

First IAT Scheme and solutions

Semester: 8-CBCS 2017 Date: 23 May 2021

Subject: USER INTERFACE DESIGN (PE) (17CS832)

Time: 11:00 AM - 12:30 PM

Faculty: Dr Anand R

Max Marks: 50

1a. Compare the characteristics of GUI versus Web Design with respect to the given GUI Example

Any 10 Characteristics 1*1=10 marks

1. Devices
2. User Focus
3. Data
4. Information
5. User Tasks
6. Presentation
7. Navigation
8. Interaction
9. Response Time
10. System Capability
11. Task Efficiency
12. Consistency
13. User Assistance
14. Integration
15. Security
16. Reliability

1b. Write the definition of User Interface Design

Definition 2 marks

User interface design is a subset of a field of study called human-computer interaction (HCI). Human-computer interaction is the study, planning, and design of how people and computers work together so that a person's needs are satisfied in the most effective way.

2. Briefly explain the general principles of User Interface Design

Explain any 10 principles 1*1=10 marks

1. Aesthetically Pleasing

2. Clarity
3. Compatibility
4. Comprehensibility
5. Configurability
6. Consistency
7. Control
8. Directness
9. Efficiency
10. Familiarity
11. Flexibility
12. Forgiveness
13. Predictability
14. Recovery
15. Responsiveness
16. Simplicity
17. Transparency
18. Trade-Offs

3a. Describe the important human characteristics in User Interface Design

Explain any 7 characteristics 10 marks

1. **Perception**
2. **Memory**
3. **Sensory Storage**
4. **Visual Acuity**
5. **Foveal and Peripheral Vision**
6. **Information Processing**
7. **Mental Models**
8. **Movement Control**
9. **Learning**
10. **Skill**
11. **Individual Differences**

3b. Identify the steps to build a basic business functions

Listing the steps 2 marks

- Perform a business definition and requirements analysis.
- Determine basic business functions.
- Describe current activities through task analysis.
- Develop a conceptual model of the system.
- Establish design standards or style guides.

- Establish system usability design goals.
- Define training and documentation needs

4. List and summarize the pit falls in development path of the design process.

1. Designing for People
2. Usability
3. Common Usability Problems
4. Some Practical Measures of Usability
5. Some Objective Measures of Usability
6. The Design Team
7. Know your user or client
8. Why People Have Trouble with Computers
9. Responses to Poor Design

5. Consider the development a conceptual model for the registration form and Summarize the list of Human Considerations in Design process

Knowledge/Experience -3 marks

JOB/TASK/NEED- 3 marks

PSYCHOLOGICAL CHARACTERISTICS- 2 marks

PHYSICAL CHARACTERISTICS- 2 marks

6. Apply direct methods for determining the business user requirements with suitable examples

Any 5 methods -5*2=10 marks

1. **Individual Face-to-Face Interview**
2. **Telephone Interview or Survey**
3. **Traditional Focus Group**
4. **Facilitated Team Workshop**
5. **Observational Field Study**
6. **Requirements Prototyping**
7. **User-Interface Prototyping**
8. **Usability Laboratory Testing**
9. **Card Sorting for Web Sites**