

Total No. of Questions : 8]

SEAT No. :

PE-2521

[Total No. of Pages : 3

[6583]-47

**T.E. (Computer/A.I.&D.S./Computer Science/  
Computer Science and Engineering (Data Science)  
HUMAN COMPUTER INTERFACE  
(2019 Pattern) (Semester - V) (310245 B) (310645 A)**

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates :

- 1) Answer Q.1 or Q.2, Q.3 or Q.4, Q. 5 or Q. 6, Q. 7 or Q. 8.
- 2) Figures to the right indicate full marks.
- 3) Neat diagrams must be drawn whenever necessary.

**Q1) a)** What is mean by interaction styles? Explain different types of interaction styles such as: [8]

- i) Command-line interface
- ii) Menus
- iii) Form-Fills-In
- iv) Direct Manipulation.

**b)** Write down about iterative design and prototyping using suitable example. [5]

**c)** Elaborate characteristics of web using Merging of Graphical Business Systems and Web Characteristics of Intranet Versus Internet. [5]

OR

**Q2) a)** What is mean by design? Which are the important things required to consider for designing? Explain with example [8]

**b)** Explain advantages, disadvantages and characteristics of Graphical User Interface. [5]

**c)** Write short note on: Popularity of the Web [5]

**P.T.O.**

- Q3) a) Write short note on:** [6]
- i) Usability Testing in Laboratory
  - ii) Controlled Experiments
  - iii) Heuristic Evaluation
- b) Elaborate Evaluation Framework using following point: [6]
- i) Paradigms and Techniques
  - ii) DECIDE: a Framework to Guide Evaluation
- c) What is significance of multi-modal interaction in HCI System? Explain with example. [5]

OR

- Q4) a) Elaborate universal design principles in detail.** [6]
- b) Write short note on: [6]
- i) Empirical Methods: Experimental Evaluation
  - ii) Field Studies
- c) Explain formative and summative evaluation. [5]
- Q5) a) Discuss about interface design, pattern recognition phases, system architecture using suitable example of HCI system.** [6]
- b) Explain vision-based Hand Gesture Recognition System using HCI paradigms. [6]
- c) What is mean by ubiquitous computing? Which are the applications of it? Explain with suitable example. [6]

OR

- Q6)** a) Explain the term “data entry and usability using appropriate case study. [6]
- b) Write short note on: [6]
- i) Retrieval in Physical World
  - ii) Retrieval in Digital world
  - iii) Constrained Natural Language output
- c) Compare data integrity and data immunity. [6]

- Q7)** a) Elaborate designing for Mobile and other devices. [6]
- b) Explain Mobile Navigation, Content, and Control Idioms using appropriate Example. [6]
- c) What is the significance of navigation and toolbars” in HCI? Explain. [5]

OR

- Q8)** a) What is use of”multi-touch gestures”. Explain various multi-touch gestures used in mobile device [6]
- b) Describe Tap-to-Reveal and Direct Manipulation. [6]
- c) Explain Norman’s Principles of Design in software. [5]

