



INSTITUTE OF AERONAUTICAL ENGINEERING (AUTONOMOUS)

Dundigal, Hyderabad - 500 043

INFORMATION TECHNOLOGY

QUESTION BANK

Course Name	:	HUMAN COMPUTER INTERACTION
Course Code	:	A70531
Class	:	IV B. Tech I Semester
Branch	:	Information Technology
Year	:	2018 – 2019
Course Faculty	:	Mrs. B.Pravallika, Assistant Professor, IT

OBJECTIVES

To meet the challenge of ensuring excellence in engineering education, the issue of quality needs to be addressed, debated and taken forward in a systematic manner. Accreditation is the principal means of quality assurance in higher education. The major emphasis of accreditation process is to measure the outcomes of the program that is being accredited.

In line with this, Faculty of Institute of Aeronautical Engineering, Hyderabad has taken a lead in incorporating philosophy of outcome based education in the process of problem solving and career development. So, all students of the institute should understand the depth and approach of course to be taught through this question bank, which will enhance learner's learning process.

S. No	Question	Blooms Taxonomy Level	Course Outcome
UNIT-1			
Introduction and The Graphical User Interface			
Part - A (Short Answer Questions)			
1	What is User Interface?	Remember	1
2	Explain the chronological history of graphical user interface	Understand	1
3	Explain in detail the importance of the user interface design	Understand	1
4	What is the importance of Good design?	Remember	1
5	Write the impact of inefficient screen design on processing time.	Remember	2
6	Explain the design structure of 1970s screen	Understand	2
7	Explain the design structure of 1980s screen	Understand	2
8	Explain the design structure of 1990s screen	Understand	2
9	What are the benefits of a good design?	Remember	1
10	What Comprises a good design?	Remember	1
11	What is Screen design?	Remember	2
12	Explain the benefits of good interface design	Understand	1
13	Explain about GUI Interface designs	Understand	3
14	Explain about the popularity of graphics	Understand	3

S. No	Question	Blooms Taxonomy Level	Course Outcome
15	Explain the concept of Direct manipulation	Understand	3
16	What are the various problems with Direct manipulation?	Remember	3
17	Why should we go for indirect manipulation?	Remember	3
18	What are the advantages of Graphical Systems?	Remember	3
19	What are the disadvantages of Graphical Systems?	Remember	3
20	Illustrate the characteristics of a Web Interface	Understand	3
21	Explain the characteristics of an Intranet versus the Internet Extranets	Understand	3
22	List out any two principles of user interface design?	Remember	3

Part - B (Long Answer Questions)

S. No	Question	Blooms Taxonomy Level	Course Outcome
1	Explain the history of screen design	Understand	2
2	Compare a 1970's screen, a 1980's screen, and a 1990's and beyond screen	Understand	2
3	Define the terms i. User interface ii. Objects and iii. Action.	Remember	2
4	What is the impact of inefficient screen design	Remember	1
5	Explain in detail the importance of the user interface for success of a software	Understand	2
6	Explain in details the benefits of Good Design	Understand	2
7	Explain the chronological history of internet	Understand	2
8	Explain the chronological history of GUI	Understand	1
9	Explain about the data objects, container objects and device objects	Understand	3
10	What is the important human characteristics which have influence on interface and screen design	Remember	3
11	Compare and contrast the graphical user interface and the web user interface	Understand	3
12	Explain about attributes of an object.	Understand	3
13	Explain the concept of Direct Manipulation	Understand	3
14	What is Graphical Systems? Explain its advantages and disadvantages	Remember	3
15	List out the characteristics of the Graphical User Interface	Remember	3
16	List out the characteristics of the Web User Interface	Remember	3
17	Compare the print page design and web page design	Understand	3
18	Compare and contrast GUI versus Web page Design	Understand	3
19	Explain about the principles of user interface design?	Understand	3
20	Explain and state various principles of Xerox star.	Understand	3

UNIT-II

Design Process and Screen Designing

Part - A (Short Answer Questions)

1.	What are the various difficulties with poor design?	Remember	4
2.	Discuss any three psychological and physical user responses to poor design.	Remember	5
3.	Explain any 5 important Human characteristics in Design	Understand	5
4.	Discuss about users knowledge and experience in the design of business system	Remember	5
5.	Explain about human interaction speed	Understand	4

