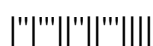Code No: **RT42053A**   **R13**   **Set No. 1**

IV B.Tech II Semester Regular/Supplementary Examinations, April/May - 2019
HUMAN COMPUTER INTERACTION
(Common to Computer Science and 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
*****

PART–A *(22 Marks)*

1. a) What are the potential controversies for legal issues of design processes? [3]
   b) Why direct manipulation of all screen objects and actions may not be feasible? [4]
   c) Compare and contrast between *QWERTY* and *Dvorak* keyboard layouts. [4]
   d) Justify that "modest variations in response time are tolerable and have little effect on system performance". [4]
   e) What is paper prototyping and how is it used? What are the advantages and disadvantages of it? [3]
   f) How the advanced filtering and searching interfaces improve the search content and response time. [4]

PART–B *(3x16 = 48 Marks)*

2. a) What is Heuristic Evaluation? Why is it used? Outline the steps involved for expert review. [8]
   b) Discuss the guidelines for Ethnographic observation. [8]

3. a) Explain the importance of response time display rate in menu designing. [8]
   b) Compare and contrast between the Linear menus and Tree structured menus with examples. [8]

4. a) Discuss the challenges and issues in adopting Speech recognition technology. [8]
   b) Explain the various display technologies applicable for small and large displays. [8]

5. a) Discuss the factors that influence the acceptable response time. [8]
   b) Explain the importance and impact of using colors in the design of error and warning messages. [8]

6. a) Explain the advantages of online documentation and also discuss the important features that can help accessing the online documentation in a better way. [8]
   b) Discuss the designer concerns and user-desired qualities for shaping the content of documentation. [8]

7. a) What do you mean by Multimedia document? Discuss various challenges involved in searching a multimedia document. [8]
   b) Discuss the process of data type by task taxonomy for information visualization. [8]

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Code No: **RT42053A**　　　**R13**　　　　Set No. 2

IV B.Tech II Semester Regular/Supplementary Examinations, April/May - 2019
HUMAN COMPUTER INTERACTION
(Common to Computer Science and 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
*****

PART–A *(22 Marks)*

1. a) Discuss the interface design goals for academicians, industrial researches and common people. [3]
   b) What are the different types of display devices? [4]
   c) Describe the features of mobile device displays. [4]
   d) Why is quality of service important in the context of HCI? [3]
   e) Differentiate between paper manuals and displays. [4]
   f) What is the reference model for visualizations? Why is this model important for visualization? [4]

PART–B *(3x16 = 48 Marks)*

2. a) Explain how organizational design supports usability. [8]
   b) Discuss the concerns and potential barriers for Social impact statement of early design review. [8]

3. a) Explain various structures of menus with neat diagrams. [8]
   b) What are small display units? What are its special characteristics? Discuss various factors that are to be considered in designing menus for small display units. [8]

4. a) Explain the abbreviation strategies and guidelines for naming commands. [5]
   b) Discuss the impact of using natural language in human computer communication. [5]
   c) Explain briefly about voice information systems. [6]

5. a) Define Response-Time. Explain how a model of Response-Time impacts the quality of service. [8]
   b) Explain the task-independent metrics proposed by *Tullis* for alphanumeric displays. [8]

6. a) Explain the organization and writing style of manuals. [8]
   b) Discuss the guide lines for the development process of user documentation and online help. [8]

7. a) How the advanced filtering and searching interfaces help in improving the search result as well as the searching time? Explain with a suitable example. [8]
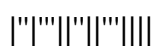   b) Describe the guidelines for effective user interfaces for information retrieval. [8]

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Code No: **RT42053A**   **R13**   Set No. 3

IV B.Tech II Semester Regular/Supplementary Examinations, April/May - 2019
HUMAN COMPUTER INTERACTION
(Common to Computer Science and 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
*****

PART–A *(22 Marks)*

1. a) Write about the various factors that plays a significant role in influencing users expectations with respect to system response time.   [3]
    b) Discuss the importance of audio menus for small display units.   [4]
    c) Write about the obstacles to speech recognition technology.   [3]
    d) Mention the three initial strategies which can reduce user frustration.   [4]
    e) Outline the problems with preparing the information for both print and screen. [4]
    f) What are the challenges for Information Visualization?   [4]

PART–B *(3x16 = 48 Marks)*

2. a) Describe the *Rosson* and *Carroll's* design characterization for user interface. [8]
    b) Discuss the merits and demerits of participatory design.   [8]

3. a) What are the contents of menus? Explain their structures.   [8]
    b) Explain the techniques to accelerate the fast movement through menus.   [8]

4. a) Discuss any four potential command abbreviation strategies.   [8]
    b) Explain the various types of interaction tasks supported by pointing devices.   [8]

5. a) Justify that "The response time/productivity relation changes based on the task and user".   [8]
    b) Explain the design goals and content issues of Web page design.   [8]

6. a) Compare and contrast between Online and Paper documentation.   [8]
    b) Discuss the hybrid approaches for accessing the documentation.   [8]

7. a) What is the importance of searching? Explain different task actions.   [8]
    b) Explain different data types of Type by Task Taxonomy (TTT).   [8]

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Code No: **RT42053A**   **R13**   Set No. 4

IV B.Tech II Semester Regular/Supplementary Examinations, April/May - 2019
HUMAN COMPUTER INTERACTION
(Common to Computer Science and 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
*****

PART–A *(22 Marks)*

1. a) Describe the *Shneiderman's* three pillars of design. [3]
   b) Mention the application domains that exist for devices with small displays. [4]
   c) Write short notes on higher-level goals of Language design. [4]
   d) What are the general issues that are required to be considered by designers and/or network managers when specifying Quality of Service levels? [4]
   e) Give the disadvantages of online help. [3]
   f) Write the various approaches for advanced filtering features of information search. [4]

PART–B *(3x16 = 48 Marks)*

2. a) What is Universal usability? Explain why Universal usability is important. [8]
   b) Explain the six stages of LUCID development methodology. [8]

3. a) What is the importance of designing Menus in user interface? Explain about various design principles for single and multiple Menus. [8]
   b) Explain the features of Linear menus. [8]

4. a) Discuss the six potential abbreviation strategies for natural languages. [8]
   b) Compare and contrast between the features of various pointing devices. [8]

5. a) Discuss the design principles proposed by *Smith and Mosier.* [8]
   b) Elaborate the requirements for personal role management of Window design. [8]

6. a) Why system training and documentation are also an integral part of any development effort? Explain. [8]
   b) Discuss the merits and demerits of animated demonstrations in online tutorials. [8]

7. a) Explain the user interface framework for text searches. [8]
   b) List and discuss the qualities that provide visually pleasing composition for screen. [8]

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