SVKM's NMIMS
MUKESH PATEL SCHOOL OF TECHNOLOGY MANAGEMENT & ENGINEERING / SCHOOL OF TECHNOLOGY MANAGEMENT & ENGINEERING

Academic Year: 2022-23

Programme: B. Tech (CSBS)   Year: IV   Semester: VII

Subject: Usability Design of Software Applications

Date: 16 November 2022

Marks: 100
Time: 2.00 pm - 5.00 pm
Durations: 3 (Hrs)
No. of Pages: __3__

Final Examination

Instructions: Candidates should read carefully the instructions printed on the question paper and on the cover of the Answer Book, which is provided for their use.

1) Question No. _1___ is compulsory.

2) Out of remaining questions, attempt any __4___ questions.

3) **In all ___5_ questions to be attempted.**

4) All questions carry equal marks.

5) **Answer to each new question to be started on a fresh page.**

6) **Figures in brackets on the right hand side indicate full marks.**

7) **Assume Suitable data if necessary.**

Q1		Answer briefly:	[20]
CO-1; BL-1	a.	Explain the terms affordance and signifiers with examples.	[5]
CO-2; BL-1	b.	Describe the feedback heuristic principle in user centered design in brief.	[5]
CO-3; BL-2	c.	Define characteristics of usability which must be met for the users of a product	[5]
CO-4; BL-3	d.	Give details the four factors of usability testing.	[5]

Q2 CO-1,2; BL-3	a.	Provide suitable reasons that why this webpage is an example of a bad design. Suggest some good design changes to this interface. 	[10]
	b.	Describe any 5 heuristic principles with examples.	[10]
Q3 CO-1,3; BL-3	a.	Why user data gathering is hard? Discuss the process of interviewing a user.	[10]
	b.	Discuss the importance of redesigning? Explain step by step process of redesigning.	[10]
Q4 CO-4; BL-3	a.	Why is prototyping needed? Discuss any two types of prototyping techniques in detail.	[10]
	b.	Define the importance of user research (UX research). Explain Qualitative UX research and Quantitative UX research.	[10]

Q5
CO-3,4;
BL-3
	a.	Read the following case study and answer the given questions:
		"SVKM's student portal is used to maintain all student's related records and announcements. Students use the website regularly to get information about syllabus for exam results, but the problem was the visual appearance of the website and its navigation. The biggest problem was facing by students to get the information about exam results, each time it requires to get 2–3 steps for getting exam results".
		    a) List down the problems properly and provide the workable solutions of identified problem (as mentioned in case study).
		    b) Redesign the website to solve the identified problems. Draw neat and clean sketches and highlight the features in sketches.
			[10]

	b.	List down the importance of task flow in project development. Design the task flow for cancelling the ordered product from the flipkart.	[10]

Q6 CO-1,3, BL-4	a.	Read the given case study "John wants to buy online gift for his friend through Flipkart website. He uses mobile app to search the product and save in to cart to buy it later. Apply and show heuristic evaluation in tabular format and generate evaluation report with severity ranking for possible solutions.	[10]
	b.	Explain the different phases of User centered design process for designing a health fitness app.	[10]
Q7 CO-2; BL-2	a.	Discuss the importance of persona. Design a persona for a person who is looking for a job.	[10]

	b.	Read the following case study;
		"Online examination system is web application designed for educational institutes to prepare an exam, save time which is taken to evaluate the answer sheets and prepare marks card. It will help the institute to test students efficiently and effectively while they enhance their skills. Currently a client was using Microsoft forms to evaluate such exams. Pulling reports, maintaining records, and managing results were a few of the major challenges faced by institutions working with the client. Each school should be able to manage their exams online efficiently and effectively. The interface should be user friendly and self-explanatory so that it does not require any training to Students or Teachers who are going to conduct the exam."
		Give answers of the following questions:
		    a. Who are the end users?
		    b. Analyze and list down the user requirements
		    c. Explain user centered design iterative process while designing the webpages of given case study
			[10]