**DHANALAKSHMI SRINIVASAN COLLEGE**

**OF ENGINEERING AND TECHNOLOGY**

# DEPARTMENT OF INFORMATION TECHNOLOGY

**QUESTION BANK**

VII SEMESTER

CS8079 – Human Computer Interaction Regulation – 2017

Academic Year 2022 – 2023(ODD)

*Prepared by*

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**QUESTION BANK**

**SUBJECT : CS8079 – HUMAN COMPUTER INTERACTION**

**SEM/YEAR : VII/IV**

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|  | **UNIT I - FOUNDATIONS OF HCI** | | |
|  | The Human: I/O channels – Memory – Reasoning and problem solving; The computer: Devices –  Memory – processing and networks; Interaction: Models – frameworks – Ergonomics – styles – elements – interactivity- Paradigms-Case Studies | | |
|  | **PART-A** | | |
| **Q.No** | **Questions** | **BT Level** | **Competence** |
| **1** | Define Human Computer Interaction. | BTL -1 | Remember |
| **2** | What are mental models and why are they important in interface  design? | BTL -1 | Remember |
| **3** | What are the two types of photoreceptor. | BTL -1 | Remember |
| **4** | What is visual angle? How the visual angle is calculated? | BTL -1 | Remember |
| **5** | What is iconic memory? | BTL -1 | Remember |
| **6** | What type of HCI paradigm could be used to monitor eruptions of active and hazardous volcanoes? | BTL -2 | Understand |
| **7** | Write the three types of memory or memory function. | BTL -1 | Remember |
| **8** | Define Reasoning. List its types. | BTL -1 | Remember |
| **9** | What are the text entry devices. | BTL -1 | Remember |
| **10** | Point out distribution of practice effect. | BTL -2 | Understand |
| **11** | Classify the two main theories of forgetting | BTL -2 | Understand |
| **12** | Define productive and reproductive problem solving. | BTL -1 | Remember |
| **13** | Show ACT model. | BTL -2 | Understand |
| **14** | How does the spreading activation affect the interferences effects  during information recall from memory. | BTL -2 | Understand |
| **15** | Give the Models of interaction. | BTL -1 | Remember |
| **16** | What is Ergonomics? | BTL -1 | Remember |
| **17** | Conclude the factors in the physical environment that directly affect  the quality of the interaction and the user’s performance. | BTL -2 | Understand |
| **18** | Give the use of scroll bars and title bars. | BTL -1 | Remember |
| **19** | Tabulate direct manipulation vs indirect manipulation. | BTL -2 | Understand |
| **20** | Give the importance of grouping controls. | BTL -2 | Understand |
|  | **PART-B** | | |

