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B.TECH.
(SEM V) THEORY EXAMINATION 2022-23
HUMAN COMPUTER INTERFACE

Time: 3 Hours**Total Marks: 100****Note:** Attempt all Sections. If you require any missing data, then choose suitably.

SECTION A

1. Attempt all questions in brief. 2x10 = 20

- (a) Discuss the design guidelines for design of human computer interface.
- (b) Explain the brief history of Screen design.
- (c) What are the input and output channels of human?
- (d) Differentiate deductive reasoning, inductive reasoning, and adductive reasoning.
- (e) Discuss about interaction of people with computers.
- (f) Give the brief history of screen design.
- (g) Describe developing conceptual models.
- (h) What are the technological considerations of interface design? Explain.
- (i) What are structures of menus?
- (j) What are the various components of a window?

SECTION B

2. Attempt any three of the following: 10x3 = 30

- (a) What are the roles of icons, graphics, and colour in providing feedback?
- (b) Explain the meaning of hypertext and how it is different normal text? Discuss various elements of hypertext.
- (c) Explain the concept of Hypermedia for user interface. Also discuss their importance and necessary design consideration for user interface.
- (d) How do methods and tools support the process of designing human-computer interaction for the three emerging technologies studies?
- (e) What are the advantages and disadvantages of Menus used in GUI application?

SECTION C

3. Attempt any one part of the following: 10x1 = 10

- (a) Explain the role of user documentation in HCI. What are the major parameters on which documentation should be done?
- (b) Explain in brief about Device-based controls and Screen-based controls? Give the guidelines for selecting the proper controls in screen design.

4. Attempt any one part of the following: 10 x1 = 10

- (a) How the two important components of presentation design are evolved from the Sequential machine theory? Discuss the analogy in detail.
- (b) Discuss three approaches to organize content of documentation. "Designing an interface is an iterative process". Give your reasonable comments on this statement.

5. **Attempt any *one* part of the following:** **10x1 = 10**
- (a) Is usability in User Interface design? Why usability is so important? Explain the principles of User Interface Design.
 - (b) Discuss the important human characteristics which have influence on interface and screen design.
6. **Attempt any *one* part of the following:** **10x1 = 10**
- (a) What are the issues to be considered in designing title bar and message box?
 - (b) Give a brief note about different widget supports and interface features supported in user-interface building tools.
7. **Attempt any *one* part of the following:** **10x1 = 10**
- (a) What are the various statistical graphic forms and explain surface charts, bar graphs and histograms with suitable examples,
 - (b) What is meant by basic business function? Discuss in detail the process of determining basic business functions.

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