



[4459] – 267

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| Seat No. | |
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**T.E. (Information Technology) Examination, 2013
HUMAN COMPUTER INTERACTION AND USABILITY
(314451) (2008 Pattern)**

Time : 3 Hours

Max. Marks : 100

- Instructions:**
- 1) Answer questions **1** or **2**, **3** or **4**, **5** or **6** from Section I.
 - 2) Answer questions **7** or **8**, **9** or **10** and **11** from Section – II.
 - 3) Answers to the **two** Sections should be written in **separate** answer books.
 - 4) **Neat** diagrams must be drawn **wherever** necessary.
 - 5) Figures to the **right** indicate **full** marks.
 - 6) Assume **suitable** data, if **necessary**.

SECTION – I

1. a) What is reasoning ? Discuss with example Inductive Versus Deductive Reasoning. 8
b) Explain the goals of Interaction design in detail. 8
OR
2. a) Explain Good design and poor design with example. 8
b) Write short note on : 8
 - i) Human Input output channels
 - ii) Human memory.
3. a) Describe how HCI affects use of Fully Automatic Washing Machine with respect to: 8
 - i) the aim of the program (what is used for)
 - ii) describe its interface (picture of the screen)
 - iii) describe its interaction (how it is used).
b) Describe briefly four different interaction styles used to accommodate the dialog between user and computer. Specify advantages and disadvantages of each interaction style. 8

OR

P.T.O.



4. a) Explain paradigms of Interaction design. 8
 b) Write short note on process of Interaction design with respect to following points: 8
 i) Basic activities
 ii) Characteristics.

5. a) Explain learnability principles to support usability with example. 10
 b) Explain Shneiderman's Eight Golden Rules of Design. 8

OR

6. Write short notes on **any three** of the following : 18
 i) Iterative design and prototyping
 ii) Design Rationale
 iii) HCI patters
 iv) Multimodal Interaction
 v) Design for Diversity.

SECTION – II

7. a) Discuss the importance and benefits of usability evaluation of user interfaces. 8
 b) Compare the heuristic evaluation and cognitive walkthrough techniques. 8

OR

8. a) Generate a 16 point checklist for website usability testing. 8
 b) How will you evaluate a website based on speed, accuracy, success and satisfaction ? 8
 9. a) Explain the role of cognitive modeling in user interface design. 8
 b) Perform a hierarchical task analysis (HTA) of communication using e-mails. 8

OR

10. a) Discuss augmented reality applications. 8
 b) How will context awareness benefit HCI ? 8
 11. Write short notes on **any three** of the following : 18
 i) Groupware systems
 ii) GOMS analysis
 iii) Dialogue notations
 iv) Data visualization.