

Total No. of Questions : 12]

SEAT No. :

**P4557**

[Total No. of Pages : 3

**[4958] - 208**

**T.E. (Information Technology)**

**HUMAN COMPUTER INTERACTION AND USABILITY**

**(2008 Pattern)**

*Time : 3 Hours]*

*[Max. Marks :100*

*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, Q.9 or Q.10., Q.11 or Q.12.*
- 2) Draw neat diagrams whenever necessary.*
- 3) Figures to the right side indicate full marks.*
- 4) Assume suitable data if necessary.*

**SECTION - I**

- Q1)** a) Discuss general principles and goals of user interface design. **[8]**  
b) Define Ergonomics. Explain with example. **[8]**

OR

- Q2)** a) Compare STM and LTM of human with respect to capacity, access time and forgetting. **[8]**  
b) What is reasoning? Discuss with example Inductive versus Deductive Reasoning. **[8]**

- Q3)** a) Describe briefly four different interactions styles used to accommodate the dialog between user and computer. Specify advantages and disadvantages of each interaction style. **[10]**  
b) What are the different life cycle models in HCI? Explain any one lifecycle model in detail. **[8]**

OR

***P.T.O.***

- Q4)** a) List different interaction styles. Explain command line interface and menus interface with advantages and disadvantages. [10]  
b) Express your opinion - "A design should be User-Centric". [8]
- Q5)** a) Evaluate Microsoft Power Point interface using the "Eight golden rules of interface design". [8]  
b) With respect to Human Diversity how to accommodate users with disabilities and elderly users. [8]

OR

- Q6)** a) Why is context important in selecting and applying guidelines and principles for interface design? Illustrate your answer with examples. [8]  
b) Explain how practical usability engineering process can be incorporated for developing an online hospital management system. [8]

## **SECTION - II**

- Q7)** a) Discuss the characteristics, guidelines and principles of good web page design. [8]  
b) Explain any two evaluation paradigms for UI design. [8]

OR

- Q8)** a) What usability standards are necessary in designing home page for e-governance websites? [8]  
b) Compare: Formative Evaluation versus Summative Evaluation. [8]
- Q9)** a) Hierarchical Task Analysis (HTA) is used to describe the interactions between a user and a software system. Draw and explain HTA to online bus reservation system. [8]  
b) What is Cognitive Model? Discuss with example. [8]

OR

- Q10)** a) Explain status event analysis with example. [8]  
b) Give any two diagrammatic or textual notations used to design dialogs in effective user interface. Justify your notations with respective examples. [8]

**Q11)a)** Discuss use of augmented reality in Education. **[8]**

b) Consider following two shared application : **[10]**

- Shared PCs and shared window systems
- Shared editors.

What are the main issues that need to be addressed in the design of these applications?

OR

**Q12)** Write short notes on ANY THREE of the following : **[18]**

- a) Information and data visualization.
- b) Synchronous and asynchronous groupware applications.
- c) Any three devices for virtual reality.
- d) Ubiquitous computing.