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| **1** | i) List Input and Output channels and discuss briefly about it. | 7 |  |  |
|  | ii) Draw the model of the structure of human memory with diagrammatic illustration. | 6 | BTL -1 | Remember |
| **2** | i) Briefly discuss about the types of memory in detail. | 7 |  |  |
|  | ii) Describe five important differences between Short Term Memory |  | BTL -2 | Understand |
|  | and Long Term Memory. | 6 |  |  |
| **3** | i) Illustrate the similarities and differences in human memory and |  |  |  |
|  | computer memory.  ii) Classify mental models, and why are they important in interface | 7 | BTL -3 | Apply |
|  | design? | 6 |  |  |
| **4.** | Differentiate deductive reasoning, inductive reasoning and abductive reasoning. | 13 | BTL -2 | Understand |
| **5** | 1. Describe the guidelines for data display and data entry. 2. State requirements to perform cognitive walkthrough of a system. | 7  6 | BTL -1 | Understand |
| **6** | Examine in detail about the following: |  |  |  |
|  | (i) Digital paper. | 7 | BTL -1 | Remember |
|  | (ii) Display devices. | 6 |  |  |
| **7** | Demonstrate how the system designer can minimize the memory  load of the user. | 13 | BTL -3 | Apply |
| **8** | 1. Discuss the factors that can limit the speed of an interactive computer system. 2. Draw the block diagram representing human-computer interaction framework and explain it. | 7  6 | BTL -2 | Understand |
| **9** | Compose the stages of Norman’s model of interaction and justify it with an example. | 13 | BTL -3 | Apply |
| **10** | Briefly describe about the elements of the WIMP interface with example. | 13 | BTL -3 | Apply |
| **11** | Explain the various types of users and the organizational issues to be considered in designing an interactive system with examples. | 13 | BTL -3 | Apply |
| **12** | i)How the user performance is improved using ergonomics? Explain. | 7 | BTL -3 | Apply |
|  | ii)Point out briefly four different interaction styles used to |  |  |  |
|  | accommodate the dialog between user and computer. | 6 |  |  |
| **13** | i)Examine (in words as well as graphically) the interaction | 7 | BTL -2 | Understand |
|  | framework introduced in Human–Computer Interaction. |  |  |  |
|  | ii) Show how it can be used to explain problems in the dialog |  |  |  |
|  | between a user and a computer. | 6 |  |  |
| **14** | Analyze briefly four different interaction styles used to accommodate  the dialog between user and computer and finalize it for an application. | 13 | BTL -4 | Analyze |
|  | **PART C** | | | |
| 1 | Integrate the ideas of how new, fast, high-density memory devices and quick processors have influenced recent developments in HCI? Do they make systems any easier to use? Do they expand the range of applications of computer systems? | 15 | BTL -3 | Apply |
| 2 | What input and output devices would you use for the following systems? For each, compare and contrast alternatives, and if  appropriate indicate why the conventional keyboard, mouse and c.r.t | 15 | BTL -3 | Apply |

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|  | screen may be less suitable.   1. portable word processor 2. tourist information system 3. tractor-mounted crop-spraying controller 4. air traffic control system 5. worldwide personal communications system 6. digital cartographic system | |  | |  |
| 3 | Choose two of the interaction styles that you have experience of using. Use the interaction framework to analyze the interaction involved in using these interface styles for a database selection  Task. Which of the distances is greatest in each case? | 15 | BTL -3 | | Apply |
| 4 | What influence does the social environment in which you work have on your interaction with the computer? What effect does the organization (commercial or academic) to which you belong have on the interaction? Prepare answer for this with an example. | 15 | BTL -3 | | Apply |
|  | **UNIT II - DESIGN & SOFTWARE PROCESS** | | | | |
|  | Interactive Design basics – process – scenarios – navigation – screen design – Iteration and Prototyping. HCI in software process – software life cycle – usability engineering – Prototyping in practice – design rationale. Design rules – principles, standards, guidelines, rules. Evaluation Techniques – Universal Design. | | | | |
|  | PART A | | | | |
| **1** | What is design? List out the design process. | | | BTL -1 | Remember |
| **2** | State the golden rule of design. | | | BTL -1 | Remember |
| **3** | Give a model of Interaction design process. | | | BTL -2 | Understand |
| **4** | Show the three main goals of Evaluation. | | | BTL -1 | Remember |
| **5** | What are the possible ways to set measurement levels in a usability specification? | | | BTL -1 | Remember |
| **6** | Compare the Levels of interaction. | | | BTL -2 | Understand |
| **7** | Summarize the different implications of navigation design. | | | BTL -2 | Understand |
| **8** | Define localization or internationalization. | | | BTL -1 | Remember |
| **9** | Compare formative evaluation vs summative evaluation. | | | BTL -2 | Understand |
| **10** | Do you think that prototyping will solve all problems associated with user interfaces design? | | | BTL -2 | Understand |
| **11** | What are the advantages and disadvantages of Prototyping Model? | | | BTL -2 | Understand |
| **12** | What are the three main approaches to prototyping. | | | BTL -2 | Understand |
| **13** | Illustrate UIMS. | | | BTL -2 | Understand |
| **14** | Show the warning about iterative design. | | | BTL -1 | Remember |
| **15** | Write down the three categories of the principles to support usability. | | | BTL -1 | Remember |
| **16** | Discuss on the usage of colors in emergency response panels. | | | BTL -2 | Understand |
| **17** | Compare Efficiency & Satisfaction. | | | BTL -2 | Understand |
| **18** | Summarize the basic categories of the Smith and Mosier guidelines. | | | BTL -2 | Understand |
| **19** | Define multithreading. | | | BTL -1 | Remember |
| **20** | Point out universal design. | | | BTL -2 | Understand |

