI)? List any four.	4	CO1
Q 3	Explain the concept of Human-Centered Design (HCD) and its importance in HCI.	4	CO2
Q 4	Describe the difference between augmented reality and tangible user interfaces.	4	CO4
Q 5	What is Bayesian strategy for data entry? Provide a brief explanation.	4	CO1

SECTION B
(10 Marks * 4 = 40 Marks)
Answer any three questions. Each question carries 10 marks

Q 6	Describe the principles of multimodal interfaces and their benefits in enhancing user experience.	10	CO1
Q 7	Illustrate with examples the application of Fourier Transform in feature extraction for HCI.	10	CO1
Q 8	Discuss the advantages and disadvantages of using Hidden UI in smart devices.	10	CO3
Q 9	Compare and contrast between invasive and non-invasive Brain-Computer Interfaces. OR Explain the significance of the BCI Competition III Dataset and its impact on BCI research.	10	CO2

SECTION C
(20 Marks * 2= 40 Marks)
Answer all questions. Each question carries 20 marks.

Q 10	Analyze the ethical considerations in BCI research and propose solutions to address potential ethical dilemmas.	20	CO4

| Q 11 | Develop a comprehensive design proposal for a web based HCI system that accommodates diverse user needs and implements principles of user interface design. Include considerations for text-to-speech and auditory displays.
OR
Create a detailed plan for evaluating a multimodal interface designed for educational software. Your plan should include methodologies for assessing effectiveness, user satisfaction, and learning outcomes. | 20 | CO2 |