S. No	Question	Blooms Taxonomy Level	Course Outcome
6.	Explain various methods of requirement analysis briefly	Understand	4
7.	Explain the user's mental model and systems conceptual models	Understand	5
8	What is Document Design? Explain about it?	Remember	4
9.	Why system training and documentation are also an integral part of any development effort. Discuss	Remember	5
10.	Explain various User's physical characteristics	Understand	5
11.	Explain any 4 interface design goals	Understand	6
12.	Define good screen design. What are the problems with poor design given the factors.	Remember	7
13.	What is a screen? What is the purpose of a screen?	Remember	8
14.	Explain the purpose of screen design?	Understand	4
15.	Explain about organizing and ordering of screen elements	Understand	6
16.	What is the role of screen navigation and flow in developing good screen design?	Remember	7
17.	Explain any 4 qualities which provide visually pleasing composition	Understand	8
18.	Discuss any 4 techniques used for visual emphasis of important elements on a screen	Remember	5
19.	Explain various guidelines for presenting information on screen	Understand	4
20.	Explain the types of Statistical Graphics	Understand	5
Part - B (Long Answer Questions)			
1	What is meant by basic business functions? Discuss in detail the process of determining basic business functions	Remember	4
2	Discuss about the users psychological characteristics in the design of a system	Remember	5
3	Discuss about the users physical characteristics in the design of a system	Remember	4
4	What is the importance of user's tasks and needs important in design of a system	Remember	5
5	Explain briefly about the important human characteristics in design of a system	Understand	5
6	Explain about Human Interaction Speed	Understand	6
7	Compare and contrast direct and indirect methods of requirements analysis	Understand	7
8	Why the system training and documentation are also an internal part of any development effort. Discuss	Remember	8
9	Explain various Design Standards or Style Guides	Understand	4
10	Explain the user's mental model and system's conceptual model.	Remember	6
11	What are the goals of user Interface design?	Remember	7
12	What is a Screen? What is the purpose of a screen?	Remember	8
13	Explain about organizing and ordering of screen elements	Understand	5
14	Explain various qualities which provides visually pleasing composition and give suitable examples for each quality	Understand	4
15	What is the role of screen navigation and flow in good screen design?	Remember	5
16	Discuss the techniques user of visual emphasis of important elements on a screen	Remember	4
17	Explain the various guidelines for presenting information on screen	Understand	5
18	Explain various Intranet and Extranet design Guidelines	Understand	4
19	Discuss in detail the technological considerations in interface design	Remember	5

S. No	Question	Blooms Taxonomy Level	Course Outcome
20	Discuss various Types of Statistical Graphics (or) Explain the guidelines for displaying graphic components on screen	Remember	7,8
UNIT-III			
Windows and Components			
Part - A (Short Answer Questions)			
1	Explain in detail any Three contents of menu.	Understand	9
2	What are the various functions of menu	Remember	9
3	Discuss different types of menus	Remember	9
4	Discuss the goals of website navigation	Remember	9
5	How many types of windows are available? Explain briefly	Remember	9
6	What are the components of a web navigation system?	Remember	9
7	Discuss about the website navigation design	Remember	9
8	Explain about window characteristics	Understand	9
9	Discuss any 5 window operations	Remember	9
10	Explain different kinds of links	Understand	9
11	Explain the issues that are to be considered in website organization	Understand	9
12	Discuss any four Components of a Windows	Understand	9
13	Explain any Three operations of a Window	Understand	9
14	Discuss the following Web systems frames (b) pop-up windows	Remember	9
15	Explain the functionality of Joystick and Graphic Tablet	Understand	9
16	Explain any 5 characteristics of Device-Based Controls	Understand	9
17	What are the guidelines for selecting the proper device-based controls? Explain in details	Remember	9
18	Explain the characteristics of the various screen -based controls	Understand	9
19	Explain any 3 Operable Controls	Understand	9
20	What is the importance of Radio Buttons and Check Boxes?	Remember	9
21	What are the advantage and disadvantages of palettes	Remember	9
22	Compare GUI controls	Understand	9
23	Explain about Words, Messages	Understand	10
24	Explain about Text , Instructional messages	Understand	10
24	Discuss about different types of Messages	Remember	10
25	What is icon?	Remember	10
26	Explain different kinds of icons?	Understand	10
27	What are the guidelines for creating images?	Remember	10
28	Explain about Color-What is it?	Understand	10
29	What are the uses of color?	Remember	10
30	Discuss any 3 possible problems with color.	Remember	10
31	What are the required features of diagrams?	Remember	10
32	Explain what are the issues to be considered in combining mediums	Understand	10
33	What are the guidelines for presenting error messages on web?	Remember	10
34	What is message?	Remember	10
35	Explain the advantages and disadvantages of image maps, video and animation	Understand	10
36	What are the uses of video?	Remember	10
37	What are the uses of diagrams?	Remember	10
38	How to create Three- Dimensional Look on a screen?	Remember	10

