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B.E. (FT) END SEMESTER EXAMINATIONS – NOV / DEC 2023

Computer Science and Engineering

Seventh Semester

**CS6017 – HUMAN COMPUTER INTERACTION**

(Regulation 2018 - RUSA)

Time: 3 Hours

Answer ALL Questions

Max. Marks: 100

CO1	To determine the necessity of user interaction by understanding usability engineering and user modeling
CO2	To learn the methodologies for designing interactive systems
CO3	To investigate the core and complex design issues for interaction
CO4	To examine the evaluation methodologies of design
CO5	To understand design issues for web and mobile platforms

**PART - A (10 x 2 = 20 Marks)**

Sl.No.	Questions	Marks	CO	BL
1.	What are the defining characteristics of "User Centred Design"?	2	CO1	L1
2.	What constitutes <i>universal usability</i> ?	2	CO1	L2
3.	Suggest guidelines for navigation design for small displays.	2	CO3	L1
4.	State Fitts's Law and identify the usability issue it addresses.	2	CO2	L2
5.	What do you understand by <i>between-subjects</i> and <i>within-subjects</i> usability study?	2	CO4	L1
6.	Mention a few <i>feedback patterns</i> on the web.	2	CO5	L1
7.	Give expansions for the following: CSCW, MVC, WYSIWYG, VDM	2	CO2	L1
8.	What is <i>free rider problem</i> and <i>Critical Mass</i> ?	2	CO3	L1
9.	What is the need for formalism in HCI design?	2	CO3	L2
10.	Decipher the idioms: " <i>lost in hyperspace</i> ", " <i>change blindness</i> ".	2	CO5	L2

**PART – B (8 x 8 = 64 Marks)**

(Answer any 8 questions)

Sl. No.	Questions	Marks	CO	BL
11.	Write notes on a few popular Cognitive frameworks.	8	CO1	L1
12.	Present a summary of the contributions of Ben Shneiderman to HCI design.	8	CO1	L1
13.	Critically analyze the design issues and challenges in using <i>spoken interaction</i> .	8	CO3	L2
14.	i) Compare <i>Face-to-Face communication</i> with <i>online video call</i> based communication. ii) Present any simple model for collaboration.	4 4	CO3	L2



15.	What do you know about incidental and sensor based interactions? Suggest design guidelines and arrange the following in the order of intention. <i>Automatic doors into hotel, automatic water taps in washbasin, reversing lights in a car, auto-numbering lists in a word processor, web page counter, font menu in word processor that shows recent fonts at the top of the list.</i>	8	CO3	L2
16.	Summarize the common issues and techniques for <i>data visualization</i> .	8	CO2	L1
17.	What is <i>status-event</i> analysis? Critically analyze the following scenario based on the above technique: <i>"An oven has some indicators displaying status of baking along with a buzzer to indicate the completion of the job and a POS system shows new orders. The chef is busy with another cooking job and has headphones plugged in his ear. His assistants keep looking for new orders on the POS system and ovens status".</i>	8	CO3	L2
18.	Write about <i>Soft Systems methodology</i> and present an example.	8	CO3	L2
19.	Write short notes on the popular Mobile Navigation design patterns.	8	CO5	L1
20.	What are the common techniques used for keeping the users focused on the same page while interaction?	8	CO5	L1
21.	Present any two diagrammatic notations for dialog design for "ATM withdrawal" scenario.	8	CO3	L2
22.	Throw light on Hypermedia application design issues and concerns.	8	CO5	L1

**PART – C (2 x 8 = 16 Marks)**

Sl.No.	Questions	Marks	CO	BL
23.	Present a GOMS description and HTA for the following scenario and compare the techniques. Scenario: "Mobile payments using QR code".	8	CO3	L3
24.	Present the Neilsen's Heuristics and address the following. <i>"Imagine you are interested in buying a smart watch online, what are the key usability issues that bother you and how would you evaluate the same heuristically"?</i>	8	CO4	L3

