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NARSIMHAREDDY ENGINEERING COLLEGE
(UGC AUTONOMOUS)

IV B.Tech II Semester (NR20) Regular Examination, April / May 2024

HUMAN COMPUTER INTERACTION
(Computer Science and Engineering)

Time : 3 hours

Maximum marks: 75

- Note:**
- This question paper contains two parts A and B
 - Part A is compulsory which carries 25 marks (1st 5 sub questions are one from each unit carry 2 Marks each & Next 5 sub questions are one from each unit carry 3 Marks). Answer all questions in Part A
 - Part B Consists of 5 Units. Answer any one full question from each unit. Each question carries 10 Marks and may have a, b sub questions

Part-A **(25 Marks)**
Answer all questions

Q.No	Question	M	CO	BL
1)	a. What is User Interface?	2	CO1	L2
	b. What are the various difficulties with poor design?	2	CO2	L2
	c. What are the various functions of menu?	2	CO3	L2
	d. What are menu-selection and dialog box trees.	2	CO4	L2
	e. Distinguish between QWERTY and ABCDE style.	2	CO5	L2
	f. Discuss in detail the importance of the user interface design	3	CO1	L2
	g. List three psychological and physical user responses to poor design.	3	CO2	L2
	h. Discuss the goals of website navigation.	3	CO3	L2
	i. List out advantages of menu selection and dialog box tree.	3	CO4	L2
	j. Explain various Cursor movements keys.	3	CO5	L2

Part-B **(50 Marks)**
Answer any five questions
All Questions carry equal Marks

Q.No	Question	M	CO	BL
UNIT-I				
2)	a. Discuss the impact of inefficient screen design.	5	CO1	L2
	b. Describe the chronological history of internet.	5	CO1	L2
OR				
3)	a. Discuss in detail the importance of the user interface for success of a software.	5	CO1	L2
	b. Explain the chronological history of GUI.	5	CO1	L3
UNIT-II				
4)	a. Discuss about the users psychological characteristics in the design of a system	5	CO2	L2
	b. Explain briefly about the important human characteristics in design of a system.	5	CO2	L3
OR				
5)	a. What is the importance of user's tasks and needs important in design of a svstem?	5	CO2	L2

	b.	Explain about Human Interaction Speed.	5	CO2	L3
UNIT-III					
6)	a.	What are the contents of Menus? Explain in detail.	5	CO3	L2
	b.	Illustrate the guidelines for designing icons?	5	CO3	L3
OR					
7)	a.	Explain different structures of Menus.	5	CO3	L2
	b.	What are the various Components of a Window.	5	CO3	L3
UNIT-IV					
8)	a.	What are menu- selection and dialog box trees? and write it advantages.	5	CO4	L2
	b.	Discuss various Design tools for creating user interface.	5	CO4	L3
OR					
9)	a.	Discuss about Backus normal form/Describe grammars specification method.	5	CO4	L3
	b.	Explain about the Features of user interface building tools.	5	CO4	L2
UNIT-V					
10)	a.	Explain briefly about direct control pointing devices.	5	CO5	L2
	b.	What is scripting and explain the characteristics of scripting language.	5	CO5	L3
OR					
11)	a.	Explain the importance of keyboards, Function keys.	5	CO5	L2
	b.	Describe the menu- selection and dialog box trees? And write it advantages.	5	CO5	L3

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Code No: 117DT**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B. Tech IV Year I Semester Examinations, November/December - 2016****HUMAN COMPUTER INTERACTION****(Information Technology)****Time: 3 Hours****Max. Marks: 75****Note:** This question paper contains two parts A and B.

Part A is compulsory which carries 25 marks. Answer all questions in Part A.

Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART- A**(25 Marks)**

- 1.a) What is the importance of good design? [2]
- b) What are the benefits of good design? [3]
- c) Explain Scatter plots with example. [2]
- d) Write the guidelines for building metaphors. [3]
- e) What are the advantages of tiled windows? [2]
- f) What are the functions of menus? [3]
- g) Write the capabilities of Galaxy scripting language. [2]
- h) What is Backus-Naur Form? What is its use? [3]
- i) What are the different key board layouts? [2]
- j) What are novel pointing devices? [3]

PART-B**(50 Marks)**

- 2.a) What are the differences between GUI and web user interface?
 - b) State various principles considered in the design of Xerox STAR. [5+5]
- OR**
- 3.a) Explain the concept of direct and indirect manipulation.
 - b) What are the general principles of user interface design? [5+5]
- 4.a) Explain the process of determining basic business functions.
 - b) What is the role of screen navigation in screen design? Explain. [5+5]
- OR**
- 5.a) Write the guidelines for designing conceptual models.
 - b) What are the goals of user interface designer? [5+5]
- 6.a) Write about various GUI controls in brief.
 - b) What are the factors that influence the icon's usage? [5+5]
- OR**
- 7.a) Briefly discuss about operable controls.
 - b) Give the uses, advantages and disadvantages of audition. [5+5]
- 8.a) Describe transition diagrams specification method.
 - b) What is the role of user interface architects in building software tools? [5+5]

OR

- 9.a) What are the factors considered while choosing user interface building tools?
b) What are menu selection and dialog-box trees? Explain. [5+5]
- 10.a) Explain the concept of speech generation.
b) Write about digital photography and scanners. [5+5]

OR

- 11.a) Give a brief note about function keys on a keyboard.
b) Write about attributes display devices and their features. [5+5]

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R13**Code No: 117DT****JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B. Tech IV Year I Semester Examinations, November/December - 2017****HUMAN COMPUTER INTERACTION****(Information Technology)****Time: 3 Hours****Max. Marks: 75****Note:** This question paper contains two parts A and B.

Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART- A**(25 Marks)**

- 1.a) What are the characteristics of web pages? [2]
- b) What are the problems with direct manipulation? [3]
- c) What is the objective of requirements analysis? [2]
- d) What are the psychological user responses to poor design? [3]
- e) What are the strengths and weaknesses of cascading menus? [2]
- f) Differentiate between system, status and warning messages. [3]
- g) What is the use of state charts? Explain. [2]
- h) What are the features of Galaxy scripting language? [3]
- i) What are the indirect control pointing devices? [2]
- j) What are the advantages and limitations of Plotters? [3]

PART-B**(50 Marks)**

- 2.a) Explain the principle of uniformity in user interface design.
 - b) Discuss about container objects in detail. [5+5]
- OR**
- 3.a) What are the difficulties in designing web interface design? Explain.
 - b) List and explain the benefits of good design. [5+5]
- 4.a) Explain the process of determining basic business functions.
 - b) What are the problems with search facility? Discuss. [5+5]
- OR**
- 5.a) What are the important human characteristics that have an influence on design?
 - b) Write about the qualities of screen elements. [5+5]
- 6.a) Write the guidelines for presenting error messages on web.
 - b) What are the components of a web navigation system? Explain. [5+5]
- OR**
- 7.a) List out the factors for using icons and explain.
 - b) What are the functions of menus? Explain them in brief. [5+5]

- 8.a) Describe grammars specification method.
b) What is the role of CASE tools in building user interface? [5+5]

OR

- 9.a) What are the advantages and disadvantages of Transition diagrams? Explain.
b) Discuss in detail about Dialog-box Trees. [5+5]

10. Explain the features of the following keyboard layouts:
a) QWERTY b) DVORAK [5+5]

OR

- 11.a) List and explain about different types of mouses and their operations.
b) What are the features of Display devices? Discuss. [5+5]

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Code No: 158BE**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B. Tech IV Year II Semester Examinations, July/August - 2022****HUMAN COMPUTER INTERACTION****(Common to CSE, IT)****Time: 3 Hours****Max.Marks:75**

Answer any five questions
All questions carry equal marks

- 1.a) Discuss in detail the importance of user Interface.
b) What is a Graphical System? Explain its characteristics. [7+8]
- 2.a) List out the benefits of Good Design.
b) What is GUI? Explain in detail the popularity of Graphics. [7+8]
- 3.a) Write a detailed note on Human Interaction with computers.
b) List out Design Goals of Screen Designing. [7+8]
- 4.a) Discuss in detail the importance of human characteristics and human consideration.
b) Write a detailed note on Technological Consideration in Interface Design. [7+8]
- 5.a) Define Windows. Explain in detail New and Navigation schemes selection of window.
b) Write a detailed note on selection of devices based and screen based controls. [8+7]
6. What are Components? Explain in detail about Icons and Colors. [15]
- 7.a) Discuss about HCI in the Software Process.
b) Write a detailed note on Design rules Principles to support usability. [6+9]
- 8.a) Write a detailed note on Cognitive models Goal and task hierarchies.
b) Explain in detail the Applications of augmented reality Information and data visualization. [7+8]

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IV B.Tech II Semester Regular Examinations, April/May - 2017**HUMAN COMPUTER INTERACTION****(Common to Computer Science & 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 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

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

HUMAN COMPUTER INTERACTION

(Common to Computer Science & 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 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]



Code No: **RT42053A**

R13

Set No. 3

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

HUMAN COMPUTER INTERACTION

(Common to Computer Science & 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) 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]



Code No: RT42053A

R13

Set No. 4

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

HUMAN COMPUTER INTERACTION

(Common to Computer Science & 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) 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:
(i) QWERTY layout
(ii) DVORAK layout [8]
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]



Code No: 158BE

R18

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B.Tech IV Year II Semester Examinations, September - 2022

HUMAN COMPUTER INTERACTION

(Common to CSE, IT)

Time: 3 Hours

Max.Marks:75

**Answer any five questions
All questions carry equal marks**

- 1.a) Give a brief summary on graphical systems.
b) What are the benefits of a good design? [8+7]
- 2.a) Discuss the importance of good user interface.
b) Compare the graphical user interface and web user interface. [7+8]
3. Explain the following:
a) Statistical Graphics screen planning
b) Information retrieval on web. [8+7]
- 4.a) State the screen design goals.
b) Discuss the guidelines for displaying amount of information on screen. [6+9]
- 5.a) Explain various window components.
b) Write short notes on foreground of colors. [8+7]
- 6.a) Explain the different types of messages.
b) What are the uses of the diagrams? [8+7]
- 7.a) Give a brief summary on multi-modal interaction.
b) What are the techniques of evaluation? Explain. [7+8]
8. Explain in detail about hierarchical models and linguistic models. [15]

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