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**PRESIDENCY UNIVERSITY  
BENGALURU**

**SCHOOL OF ENGINEERING**

**TEST 1**

**Sem & AY:** Odd Sem. 2019-20

**Course Code:** CSE 218

**Course Name:** HUMAN COMPUTER INTERACTION

**Programme & Sem:** B.Tech (CSE) & VII

**Date:** 1.10.2019

**Time:** 9:30AM to 10:30AM

**Max Marks:** 40

**Weightage:** 20%

**Instructions:**

- i. Read the question properly and answer accordingly.
- ii. Question paper consists of 3 parts.
- iii. Scientific and Non-programmable calculators are permitted.

**Part A [Memory Recall Questions]**

**Answer both the Questions. Each Question carries six marks. (2Qx6M=12M)**

1. Write in detail about Norman's model of interaction. [C.O.NO.1] [Knowledge]
2. Explain the role of ergonomics in designing interfaces.  
[C.O.NO.1] [Knowledge]

**Part B [Thought Provoking Questions]**

**Answer both the Questions. Each Question carries eight marks. (2Qx8M=16M)**

3. Differentiate between internal and external cognitive frameworks.  
(C.O.NO.1) [Comprehension]
4. "Study of Human Reasoning and Problem solving capabilities helps in designing interfaces" Justify the statement with proper explanation.  
[C.O.NO.1] [Comprehension]

**Part C [Problem Solving Questions]**

**Answer the Question. Question carries twelve marks. (1Qx12M=12M)**

5. Case study – "User Interface designing" is a lab based course in Presidency University. In User interface designing lab students need to develop User Interfaces for web based project by following all the guidelines and principles of designing interfaces. The evaluation of the interfaces will be done based on interface satisfying all the rules, principles and guidelines of designing interfaces. If the project is unable to satisfy any one of the guidelines or principles it will be rejected.

Assume that you are a student registered for User Interface designing lab course. Suggest the Principles which you will follow to make your project successful and mention why those Principles are to be followed.

[C.O.NO.2] [Application]





## SCHOOL OF ENGINEERING

Semester: 7TH

Course Code: CSE 218

Course Name: HCI

Date: 1-10-2019

Time:

Max Marks: 40

Weightage: 20%

### Extract of question distribution [outcome wise & level wise]

Q.NO	C.O.NO	Unit/Module Number/Unit /Module Title	Memory recall type [Marks allotted] Bloom's Levels			Thought provoking type [Marks allotted] Bloom's Levels			Problem Solving type [Marks allotted]			Total Marks
			K			C			A			
1,2,3, 4	1	1	6	6		8	8					28
5	2	2							12			12
	Total Marks		12			16			12			40

K = Knowledge Level    C = Comprehension Level, A = Application Level



Note: While setting all types of questions the general guideline is that about 60%

Of the questions must be such that even a below average students must be able to attempt, About 20% of the questions must be such that only above average students must be able to attempt and finally 20% of the questions must be such that only the bright students must be able to attempt.

[I hereby certify that All the questions are set as per the above guide lines. Mr. Gowtham ]

Reviewers' Comments



## Annexure- II: Format of Answer Scheme



### SCHOOL OF ENGINEERING

#### SOLUTION

Semester: 7TH

Course Code: CSE 218

Course Name- HCI

Date: 1-10-19

Time: 1 HOUR

Max Marks: 40

Weightage: 20%

#### Part A

(2 x 6M = 12Marks)

Q No	Solution	Scheme of Marking	Max. Time required for each Question
1	Normans model	6 marks	8 min
2	Definition Role of ergonomics	2 marks 4 marks	8 min

#### Part B

(2 x 8M = 16Marks)

Q No	Solution	Scheme of Marking	Max. Time required for each Question
3	Internal cognitive frameworks External cognitive frameworks Differentiation	3 marks 3 marks 2 marks	12 mins
4	Reasoning and problem solving Justification	4 marks 4 marks	12 mins

#### Part C

(1 x 12M = 12Marks)

Q No	Solution	Scheme of Marking	Max. Time required for each Question
5	Determine user skill levels Identify tasks Choose an interaction style Prevent errors Ensuring human control Eight golden rules	2 marks 2 marks 2 marks 2 marks 2 marks 2 marks	20 mins







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**PRESIDENCY UNIVERSITY  
BENGALURU**

**SCHOOL OF ENGINEERING**

**TEST - 2**

**Sem & AY:** Odd Sem 2019-20

**Course Code:** CSE 218

**Course Name:** HUMAN COMPUTER INTERACTION

**Program & Sem:** B.Tech (CSE) & VII

**Date:** 19.11.2019

**Time:** 9.30 AM to 10.30 AM

**Max Marks:** 40

**Weightage:** 20%

**Instructions:**

- (i) Read the question properly and answer accordingly.
- (ii) Question paper consists of 3 parts.
- (iii) Scientific and Non-programmable calculators are permitted.