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|  | **PART-B** | | | |
| **1** | With a neat sketch, describe about Interaction design process and golden rule of Design. | 13 | BTL -2 | Understand |
| **2** | Explain an example of a scenario for the personal movie player. | 7 |  |  |
|  | Draw the block diagram of application functional hierarchy and | 6 | BTL -3 | Apply |
|  | Explain. |  |  |  |
| **3** | i)Illustrate about Navigation design through Levels of Interaction and | 7 | BTL -3 | Apply |
|  | Screen design | 6 |  |  |
|  | ii) What is known as a hill-climbing approach? Explain. |  |  |  |
| **4** | Express the use of layout and other elements in the control  panels. | 13 | BTL -2 | Understand |
| **5** | Explain in detail about the activities in the waterfall model and spiral model of the software life cycle with an example. | 13 | BTL -3 | Apply |
| **6** | i) Describe the principles of good UI design. | 7 | BTL -2 | Understand |
|  | ii)Using the tour booking form as an example, try to relate its suitability |  |  |  |
|  | for automation. | 6 |  |  |
| **7** | Summarize some of the techniques that are available for producing rapid prototypes. | 13 | BTL -2 | Understand |
| **8** | 1. List and describe the activities in the life cycle. 2. Briefly discuss about the three main approaches to prototypin | 7  6 | BTL -2 | Understand |
| **9** | 1. Examine the principles affecting learnability in detail. 2. Give the summary of principles affecting flexibility in detail. | 7  6 | BTL -2 | Understand |
| **10** | Consider the following usability objective. Theatre booking clerks with low motivation, no computing experience and no previous training, working in a small and hectic box office, are able to learn to reserve or book seats within a one hour period. Demonstrate what measures could  be taken and which techniques would you consider appropriate to test whether this objective was met? | 13 | BTL -3 | Apply |
| **11** | 1. Mention and Explain the Shneiderman’s Eight Golden Rules of Interface Design. 2. State and Explain Norman’s Seven Principles for Transforming Difficult Tasks into Simple Ones. | 7  6 | BTL -2 | Understand |
| **12** | i) With help of Norman’s Model of interaction, Examine the process of | 7 |  |  |
|  | execution evaluation cycle.  ii) Define gulf of execution and gulf of evaluation with respect to this | 6 | BTL -2 | Understand |
|  | model? |  |  |  |
| **13** | i)List and discuss seven stages of action model. | 7 |  |  |
|  | ii) What are the seven principles give us a good starting point in |  | BTL -2 | Understand |
|  | considering universal design. | 6 |  |  |
| **14** | Develop a short notes on |  |  |  |
|  | a)Cognitive walkthrough. | 7 | BTL -2 | Understand |
|  | b) Speech-based system is the phonetic typewriter. | 6 |  |  |
|  | **PART C** | | | |
| **1** | Provide a usability specification for an electronic meetings diary or | 15 | BTL -3 | Apply |

