

IV B.Tech II Semester Regular Examinations, April/May - 2017

**HUMAN COMPUTER INTERACTION**

(Common to Computer Science &amp; Engineering and Information Technology)

Time: 3 hours

Max. Marks: 70

*Question paper consists of Part-A and Part-B**Answer ALL sub questions from Part-A**Answer any THREE questions from Part-B*

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**PART-A (22 Marks)**

1. a) Describe various usability goals and measures. [4]
- b) Write a short note on the fast movement through menus [4]
- c) Distinguish between keyboards and keypads [3]
- d) Discuss on the issues related to webpage design [4]
- e) Describe the taxonomy of user manuals and tutorials [4]
- f) Define the term multidimensional data [3]

**PART-B (3x16 = 48 Marks)**

2. a) Describe five main issues that may affect the design, implementation or marketing [8]
- b) Explain Shneiderman's three pillars of design [8]
3. a) Discuss the classification of Menus [8]
- b) Provide three examples of an application where menu selection and form filling are more appropriate than a direct-manipulation strategy [8]
4. a) Elaborate on various pointing devices [6]
- b) What are the various abbreviation strategies and also discuss on abbreviation guidelines [10]
5. a) What are the guidelines for alphanumeric displays, spreadsheets and Graphs [8]
- b) List few common mistakes of web-based display of information [8]
6. a) Discuss the advantages and disadvantages of reading on paper and reading on computer display [8]
- b) "Online communities are useful for User Assistance" – Justify this statement describing various weaknesses and strengths [8]
7. a) What is information Visualization? Explain how it caters to the perceptual abilities of humans [8]
- b) Explain advanced filtering and search techniques [8]

Code No: RT42053A

**R13**

**Set No. 2**

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**PART-A (22 Marks)**

1. a) What should we do to achieve Usability? [3]
- b) Write the guidelines for Menu-selection. [4]
- c) Compare and contrast the characteristics of various pointing devices. [4]
- d) Illustrate the variability in system response time. [4]
- e) Mention the potential disadvantages of reading from displays. [3]
- f) What is the reference model for visualizations? [4]

**PART-B (3x16 = 48 Marks)**

2. a) Explain in detail about the usability measures. [8]
- b) Discuss the organizational design to support usability. [8]
3. a) Explain the various strategies for combining multiple Menus. [8]
- b) What are the application domains that exist for devices with small displays? Explain with examples. [8]
4. a) List and explain the strategies for command organization. [8]
- b) Describe about discrete word recognition and continuous speech recognition in detail. [8]
5. a) Explain about users' tasks and needs which are important in user interface design. [8]
- b) Discuss and elaborate the issues to be considered in choosing colors for web pages. [8]
6. a) What is Transition diagram? Explain its advantages and disadvantages with examples. [8]
- b) Explain in detail about context-sensitive help. [8]
7. a) Discuss with examples about the database searches. [8]
- b) What are the challenges that information visualization researchers need to face to create successful tools? Explain. [8]

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**R13**

**Set No. 3**

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*Answer ALL sub questions from Part-A*

*Answer any THREE questions from Part-B*

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**PART-A (22 Marks)**

1. a) Mention the usability goals for our profession. [3]
- b) What are menu-selection and dialog box trees? [4]
- c) Compare and contrast between specificity and generality. [4]
- d) Write the primary factors that influence users' expectations and attitudes regarding system response time. [4]
- e) Give a brief note on animated demonstrations. [3]
- f) Discuss about the multilingual searches. [4]

**PART-B (3x16 = 48 Marks)**

2. a) Why do we really want usability? Explain with suitable examples. [8]
- b) Discuss the Social impact statement for early design review. [8]
3. a) Explain the various guidelines for designing dialog boxes. [8]
- b) Discuss about the menus for long lists with examples. [8]
4. a) Describe the Speech digitization and generation. [8]
- b) Explain the system functionality to support users' tasks. [8]
5. a) Discuss the role of User Productivity in determining system response time. [8]
- b) Describe choosing colors for statistical graphical screens. [8]
6. a) What are the advantages and disadvantages of online manuals? [8]
- b) Discuss the use of OAI model to design manuals with suitable diagrams. [8]
7. a) Describe the five-phase framework to clarify user interfaces for textual search. [8]
- b) Discuss the data type by task taxonomy to identify information visualization data types. [8]

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**PART-A (22 Marks)**

1. a) Compare and contrast between three and Four pillars of design. [3]
- b) What is the importance of user's tasks and needs in design of a system? [4]
- c) List the strategies for command organization. [4]
- d) Write short notes on user-centered phrasing. [4]
- e) Discuss the various forms of traditional paper user manuals. [3]
- f) Mention the five phases that offers features for designers for textual search. [4]

**PART-B (3x16 = 48 Marks)**

2. a) Discuss the usability goals for requirement analysis. [8]
- b) Explain the six stages of LUCID development methodology. [8]
3. a) Discuss the techniques available to accelerate the fast movement through menus. [8]
- b) Explain how the content organization issues in menus can be reviewed through design guidelines. [8]
4. a) Discuss the guidelines for using abbreviations in Command Languages. [8]
- b) Explain briefly about the features of following key board layouts: [8]
  - (i) QWERTY layout
  - (ii) DVORAK layout
5. a) In presentation styles what is the role of error messages? Explain about readability guidelines for messages. [8]
- b) What is coordination? Discuss the important coordinations supported by interface developers for window design. [8]
6. a) Discuss the taxonomy of user manuals, online help and tutorials. [8]
- b) Explain the appropriate milestones for the production of a manual. [8]
7. a) Explain the role of text messages for designing a successful user interface. [8]
- b) Discuss the basic tasks that need to be supported for information visualization. [8]