



UNIVERSITY COLLEGE TATI (UC TATI)

FINAL EXAMINATION QUESTION BOOKLET

COURSE CODE : BCS 3253
COURSE : HUMAN COMPUTER INTERACTION
SEMESTER/SESSION : 1 - 2022/2023
DURATION : 3 HOURS

Instructions:

1. This booklet contains **5** questions. Answer **ALL** the questions.
2. All answers should be written in answer booklet.
3. Write legibly and draw sketches wherever required.
4. This is an open book online exam.

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO

THIS BOOKLET CONTAINS 4 PRINTED PAGES INCLUDING COVER PAGE

HUMAN COMPUTER INTERACTION (BCS 3253)

QUESTION 1

Human Computer Interaction (HCI) is a design field that focuses on interfaces between people and computers. HCI incorporates multiple disciplines, such as computer science, psychology, human factors, and ergonomics, into one field. There are three main components of human-computer interaction: the user, the interface, and how they work together.

- a) Define about Interaction. (2 marks)
- b) Explain **TWO (2)** reasons why HCI is important in our life. (4 marks)
- c) Describe about graphical display in paradigm shift. (3 marks)
- d) Information stored in memory. Give **THREE (3)** types of memory. (3 marks)
- e) Describe **THREE (3)** objectives of User Psychology in HCI. (6 marks)

QUESTION 2

- a) Identify **TWO (2)** types of dedicated displays and give **ONE (1)** example of each. (3 marks)
- b) Explain **THREE (3)** limitations on interactive performance of computer system (6 marks)
- c) Draw **TWO (2)** types of menu for Pie Menu and Hierarchical Menu. (4 marks)
- d) Describe the ergonomics in the workplace of the product in Figure 1 below. (4 marks)

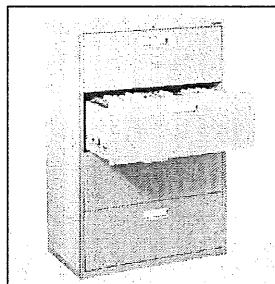
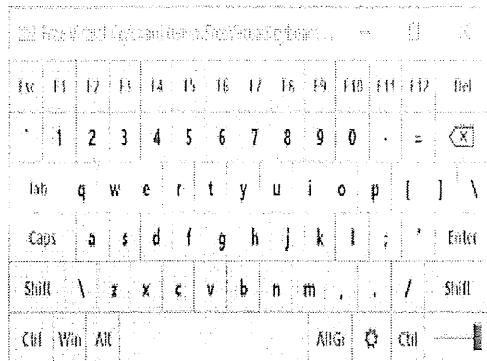
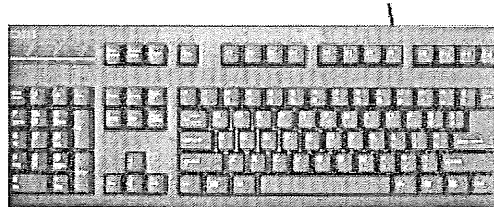


Figure 1: File Cabinet

QUESTION 3



Virtual Keyboard



Physical Keyboard

Figure 2: Virtual and Physical Keyboard

A computer keyboard is an input device used to enter characters and functions into the computer system by pressing buttons, or keys. Figure 2 show the keyboard control parts that enables user to input data and type document. (4 marks)

(8 marks)

a) Refer to Figure 2 above, compare **FOUR (4)** characteristics of Physical Design and Web Design for a keyboard. (6 marks)

b) Designing usable interactive products will support people in their everyday lives. Describe **FOUR (4)** process of interaction design. (3 marks)

c) List **SIX (6)** Norman Design Principles for Usability.

d) Illustrate *Visibility of System Status* heuristics from Nielsen's 10 heuristics evaluation of usability guidelines.

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QUESTIONS 4

- a) Identify **THREE (3)** methods to analyze people's job. (6 marks)
- b) Draw a Hierarchical Task Analysis (HTA) diagram for task decomposition in order to "*Purchase Online Shopping*". (9 marks)
- c) Clarify **ONE (1)** example for structured form of human conversation. (3 marks)
- d) Describe **THREE (3)** types of Meeting and Decision Support System. (6 marks)
- e) Groupware refers to programs that help people work together collectively while located remotely from each other. Give **THREE (3)** categories of groupware. (3 marks)
- f) Draw the groupware design page using wireframe format. Include at least **FIVE (5)** components in that selected website. (8 marks)

QUESTIONS 5

A good web design is easy to use, aesthetically pleasant and suits the user group and brand of the website. The first step in designing a website is ensuring that you have the website content and has implications for the website's usability.

- a) Give **THREE (3)** examples of dynamic web content. (3 marks)
- b) Explain **THREE (3)** guidelines to avoid design implications when designing web pages. (6 marks)

----- End of question -----