Singh Sangh Charitable Trust's (Regd.)

THAKUR COLLEGE OF ENGINEERING & TECHNOLOGY

Autonomous College Affiliated to University of Mumbai

Approved by All India Council for Technical Education(AICTE) and Government of Maharashtra(DTE)

Conferred Autonomous Status by University Grants Commission (UGC) for 10 years w.e.f. A.Y 2019-20

Amongst Top 200 Colleges in the Country, Ranked 191st in NIRF India Ranking 2019 in Engineering College category

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Estd. in 2001

• ISO 9001:2015 Certified • Programmes Accredited by National Board of Accreditation (NBA), New Delhi

• Institute Accredited by National Assessment and Accreditation Council (NAAC), Bangalore

END SEMESTER EXAMINATION, DECEMBER 2022
B. E. SEMESTER VII (CBCGS-H 2019)

Branch:	Information Technology	Q.P. Code:	4713PE400223
Subject:	Professional Elective IV: User Interaction Design	Duration:	3 hours
Subject Code:	PEC-IT 7024	Max.Marks:	75

Instructions: 1. All sections are compulsory
2. Figures to the right indicate full marks.
3. Assume suitable data if necessary and state the assumptions clearly.

Section-I Short Answer Questions (Answer any 05 questions out of 06) **(10 Marks)**

Q. No.		Marks	CO	RBT Level	PI
1	How problem space can be defined for the design purpose?	2	2	1	1.7.1
2	Why prototyping is required in interaction design?	2	3	2	3.5.1
3	What are the Different kinds of requirements?	2	4	2	6.3.1
4	List principles of Usability Engineering & elaborate any one in detail.	2	1	4	5.5.1
5	Differentiate good & bad design in interaction design.	2	3	3	4.6.1
6	Discuss Mapping Consistency in interaction design.	2	6	2	1.6.1

Section-II Descriptive Answer Questions (Answer any 05 out of 07) **(25 Marks)**

1	Consider any website and write your observation with respect to good & bad design of the same.	5	1	2	2.7.1
2	How to Choose between different techniques of data gathering? Discuss Problems with data gathering	5	4	3	3.6.1
3	Discuss different Approaches to Task Analysis in detail.	5	5	3	3.7.2
4	How possible actions can be restricted using constraints while doing interaction design? Explain in detail.	5	6	4	5.5.1
5	What conceptual models are the following applications based on? (a) A 3D video game, say a car-racing game with a steering wheel and tactile, audio, and visual feedback (b) a web browser	5	2	2	2.7.1
6	Draw Usability engineering lifecycle model& discuss it in brief.	5	3	1	1.6.1

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7	While working on best user interaction design which goals of interaction design needs to be followed by designer? Explain all in detail.	5	1	1	2.5.1
Section-III	**Long Answer Questions (Answer any 04 out of 06)**				**(40 Marks)**
1	What are the Flexible & essential data gathering techniques which give full leverage on understanding the variety of requirements we seek for best user Interaction design? Explain all in detail. Explain all in detail.	10	3	1	3.7.2
2	What is conceptual model in interaction design? which techniques can be used to create conceptual model. Discuss all in detail.	10	2	2	5.5.1
3	How to determine what users should see and do when carrying out their tasks using an interactive product. List & Explain four activities required in interaction process.	10	1	3	4.6.1
4	How Index cards & Wizard-of-Oz prototyping is used in interaction design? Differentiate between Low-fidelity prototype & High-fidelity prototype	10	4	4	1.7.1
5	What is task analysis? Write different approaches of task analysis and following are a textual representation of an HTA description of vacuum cleaning. Present the same information in a diagrammatic form. 0. in order to clean the house 1. get the vacuum cleaner out 2. get the appropriate attachment 3. clean the rooms 3.1. clean the hall 3.2. clean the living rooms 3.3. clean the bedrooms 4. empty the dust bag 5. put vacuum cleaner and attachments away ... and plans Plan 0: do 1 - 2 - 3 - 5 in that order. when the dust bag gets full do 4 Plan 3: do any of 3.1, 3.2 or 3.3 in any order depending on which rooms need cleaning	10	3	3	1.6.1
6	How product can be made more interactive based on Nielsen's 10 Heuristics? Elaborate all in detail.	10	6	2	4.6.2