**Part A [Memory Recall Questions]**

**Answer both the Questions. Each Question carries six marks.**

**(2Qx6M=12M)**

1. Write in detail about Rapid contextual design model. (CO2)[Knowledge]
2. Explain the "Theories" of designing interfaces. (CO2)[Knowledge]

**Part B [Thought Provoking Questions]**

**Answer both the Questions. Each Question carries eight marks.**

**(2Qx8M=16M)**

3. Differentiate between conceptual design and participatory design. (CO2)[Comprehension]
4. Differentiate between Survey instruments and acceptance testing. (CO3)[Comprehension]

**Part C [Problem Solving Questions]**

**Answer the Question. The Question carry twelve marks.**

**(1Qx12M=12M)**

5. **Case study** – Election commission of India is planning to conduct elections through online from 2020. Elections will be conducted through a government website, where every voter can register by their ID proofs and can vote. This project will come into act after developing the required website with efficient interface for voters. Based on the results of evaluation team, reviews gathered the project will be approved. The Election commission formed a development team and Evaluation team for developing and evaluating the interface for making it a success.

Assume that you are one of evaluation team and an expert reviewer. As an expert reviewer suggest the expert review methods which you will follow to evaluate the interface and give explanation why those methods are needed. (CO3)[Application]





## SCHOOL OF ENGINEERING

**Semester:** 7TH

**Course Code:** CSE 218

**Course Name:** HCI

**Date:** 19-11-2019

**Time:** 1hr

**Max Marks:** 40

**Weightage:** 20%

### Extract of question distribution [outcome wise & level wise]

Q.NO	C.O.NO	Unit/Module Number/Unit /Module Title	Memory recall type [Marks allotted] Bloom's Levels			Thought provoking type [Marks allotted] Bloom's Levels			Problem Solving type [Marks allotted]			Total Marks
			K			C			A			
1,2,3,	2	2	6	6		8						20
4,5	3	3				8			12			20
	<b>Total Marks</b>		12			16			12			40

K = Knowledge Level C = Comprehension Level, A = Application Level

Note: While setting all types of questions the general guideline is that about 60%

Of the questions must be such that even a below average students must be able to attempt, About 20% of the questions must be such that only above average students must be able to attempt and finally 20% of the questions must be such that only the bright students must be able to attempt.





# SCHOOL OF ENGINEERING

## SOLUTION

Semester: 7TH

Course Code: CSE 218

Course Name- HCI

Date: 19-11-19

Time: 1 HOUR

Max Marks: 40

Weightage: 20%

### Part A

(2Q x 6M = 12Marks)

Q No	Solution	Scheme of Marking	Max. Time required for each Question
1	Rapid contextual design	6 marks	8 mins
2	Descriptive Explanatory Prescriptive Predictive Design by levels	1 mark 1 mark 1 mark 1 mark 2 marks	8 mins

### Part B

(2Q x 8M = 16Marks)

Q No	Solution	Scheme of Marking	Max. Time required for each Question
3	Conceptual design Participatory Differentiation	3 marks 3 marks 2 marks	12 mins
4	Survey instruments Acceptance testing Differentiation	3 marks 3 marks 2 marks	12 mins

### Part C

(1Q x 12M = 12Marks)

Q No	Solution	Scheme of Marking	Max. Time required for each Question
5	Heuristic evaluation Guidelines review Consistency inspection Cognitive walkthrough Metaphors of human thinking Formal usability inspection	2 marks 2 marks 2 marks 2 marks 2 marks 2 marks	20 mins





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**PRESIDENCY UNIVERSITY  
BENGALURU**

**SCHOOL OF ENGINEERING**

**END TERM FINAL EXAMINATION**

**Semester:** Odd Semester: 2019-20

**Course Code:** CSE 218

**Course Name:** HUMAN COMPUTER INTERACTION

**Program & Sem:** B.Tech (CSE) & VII

**Date:** 27 December 2019

**Time:** 9:30 AM to 12:30 PM

**Max Marks:** 80

**Weightage:** 40%

**Instructions:**

- (i) Read the question properly and answer accordingly.
- (ii) Question paper consists of 3 parts.
- (iii) Scientific and Non-programmable calculators are permitted.