S. No	Question	Blooms Taxonomy Level	Course Outcome
Part - B (Long Answer Questions)			
1	What are the contents of Menus? Explain in detail	Remember	9
2	Explain the functions of Menus	Understand	9
3	Explain different structures of Menus	Understand	9
4	Discuss various kinds of Graphical Menus	Remember	9
5	What are the various Components of a Window?	Remember	9
6	Explain various window operations	Understand	9
7	What are the guidelines for selecting the proper Device-Based control? Explain in detail.	Remember	9
8	Explain various characteristics of Device- Based Controls	Understand	9
9	Distinguish between Operable controls and Presentation Controls	Understand	9
10	Explain the Types of Windows	Understand	9
11	What are the various guidelines for presenting error messages on web?	Remember	10
12	Explain different types of Messages	Understand	10
13	Explain about Words, Text, Window	Understand	10
14	What is an icon? What are the kinds of icons? Explain in detail.	Remember	10
15	What is multimedia? Explain it briefly.	Remember	10
16	What are the guidelines for designing icons?	Remember	10
17	Explain about Color- What is it?	Understand	10
18	Explain various uses of Color.	Understand	10
19	What are the possible problems with color?	Remember	10
20	Explain the procedure for choosing colors in screen design	Understand	10
UNIT-IV Software Tools			
Part - A (Short Answer Questions)			
1	Discuss about Backus normal form/Describe grammars specification method.	Remember	11
2	Explain briefly about specification methods	Understand	11
3	What are menu-selection and dialog box trees	Remember	11
4	What are the advantages of menu-selection and dialog box trees	Remember	11
5	Illustrate the following: State charts (b) Grammars	Understand	11
6	What are User-Action Notation(UAN)	Remember	11
7	Explain the use of Transition Diagram.	Understand	11
8	What are the advantages and disadvantages of Transition diagram?	Remember	11
9	Explain about Statechart diagram.	Understand	11
10	Discuss various Design tools for creating user interface	Remember	11
11	Discuss various Software Engineering for creating user interface	Remember	11
12	What are the different features of user-interface-building tools?	Remember	11
Part - B (Long Answer Questions)			
1	Discuss about Backus normal form	Remember	11
2	What is Grammars? Explain briefly.	Remember	11
3	What is Transition diagram? Explain its advantages and disadvantages with an example	Remember	11
4	Explain about user-action notation (UAN)	Understand	11
5	What is the role of state charts in specification? Give an example of state-chart for file manipulation actions	Remember	11
6	What are menu- selection and dialog box trees? And write it advantages.	Remember	11

S. No	Question	Blooms Taxonomy Level	Course Outcome
7	Explain about the Features of user-interface building tools	Understand	11
8	Discuss various Design tools for creating user interface	Remember	11
9	Discuss various Software Engineering tools for creating user interface	Remember	11
10	Explain the importance of Interface – Building Tools	Understand	11
UNIT-V Interaction Devices			
Part - A (Short Answer Questions)			
1	Explain the features of QWERTY AND DVORAK LAYOUR	Understand	12
2	Distinguish between QWERTY and ABCDE style.	Understand	12
3	What are the function keys? What are their advantages?	Remember	13
4	Explain various Cursor movements keys	Understand	12
5	What is Fitt's law?	Remember	12
6	What are Pointing devices? Explain.	Remember	12
7	What are Direct-Control pointing devices?	Remember	12
8	Discuss various Indirect-Control pointing devices?	Understand	12
9	What is speech digitization and generation?	Remember	12
10	Discuss various Display Devices	Understand	12
11	Define various kinds of keyboard layouts	Remember	14
12	Explain speech store and forward method	Understand	12
Part - B (Long Answer Questions)			
1	Explain briefly about direct control pointing devices. What is Fitt's law? Where it is used?	Understand	12
2	Explain the importance of keyboards, Function keys	Understand	12
3	What are novel pointing devices? Explain? Explain about Speech Recognition	Remember	12
4	Explain pointing devices? In detail What is Speech digitization and Generation?	Understand	12
5	Discuss briefly about discrete word recognition.	Understand	12
6	Explain about projectors, heads up displays helmet mounted displays.	Understand	15
7	What are the uses of video displays? Explain various video display devices in details.	Remember	12
8	Compare and contrast the characteristics of various pointing devices	Understand	12
9	Explain about the working of Liquid Crystal Display (LCD) devices	Understand	12

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