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|  | calendar. First identify some of the tasks that would be performed by a user trying to keep track of future meetings, and then complete the usability specification assuming that the electronic system will be replacing a paper-based system. What assumptions do you have to make about the user and the electronic diary in order to create a reasonable  usability specification? | |  |  |
| **2** | What is the distinction between a process-oriented and a structure- oriented design rationale technique? Would you classify psychological design rationale as process- or structure-oriented? Justify. | 15 | BTL -3 | Apply |
| **3** | Using the web design pattern language produce a design for an e- commerce site for a small retail business. How well does the language support the design process? Explain in detail | 15 | BTL -3 | Apply |
| **4** | You have been asked to compare user performance and preferences with two different learning systems, one using hypermedia, and the other sequential lessons. Design a questionnaire to find out what the  users think of the system. How would you go about comparing user Performance with these two systems? | 15 | BTL -3 | Apply |
|  | **UNIT III - MODELS AND THEORIES** | | | |
|  | HCI models: Cognitive models –Socio-Organizational issues and stake holder requirements – Communication and collaboration models-Hypertext, Multimedia and [WWW.](http://WWW/) | | | |
|  | **PART-A** | | | |
| **1** | What are the characteristics of computer support cooperative work systems? | | BTL -1 | Remember |
| **2** | State the group categorization based on their geographical and temporal  location. | | BTL -1 | Remember |
| **3** | Define CUSTOM methodology. | | BTL -1 | Remember |
| **4** | List the four elements of GOMS. | | BTL -1 | Remember |
| **5** | Classifying stakeholders – an airline booking system. | | BTL -2 | Understand |
| **6** | What is the Acronym for CATWOE? | | BTL -1 | Remember |
| **7** | Point out face-to-face communication. | | BTL -1 | Remember |
| **8** | What is conversation and give the basic conversational structure. | | BTL -1 | Remember |
| **9** | Differentiate context and the types of context. | | BTL -2 | Understand |
| **10** | Assess the utterances that can be classified into three kinds. | | BTL -2 | Understand |
| **11** | Classify Breakdown and repair. | | BTL -2 | Understand |
| **12** | Formulate the process as grounding. | | BTL -2 | Understand |
| **13** | Classify the four types of textual communication. | | BTL -2 | Understand |
| **14** | What are the properties of the channels in terms of grounding constraints? | | BTL -1 | Remember |
| **15** | Write the Hypertext conversation structure. | | BTL -1 | Remember |
| **16** | Differentiate Linear text vs. hypertext. | | BTL -2 | Understand |
| **17** | Write the applications of hypermedia. | | BTL -2 | Understand |
| **18** | Summarize static content and dynamic content. | | BTL -2 | Understand |

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| **19** | Define Bandwidth, latency and jitter. | | BTL -1 | Remember |
| **20** | Discuss Web servers and web clients | | BTL -2 | Understand |
|  | **PART-B** | | | |
| **1** | 1. What is cognitive model? 2. Classify cognitive models and discuss the same. | 3  10 | BTL -2 | Understand |
| **2** | 1. Explain how GOMS and the keystroke – level model support the interaction design process. 2. Summarize an example of Cognitive complexity theory and express production rules. | 7  6 | BTL -2 | Understand |
| **3** | 1. Illustrate the linguistic approach and use of Backus–Naur Form (BNF) rules to describe the dialog grammar. 2. Explain the linguistic models–BNF and Task Action Grammar in brief. | 7  6 | BTL -2 | Understand |
| **4** | 1. Discuss how do ‘golden rules’ and heuristics help interface designers take account of cognitive psychology? 2. Illustrate your answer with the design of Microsoft office word. | 7  6 | BTL -2 | Understand |
| **5** | Describe the problem space model and interacting cognitive subsystems in detail | 13 | BTL -2 | Understand |
| **6** | Briefly describe about the Three-state model. | 13 | BTL -2 | Understand |
| **7** | 1. Discuss how to organize a display. Explain how to get user’s attention. 2. Explain three techniques to prevent errors. | 7  6 | BTL -2 | Understand |
| **8** | 1. Point out the six key stages to carry out in a CUSTOM analysis? 2. Who is a stakeholder? Outline the types of stake holders and appraise the stakeholders for an airline booking system. | 7  6 | BTL -3 | Apply |
| **9** | List and explain the seven stages of soft systems methodology | 13 | BTL -2 | Understand |
| **10** | 1. Explain the participatory design process utilizes a range of methods to help convey information between the user and designer. 2. Explain Effective Technical and Human Implementation of Computer-based Systems (ETHICS) and how the design groups then address the following issues and activities. | 7  6 | BTL -3 | Apply |
| **11** | Explain some of the organizational issues that affect the acceptance and relevance of information and communication systems in detail | 13 | BTL -3 | Apply |
| **12** | Write short notes on i)Text.  ii)Hypertext. iii)Multimedia. | 4  4  5 | BTL -1 | Remember |
| **13** | Consider the case of preparing a group presentation for a software project. Demonstrate the stages in specifying and designing UI for the same. | 13 | BTL -3 | Apply |
| **14** | Write and develop short notes on   1. Fixed content. 2. Search. 3. Automatic generation. | 3  3  3 | BTL -1 | Remember |