**Part A [Memory Recall Questions]**

**Answer all the Questions. Each Question carries 5 marks.**

**(4Qx5M=20M)**

1. Write in detail about internal cognitive frameworks. (C.O.No.1)[Knowledge]
2. Explain why low fidelity prototyping is used more when compared to high fidelity prototyping in designing interfaces. (C.O.No.2) [Knowledge]
3. Discuss about asynchronous distributed interfaces . (C.O.No.4) [Knowledge]
4. Write a short note on participatory design. (C.O.No.3) [Knowledge]

**Part B [Thought Provoking Questions]**

**Answer all the Questions. Each Question carries 10 marks.**

**(3Qx10M=30M)**

5. "Study of human reasoning and problem solving capabilities helps in designing efficient interfaces". Justify the statement. (C.O.No.1)[Knowledge]
6. Compare synchronous and asynchronous distributed interfaces. (C.O.No.4)[Knowledge]
7. "Design of universal usable interface is impossible". Justify the statement with proper explanation. (C.O.No.1)[Knowledge]

**Part C [Problem Solving Questions]**

**Answer both the Question. Each Question carries 15 marks.**

**(2Qx15M=30M)**

8. **Case study** – A leading bank wanted to automate their front office management through a website. The front office consist of account maintenance, Loan ledger, Card maintenance (Credit& Debit). The automation system will be finalized only after the evaluation by expert review team.

Assume that you are one of evaluation team and an expert reviewer. As an expert reviewer suggest the expert review methods which you will follow to evaluate the interface and give explanation why those methods are needed.

(C.O.No.3)[Application]

9. Case study – 'Tourist India' is a tourism website which provides information regarding various tourist places in India. The website want to make an updating to provide virtual tour of tourist places to their web users. For that an interface development team was selected to design virtual tours. Improving Information Visualization is the main theme of updating the website.

Assume that you are one of the team selected for updating the website. Discuss about various challenges you have to face for improving the information visualization.

(C.O.No.4)[Application]



## Annexure- II: Format of Answer Scheme



### SCHOOL OF ENGINEERING

#### SOLUTION

Semester: 7TH

Course Code: CSE 218

Course Name- HCI

Date: -12-19

Time: 3 HOURS

Max Marks: 80

Weightage: 40%

#### Part A

(4 x 5M = 20Marks)

Q No	Solution	Scheme of Marking	Max. Time required for each Question
1	Mental models Gulfs of execution and evaluation Information processing	2 marks 2 marks 1 mark	10 min
2	Low fidelity prototyping High fidelity prototyping	3 marks 2 marks	10 min
3	Asynchronous distributed interfaces	5 Marks	10 min
4.	Participatory design	5 marks	10 min

#### Part B

(3 x 10M = 30Marks)

Q No	Solution	Scheme of Marking	Max. Time required for each Question
3	Reasoning Problem solving justification	3 marks 3 marks 4 marks	20 mins
4	Synchronous distributed interfaces Asynchronous distributed interfaces Comparison and differentiation	3 marks 3 marks 4 marks	20 mins
	Variation in physical abilities Cognitive and perceptual abilities Personality differences Cultural diversity Users with disabilities Old age users and children hardware and software diversity	10 marks	20 mins

#### Part C

(2 x 15M = 30Marks)



## SCHOOL OF ENGINEERING

Semester: 7TH

Course Code: CSE 218

Course Name: HCI

Date: 27-12-2019

Time: 3 hours

Max Marks: 80

Weightage: 40%

### Extract of question distribution [outcome wise & level wise]

Q.NO	C.O.NO	Unit/Module Number/Unit /Module Title	Memory recall type [Marks allotted] Bloom's Levels			Thought provoking type [Marks allotted] Bloom's Levels			Problem Solving type [Marks allotted]			Total Marks
			K			C			A			
1,5,7	1	1	5			10	10					25
2,3	2	2	5	5								10
4,8	3	3	5						15			20
6,9	4	4				10			15			25
	Total Marks		20			30			30			80

K = Knowledge Level C = Comprehension Level, A = Application Level

Note: While setting all types of questions the general guideline is that about 60%

Of the questions must be such that even a below average students must be able to attempt, About 20% of the questions must be such that only above average students must be able to attempt and finally 20% of the questions must be such that only the bright students must be able to attempt.

Q No	Solution	Scheme of Marking	Max. Time required for each Question
5	Heuristic evaluation Guidelines review Consistency inspection Cognitive walkthrough Metaphors of human thinking Formal usability inspection	15 marks	30 mins
	Importing and cleaning data Combining visual representations with textual labels Finding related information Viewing large volumes of data Integrating data mining Integrating with analytical reasoning techniques Achieving universal usability	15 marks	30 mins

