



TECHNICAL UNIVERSITY OF MOMBASA

INSTITUTE OF COMPUTING AND INFORMATICS

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

UNIVERSITY EXAMINATION FOR:

Bsc IT Sept 2013

BIT 2305

: HUMAN COMPUTER INTERFACE.

END OF SEMESTER EXAMINATION

SERIES: DECEMBER 2016

TIME: 2 HOURS

DATE: Pick Date Select Month Pick Year

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of **FIVE** questions. Attempt question ONE (Compulsory) and any other TWO questions.

Do not write on the question paper.

Question One

- a) Explain the impact of inefficient screen design on processing time
(4 Marks).
- b) Explain the important human characteristics which have influence on interface and screen design
(4 Marks)
- c) List guidelines for selecting the proper device-based control
(6 Marks)
- d) Explain factors considered in choosing colors in performing computer application related task
(6 Marks)
- e) Compare the traditional oriented approach and object oriented approach in designing GUI.
(8 Marks)
- f) Discuss principles of user interface design
(8 Marks)

Question Two

- a) Explain basic business functions
(4 Marks)
- b) Discuss in detail the process of determining basic business functions
(16 Marks)

Question Three

- a) Distinguish between QWERTY and ABCDE keyboard style,in terms of functionality and speed.
(6 Marks)
- b) Using relevant example, explain factors to be considered in converging technology,
(8 Marks)
- c) Explain the role of software engineering tools in building the user interface.
(6 Marks)

Question Four

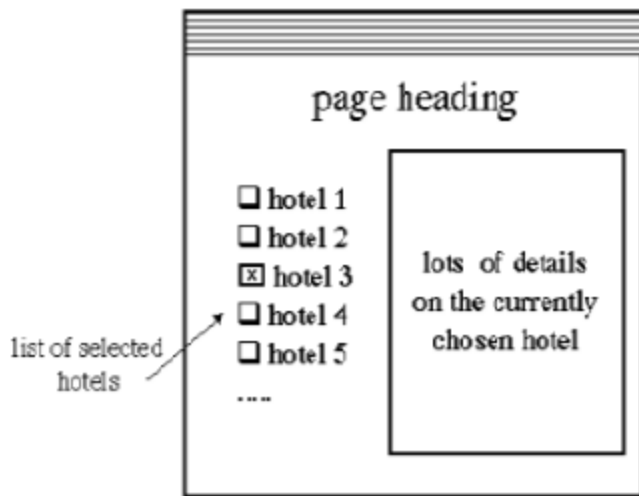
- a) Describe four population of users with special needs. (10 Marks)
- b) Suggest ways the interfaces could be improved to better serve each of the population described above (10 Marks)

Question Five

- a) Give a brief note about different widget supports and interface features supported in user-interface building tools. (4Marks)
- b) A web site designer has been asked to design a web-based hotel finder for Lancaster Tourist Board. Hotels are added to a database using an existing non-web interface, usually in batches at the end of the week. You do not need to consider this interface, but should consider the rate of update in your answer.

The first stage of the project will offer the users various fixed views of the hotels, by area, by price range etc. The user will choose a particular area or price band and will then see a screen as shown in figure below. The display has three areas (a) a heading (b) a list of hotels and (c) the details of one of the hotels. As the user selects different hotels in (b) the details in (c) are updated to reflect the chosen hotel.

Stage two will allow the user to specify queries based on criteria like price, facilities etc. and obtain similar custom search result screens.



(iii) Discuss the different architectural choices suitable for implementing this over the web. Distinguish those options that would be suitable for the first stage only and those that would be suitable for both. Include discussion of client/server side processing options for interactive elements.

(16 Marks)