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|  | iv) Batch generation. | 4 |  |  |
|  | **PART C** | | | |
| **1** | One of the assumptions underlying the programmable user model approach is that it is possible to provide an algorithm to describe the user's behavior in interacting with a system. Taking this position to the extreme, choose some common task with a familiar interactive system (for example, creating a column of numbers in a spreadsheet and calculating their sum, or any other task you can think of) and describe the algorithm needed by the user to accomplish this task. Write the description in pseudocode. Does this exercise suggest any  improvements in the system? | 15 | BTL -3 | Apply |
| **2** | A group of universities has decided to collaborate to produce an information system to help potential students find appropriate courses. The system will be distributed free to schools and careers offices on CD- ROM and will provide information about course contents and requirements, university and local facilities, fees and admissions procedures. Identify the main stakeholders for this system, categorize them and describe them and their activities, currently and with regard to the proposed system, using the CUSTOM framework. | 15 | BTL -3 | Apply |
| **3** | What is speech act theory? Explain positive and negative issues that  have arisen when it has been embodied in a specific system. | 15 | BTL -3 | Apply |
| **4** | Compare turn-taking, round-robin and free-for-all as floor control mechanisms. When might each be effective? Justify yours Answer | 15 | BTL -3 | Apply |
|  | **UNIT IV - MOBILE HCI** | | | |
|  | Mobile Ecosystem: Platforms, Application frameworks- Types of Mobile Applications: Widgets,  Applications, Games- Mobile Information Architecture, Mobile 2.0, Mobile Design: Elements of Mobile Design, Tools. Case Studies | | | |
|  | **PART-A** | | | |
| **1** | Tabulate some World’s largest mobile operators. | | BTL -1 | Remember |
| **2** | List the categories of mobile platforms. | | BTL -1 | Remember |
| **3** | Give the importance of mobile applications (any four). | | BTL -2 | Understand |
| **4** | What is Cocoa Touch? | | BTL -1 | Remember |
| **5** | Tabulate the pros and cons of mobile websites. | | BTL -1 | Remember |
| **6** | Point out the pros and cons of web widgets. | | BTL -2 | Understand |
| **7** | Discuss the pros and cons of web applications. | | BTL -2 | Understand |
| **8** | Do you think that prototyping will solve all problems associated with  user interface design? Give reason for your answer? | | BTL -1 | Remember |
| **9** | Write the pros and cons of game applications. | | BTL -1 | Remember |
| **10** | Define Information Architecture | | BTL -1 | Remember |
| **11** | Give an example mobile site map. | | BTL -2 | Understand |
| **12** | Write the layers of mobile ecosystem. | | BTL -1 | Remember |
| **13** | Demonstrate on the usage of colors in emergency response panels. | | BTL -2 | Understand |
| **14** | Classify Fixed versus fluid. | | BTL -2 | Understand |
| **15** | Write rules to be followed for Readability in mobile design. | | BTL -1 | Remember |

