

Total No. of Questions :11]

SEAT No. :

P1679

[5058]-168

[Total No. of Pages :3

T.E. (Information Technology)

HUMAN COMPUTER INTERACTION AND USABILITY

(2008 Pattern)

Time : 3 Hours]

[Max. Marks :100

Instructions to the candidates:

- 1) *Answer Q1 or Q2; Q3 or Q4; Q5 or Q6; Q7 or Q8; Q9 or Q10 and Q11.*
- 2) *Draw neat diagrams whenever necessary.*
- 3) *Figures to the right side indicate full marks.*
- 4) *Assume suitable data if necessary.*

SECTION-I

Q1) a) What is ergonomics? Discuss importance of human factors in human-computer interaction design. [8]

b) What are models of interaction? Explain any one model in details. [8]

OR

Q2) a) Differentiate between human short-term memory and long-term memory. [8]

b) What is interaction design? What are goals of interaction design? [8]

Q3) a) What are different paradigms of interactions? Explain any one of the following in details. [10]

i) pervasive computing

ii) invisible computing

iii) weavable computing

b) Discuss the practical issues in interaction design process. [8]

OR

P.T.O.

Q4) a) Describe briefly four different interaction styles used to accommodate the dialog between user and computer. Specify advantages and disadvantages of each interaction style. [10]

b) What is WIMP interface? Discuss its advantages and disadvantages. [8]

Q5) a) With respect to Human Diversity how to accommodate user with disabilities and elderly users while designing user interfaces. [8]

b) Evaluate microsoft power point interface on the basis of the 'Eight golden rules of interface design'. [8]

OR

Q6) a) What is usability Engineering? Explain principles that support usability. [8]

b) Why is context important in selecting and applying guidelines and principles for interface design? Illustrate your answers with examples. [8]

SECTION-II

Q7) a) What is DECIDE? List and explain unique phases of DECIDE framework. [8]

b) Compare: Formative versus Summative Evaluation of user interfaces. [8]

OR

Q8) a) What is Web-usability? What are benefits of web-usability? Discuss the guiding principles of web-usability. [8]

b) Explain any two evaluation paradigms for UI design. [8]

Q9) a) What is the purpose or aims of Task Analysis? Explain knowledge based task analysis. [8]

b) Explain GOMS model by taking appropriate task. Also discuss the issue of closure in terms of your GOMS description. [8]

OR

Q10) a) Explain any one cognitive model of goal or task hierarchy. **[8]**

b) Give any two digrammatic or taxtual notations used to design dialogs in effective user interface. Justify your notations with examples. **[8]**

Q11) Write short notes on ANY THREE of following: **[18]**

- a) Augmented Reality.
- b) Groupware systems.
- c) Ubiquitous computing.
- d) Information and data visualization.

EEE

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