

Total No. of Questions : 8]

SEAT No. :

**PB3782**

**[6262]-40**

[Total No. of Pages : 2

**T.E. (Computer)/(Artificial Intelligence and Data Science)**

**HUMAN COMPUTER INTERFACE**

**(2019 Pattern) (Semester- I) (310245 B) (Elective- I)**

*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 and Q.7 or Q.8.
- 2) Figures to the right indicate full marks.
- 3) Neat diagrams must be drawn wherever necessary.
- 4) Make suitable assumption whenever necessary.

**Q1) a)** What is meant by design? Which are the important points needed to consider for designing? **[6]**

b) Explain what is mean by human error in detail. **[6]**

c) List out Eight golden rules. **[6]**

OR

**Q2) a)** Explain the process of design using suitable example. **[6]**

b) Discuss the Software Life cycle used in HCI system using appropriate example. **[6]**

c) Elaborate Graphical User Interface in Detail. **[6]**

**Q3) a)** Elaborate Evaluation framework using following point: **[6]**

i) Paradigms and Techniques

ii) DECIDE: a framework to Guide Evaluation

b) Elaborate usability assessment in the design process. **[6]**

c) Explain formative and summative evaluation. **[5]**

OR

**Q4) a)** Explain analytic methods and model-based analysis. Write short note on usability specification for evaluation. **[6]**

b) Elaborate GOMS model. **[6]**

c) Elaborate universal design principles in detail. **[5]**

**Q5) a)** explain vision-based Hand Gesture Recognition System using HCI paradigms. **[6]**

b) What is mean by paradigm? Explain in detail. **[6]**

c) What is mean by ubiquitous computing? Which are the applications of it? Explain with suitable example. **[6]**

OR

**P.T.O.**

- Q6)** a) Explain the following terms: [6]  
i) Sensor-based interaction  
ii) Context-aware interaction  
iii) Data integrity and data immunity  
b) Elaborate the term auditing versus editing using Nielsen heuristic principles. [6]  
c) Explain “Five stage framework” using suitable HCI system. [6]

- Q7)** a) Explain Norman’s principles of Design in software. [6]  
b) Elaborate designing for mobile and other devices in detail. [6]  
c) Write short note on: [5]  
i) Mobile form factors  
ii) Handheld format apps  
iii) Tablet format apps  
iv) Mini-tablet format apps  
v) Mobile Navigation

OR

- Q8)** a) What is the significance of “navigation and toolbars” in HCI? Explain. [6]  
b) Discuss the drawers used in HCI system. Explain item-level drawers in detail. [6]  
c) Describe the term “Inter-app Integration” in detail. [5]