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| **16** | Contrast the three basic ways to define a color palette. | | BTL -2 | Understand |
| **17** | Write the Mobile design tools | | BTL -1 | Remember |
| **18** | What are the two distinct types of navigation layouts for mobile devices? | | BTL -2 | Understand |
| **19** | Define Iconography. | | BTL -1 | Remember |
| **20** | Draw and give the typical flow of information on mobile devices. | | BTL -2 | Understand |
|  | **PART-B** | | | |
| **1** | 1. Briefly describe the layers of the mobile ecosystem. 2. Describe several unique disciplines of Information Architecture. | 7  6 | BTL -2 | Understand |
| **2** | 1. Discuss what is information Architecture 2. Give in detail about mobile information architecture with a neat diagram | 5  8 | BTL -2 | Understand |
| **3** | Elaborate and classify the broader set of devices supports operating systems. | 13 | BTL -3 | Apply |
| **4** | List and Explain the elements of mobile design.   1. Layout 2. Colour iii)Typography   iv) Graphics | 4  3  3  3 | BTL -2 | Understand |
| **5** | Compare and contrast   1. Mobile application medium types 2. Mobile application media matrix | 7  6 | BTL -2 | Understand |
| **6** | 1. Define Jesse James Garrett’s Elements of User Experience. 2. Describe about awful mobile user experience. | 7  6 | BTL -1 | Remember |
| **7** | 1. Give the teasing content to confirm the user’s expectations. 2. Brief with an example clickstream for an iPhone web application. | 7  6 | BTL -2 | Understand |
| **8** | State and discover an example process flow diagram. | 13 | BTL -3 | Apply |
| **9** | Discuss the various elements of Mobile Design with a step by step method explain how to design an registration page foe movie ticket booking. | 13 | BTL -3 | Apply |
| **10** | List some ways to do some simple and fast mobile prototyping. | 13 | BTL -1 | Remember |
| **11** | Specify and develop the six simple rules for user with excellent readability. | 13 | BTL -2 | Understand |
| **12** | 1. Describe the types of Mobile Applications. 2. Discuss the various contexts in mobile application. | 7  6 | BTL -2 | Understand |
| **13** | 1. What is Mobile 2.0 ? 2. Mention and analyze the seven principles of Web 2.0. | 3  10 | BTL -2 | Understand |
| **14** | 1. Mention tools and what interface toolkits are available for it. 2. Examine the design for different screen size and write devices | 7  6 | BTL -2 | Understand |
|  | **PART C** | | | |
| **1** | List the ten world large Mobile operators and **compose** the rank,  markets, technologies used, and subscriber numbers. | 15 | BTL -2 | Understand |

