

Code No: **RT42053A**

R13

Set No. 1

IV B.Tech II Semester Regular/Supplementary Examinations, April - 2018

HUMAN COMPUTER INTERACTION

(Common to Computer Science and Engineering & 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

PART-A (22 Marks)

1. a) Mention goals of User Interface usability. [3]
- b) What is the importance of Menus in User Interface? [4]
- c) Why Speech recognition is difficult to implement in real time environments? [4]
- d) What are the three strategies that can be adopted to reduce user frustration? [4]
- e) Explain the importance of online documentation. [4]
- f) Write about Multi-dimensional data type. [3]

PART-B (3x16 = 48 Marks)

2. a) What is Usability in User Interface design? Why Usability is so important? Explain the principles of User Interface design. [8]
- b) Explain in detail various legal issues that are to be considered seriously while designing a User Interface. [8]
3. a) What are the contents of Menu? Explain in detail about the organization of task-related menus. [8]
- b) Why it is important to use alternative menu styles for small display units? Explain. [8]
4. a) Explain in detail the goals of Language design. [8]
- b) Discuss various Motion-tracking pointing devices and their accessibility. [8]
5. a) With a neat sketch, explain Response Time and User Think time. [6]
- b) What is nonanthropomorphic design? What reasons lead to this design? [10]
6. a) Discuss the advantages and disadvantages of reading from displays. [8]
- b) Write about the best practices for shaping a good documentation. [8]
7. a) What is the function of Search? What is a Search Engine Query? List out the most popular Search Engines in the world. [6]
- b) How is querying done in searching for textual documents? [10]

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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

PART-A (22 Marks)

1. a) Give the Metrics to measure and quantify Usability. [3]
- b) What are various classification of menus? [4]
- c) Write about various display technologies. [4]
- d) What are the three things that influence the Response Time? [4]
- e) Mention the potential disadvantages of reading from displays. [4]
- f) Write about Collaborative Filtering technique. [3]

PART-B (3x16 = 48 Marks)

2. a) With a neat sketch, explain in detail the 4 pillars of successful user interface design. [12]
- b) Discuss the Carol and Rosson's way of user interface design characterization. [4]
3. a) Explain the importance of Menu selection and dialog boxes in User interface design. [8]
- b) Discuss the issues and challenges involved in designing menus for small display units. [8]
4. a) Discuss the guidelines for using Abbreviations in Command Languages. [8]
- b) Discuss the challenges and issues in adopting Speech Recognition Technology. [8]
5. a) What is Response Time? Explain about various issues related to the response time while designing a User Interface. [8]
- b) Discuss and elaborate the issues to be considered in choosing colors for web pages. [8]
6. a) Differentiate between Paper and online documentation. [8]
- b) Why "Online communities for User assistance" is proving to be effective and popular? Explain. [8]
7. a) Differentiate between Search and Query. [4]
- b) Compare Natural Language Queries Versus Form-fill Queries. [4]
- c) What are the challenges that information visualization researchers need to face to create successful tools? Explain. [8]



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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

PART-A (22 Marks)

1. a) What do you mean by Universal Usability? Why is it important? [4]
- b) Explain the importance of audio menus for small display units. [4]
- c) Write about Direct and Indirect input devices with suitable examples for each. [4]
- d) Discuss various recommendations for phrasing Error Messages or Warnings. [4]
- e) Write a brief note on Animated Demonstrations for exploratory learners. [3]
- f) Write about Dynamic queries. [3]

PART-B (3x16 = 48 Marks)

2. a) Explain about some important measures that determine the effectiveness of the product in regard to Usability. [8]
- b) Discuss the important guidelines in the Ethnographic observation process. [8]
3. a) What is the goal of a Menu selection? Explain various types of Multiple menu selection. [8]
- b) Why direct manipulation of all screen objects and actions may not be feasible? Give proper explanation and also explain how it can be solved in indirect manipulation. [8]
4. a) Write short note on command organization functionality. [8]
- b) Explain briefly about the features of various Keyboard Layouts. [8]
5. a) Discuss the limitations of Short term and Working memory. [4]
- b) Write about the guidelines that must be considered in choosing colors for information. [6]
- c) List few common mistakes of web-based presentation of information [6]
6. a) Discuss the advantages and disadvantages of reading from displays [8]
- b) Explain about various features that help in accessing the online documentation in a best way. [8]
7. a) What is the function of Search? Explain about Multimedia document searches. [8]
- b) Discuss the basic tasks that need to be supported for information visualization. [8]



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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

PART-A (22 Marks)

1. a) Discuss various reasons that increased Usability motivations. [4]
- b) Write the importance of providing techniques to accelerate the fast movement through menus. [3]
- c) Write about Novel pointing devices. [4]
- d) Discuss the benefits of using colors in User Interface Design. [4]
- e) What are the best practices for good documentation? [4]
- f) Write about Multimedia document and Digital Libraries. [3]

PART-B (3x16 = 48 Marks)

2. a) What do you mean by User Interface design Usability? Why it is so important? Explain in detail about the Universal Usability. [8]
- b) Explain Social impact statement for early design review. [8]
3. a) Differentiate between Direct and Indirect manipulation of Screen objects with suitable examples. [8]
- b) Explain in detail the list of guidelines to be followed for designing dialog boxes. [8]
4. a) Specificity Versus Generality. [4]
- b) What is a Computer Keyboard? Explain about various Keyboards and Keypads available for Small devices. [6]
- c) Explain in detail about Discrete Word Recognition. [6]
5. a) What are the primary factors that influence users' expectations and attitudes regarding system response time? Explain. [8]
- b) Discuss the merits and demerits of using colors in User Interface design. [8]
6. a) Discuss the advantages of animated demonstrations in online tutorials. [8]
- b) Explain the appropriate milestones for the production of a manual. [8]
7. a) Explain about the few alternatives to form-fill-in query interface. [8]
- b) Discuss the data type by task taxonomy to identify information visualization data types. [8]

