

**W1-2-60-1-6**

**JOMO KENYATTA UNIVERSITY**

**OF**

**AGRICULTURE AND TECHNOLOGY**

**UNIVERSITY EXAMINATIONS 2015/2016**

**FIRST YEAR FIRST SEMESTER EXAMINATION FOR THE DEGREE OF MASTER OF SCIENCE IN INFORMATION TECHNOLOGY**

 **MIT 3108: HUMAN COMPUTER INTERACTION**

**DATE: DECEMBER 2015 TIME: 3 HOURS**

**INSTRUCTIONS: ANSWER ANY THREE QUESTIONS**

**QUESTION ONE (20 MARKS)**

A company has just designed a user interface that has an utter disaster.

You have been brought in as an HCI consultant to explain what they

did wrong. For each of the below quotes from the company’s engineers,

respond and explain what they should have done.

What design principle(s) did they violate?

Be specific. You may discus either the EIGHT (8) Golden Rules

of design in your answer book or the many sub-principles we

discussed in class.

1. “We used it ourselves for over a week! We really loved it!

I can’t understand why we’re getting all these nasty letters

from our users!” . [5 marks]

1. “We wanted to save on screen real estate so we used a point

text throughout the user interface. Well, now it turns out that

all these old-aged citizens bought our software. They seem

to be having trouble reading the text”. [5 marks]

1. “All of us felt that OK and Cancel buttons in the lower right

hand corner were boring. So instead, if you click at the top

of the dialog box, it closes as if you did clicked “OK” and if

you click at the bottom, it closes as if you clicked “Cancel”.

Labels just take up screen real estate”. [5 marks]

1. “The users seem to be getting stuck on one screen even

though the information they need to answer questions was

 two screens back. Can’t they just remember things? [5 marks]

**QUESTION TWO (20 MARKS)**

The following figure shows the front and side views of a firefly children’s phone manufactured by Cingular Wireless in 2005. The phone was to be used by children to help communicate with their parents when out of home.

**Note:**

Use your judgement to assume any specification you think need to

solve the problem. Keep your answer short, and neat.

Be short and to the point. Justify your answers:

Problem Requirements;

Assumptions:

* As buttons are pressed, a special sound is played
* The phone receives only calls from known numbers
* The phone can dial some preprogrammed numbers from

the address book

* The phone vibrates and is making a sound when someone

is calling. Also it says so on the screen.

1. Which age group do you think this phone targets [5 marks]
2. Outline how you think it is used. [5 marks]
3. Give the cognition principles its designers took into account

 when designing it. [5 marks]

1. Do you have any suggestions to improve the usability as well

 as the functionality of this phone? [5 marks]

**QUESTION THREE (20 MARKS)**

You are designing a research submarine for under water science

and exploration. You are only told that your users will all have

PhDs in marine biology, but are told little else about them.

What are THREE implications of this fact for your design?

**QUESTION FOUR (20 MARKS)**

You have a new job at Msachick, a fast food joint, and your first

assignment is to design a kiosk that will allow customers to place

their orders. Your supervisor asks you how you will go about doing requirements definition and gathering for this task, and asks you to

describe the two methods you are most likely to use and to explain

why you think those methods are best.

1. List FOUR (4) methods you can think of, from which you will

choose two. State which two you will choose. [12 marks]

1. Explain/justify/defend your first selection. [4 marks]
2. Explain/justify/defend your second selection. [4 marks]

**QUESTION FIVE (20 MARKS)**

One of the most wide-spread interface metaphors on the internet is

that of the “the shopping/cart”. This metaphor is used on most if not

all-e-commerce sites and has become a recognizable feature for anyone

who has shopped online. Extending the shopping cart metaphor further

 is the notion of “check out”, as a brick and mortar retail store.

The online shopping cart metaphor relates to a real-world shopping

cart in that you (the shopper) can put an item into it that you intend

to buy, and then continue shopping. You are able to put multiple items

into the shopping cart and purchase them all at once. The “check out”

metaphor is related to the real-world action of wheeling your shopping

cart to the check-out stand and completing the purchasing process.

Metaphors help users in their use of a U I, but can also be problematical

if the correspondence between the real world and the computer metaphor

is not always directly analogues to the real world (as in dragging a flash disk

to the trash can to eject, rather than to erase/delete it). In what ways does the shopping cart metaphor break down, in the sense of not being directly analogues to the real world?