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| **2** | Formulate the advantages and disadvantages of using the following Mobile Applications  i.SMS   1. Mobile Websites 2. Mobile Web Widgets iv.Mobile Web Applications | 15 | BTL -2 | Understand |
| **3** | Give an example mobile information architecture that was designed with desktop users in mind rather than mobile users. Summarize the pros and cons of the Architecture | 15 | BTL -3 | Apply |
| **4** | Compare the Mobile web applications and Native applications with suitable case studies. | 15 | BTL -3 | Apply |
|  | **UNIT V – WEB INTERFACE DESIGN** | | | |
|  | Designing Web Interfaces – Drag & Drop, Direct Selection, Contextual Tools, Overlays, Inlays and Virtual Pages, Process Flow. Case Studies. | | | |
|  | **PART-A** | | | |
| **1** | Define Object Selection. | | BTL -1 | Remember |
| **2** | Define Mystery Meat and Soft Mode. | | BTL -1 | Remember |
| **3** | Discuss the various approaches for Drag and Drop Modules. | | BTL -2 | Understand |
| **4** | Write down the purpose of drag and drop. | | BTL -1 | Remember |
| **5** | What is auto complete pattern? | | BTL -1 | Remember |
| **6** | Write the best practices for Drag and Drop List | | BTL -2 | Understand |
| **7** | Differentiate Dragged object versus drop target. | | BTL -2 | Understand |
| **8** | Tabulate the types of selection patterns. | | BTL -2 | Understand |
| **9** | Differentiate modal and non-modal overlays. | | BTL -2 | Understand |
| **10** | Mention and point out some nice attributes for toggle selection. | | BTL -2 | Understand |
| **11** | State and discover Fitt’s law. | | BTL -1 | Remember |
| **12** | Develop some issues with showing contextual tools. | | BTL -2 | Understand |
| **13** | What is Anti pattern? | | BTL -1 | Remember |
| **14** | What is mutton? Why is it used? | | BTL -1 | Remember |
| **15** | What is meant by Lightweight overlays? | | BTL -2 | Understand |
| **16** | What is Lightbox Effect? | | BTL -2 | Understand |
| **17** | Write few things to keep in mind while using Input Overlays. | | BTL -2 | Understand |
| **18** | Give the difference between Inlay and Overlay. | | BTL -2 | Understand |
| **19** | Write an example for virtual scrolling. | | BTL -2 | Understand |
| **20** | What is Carousel? | | BTL -2 | Understand |
|  | **PART-B** | | | |
| **1** | Briefly describe the events available for cueing the user during a drag and drop interaction. | 13 | BTL -2 | Understand |
| **2** | Tabulate the principles for designing rich web interface. | 13 | BTL -1 | Remember |

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| **3** | Write and describe short notes on i)Drag and Drop Action  ii)Drag and Drop Collection | 7  6 | BTL -2 | Understand |
| **4** | Demonstrate the process flow of web interface design. | 13 | BTL -3 | Apply |
| **5** | 1. How are contextual tools used in the design of rich web UI? 2. Illustrate and compare with suitable examples. | 7  6 | BTL -2 | Understand |
| **6** | 1. Summarize the Challenges of Drag and Drop. 2. Explain the purpose of Drag and Drop. | 7  6 | BTL -2 | Understand |
| **7** | Explain and analyze Tools in detail with example  . i)Always-Visible Tools  ii)Hover-Reveal Tools iii)Toggle-Reveal Tools iv)Multi-Level Tools | 4  3  3  3 | BTL -3 | Apply |
| **8** | Describe in detail about the three specific types of overlays: i)Dialog Overlays  ii)Detail Overlay ii)Input Overlays | 5  3  5 | BTL -2 | Understand |
| **9** | 1. Point out in detail about Secondary Menu. 2. Explain how to inlay the information directly within the page. | 7  6 | BTL -2 | Understand |
| **10** | 1. Define Tabs and its types. 2. Explain different types of inlays? | 7  6 | BTL -2 | Understand |
| **11** | 1. Interpret the patterns that support virtual pages used in the design of rich web UI. 2. Compare the patterns with suitable examples. | 7  6 | BTL -3 | Apply |
| **12** | Design a web interface for a ‘Library Management System’. State the functional requirements you are considering. | 13 | BTL -3 | Apply |
| **13** | Tabulatethe following i)Paging  ii)Scrolling | 7  6 | BTL -2 | Understand |
| **14** | Explainthe following: i)Interactive Single-Page Process ii)Inline Assistant Process | 7  6 | BTL -2 | Understand |
|  | **PART C** | | | |
| **1** | Createyour own example to design a drag and drop module on a Webpage and give the step by step interaction in detail with necessary diagrams. | 15 | BTL -3 | Apply |
| **2** | Explain the combination of object selection and Toggle selection with  suitable example. Analyze its advantages and disadvantages in detail | 15 | BTL -3 | Apply |
| **3** | Designthe technique that is used to reveal customization controls of  webpage. Discuss that technique with diagrammatic illustration. | 15 | BTL -3 | Apply |
| **4** | Find out the applications in which the following techniques. Summarize  the use of technique in that application.   1. Virtual Panning 2. Zoomable user interface | 15 | BTL -3 | Apply |