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Infrastructure University
Kuala Lumpur

FINAL EXAMINATION
MARCH SEMESTER 2015

BACHELOR OF INFORMATION TECHNOLOGY (HONS) IN SOFTWARE ENGINEERING
BACHELOR OF COMPUTER SCIENCE (HONS)

HUMAN COMPUTER INTERACTION
(BTT 306)

(TIME : 3 HOURS)

MATRIC NO.   :

IC. / PASSPORT NO. :

LECTURER   : JANAGIAMMAL RAMASAMY

GENERAL INSTRUCTIONS

1. This question booklet consists of 4 printed pages including this page.
2. Answer ALL questions in the ANSWER BOOKLET.

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SECTION A   **(60 MARKS)**

This section consists of NINE (9) structured questions. Write your answer in the Answer Booklet.

1. Define the terminology of Usability. Give at least **ONE (1)** example of a system with good usability and at least **ONE (1)** example of a system with bad usability, giving reasons to support your position in each case.

   (6 marks)

2. Answer the following questions accordingly.

   a) The human eye has a number of limitations. Give **FOUR (4)** examples.

   (4 marks)

   b) For **ONE (1)** of the limitations identified in (a), describe how this should be taken into account in the design of a visual interface.

   (4 marks)

3. The following questions are related to user-centered design.

   a) What is meant by user-centered design?

   (4 marks)

   b) How does evaluation fit into a user-centered design lifecycle?

   (4 marks)

   c) What is the aim of evaluation?

   (2 marks)

   d) Who should use evaluation? State **TWO (2)** persons involved in this process.

   (2 marks)

   e) Describe **TWO (2)** techniques for evaluation.

   (4 marks)

4. You have been asked to design a programming environment for use by teachers and school children in rural India, that will run on a mobile phone. Describe techniques that you would use to research the requirements of the teachers and children.

   (6 marks)

5. Provide **FOUR (4)** interface objects in Windows.

   (4 marks)

6. Models and prototypes are important concepts in HCI. State **THREE (3)** kinds of mental models.

(6 marks)

7. Name **ONE (1)** difference between long and short term memory.

(4 marks)

8. Explain **TWO (2)** ways on how cognitive psychology helps in designing system interface.

(4 marks)

9. Define website wireframe. State the purpose of wireframe in HCI.

(6 marks)

This section consists of TWO (2) structured questions. Write your answer in the Answer Booklet.

1. Direct manipulation is an example of conceptual model that is based on navigation and manipulation.

   a) Give **FIVE (5)** advantages of direct manipulation.

   (5 marks)

   b) Explain the meaning of WYSIWYG (What You See Is What You Get).

   (5 marks)

   c) Form-based interaction style is widely used in information retrieval applications. Discuss how this interaction style works and why a default input is needed in a form.

   (10 marks)

2. Liza wants to borrow books from University's library. By considering the library's catalogue service system, write a Hierarchical Task Analysis (HTA) and illustrate the HTA technique to borrow books from the library.

   (20 marks)

*** **END OF QUESTIONS** ***