



UNIVERSITI KUALA LUMPUR
MALAYSIAN INSTITUTE OF INFORMATION TECHNOLOGY

FINAL EXAMINATION
JANUARY 2016 SEMESTER

COURSE CODE : ITD 32603
COURSE NAME : HUMAN COMPUTER INTERACTION
PROGRAMME NAME : DIPLOMA IN INFORMATION TECHNOLOGY
DATE : 25 MAY 2016
TIME : 9.00 am – 11.00 am
DURATION : 2 HOURS

INSTRUCTIONS TO CANDIDATES

1. Please CAREFULLY read the instructions given in the question paper.
2. This question paper has information printed on both sides of the paper.
3. This question paper consists of TWO (2) sections; Section A and Section B.
4. Answer ALL questions in Section A and Section B.
5. Please write your answers in OMR form for Section A and in answer booklet provided for Section B.
6. Answer all questions in English ONLY.

THERE ARE 11 PAGES OF QUESTIONS, INCLUDING THIS PAGE.

SECTION A (Total: 25 marks)

INSTRUCTION: Answer ALL questions.

Please use the objective answer sheet provided.

1. Which of the following fields is **NOT** an influence on human computer interaction (HCI)?
 - A. Ergonomics
 - B. Cognitive psychology
 - C. Computer science
 - D. All of the above

2. A designer might design the following listed below **EXCEPT**:
 - A. Architecture Design
 - B. Web design
 - C. Product Design
 - D. User Interface Design

3. Designer needs to know the features of interactive technologies. For technology features, designer should concentrate on _____
 - A. Input, output and Hierarchy
 - B. Input, output and communication
 - C. Input, output and Database
 - D. Input, content and hardware

4. Poor design can give the following effect **EXCEPT**:
 - A. Increase learning times
 - B. Prone for making error
 - C. Avoid frustration
 - D. Lead user to reject the system

5. _____ is a Usability Goal and refers to how easy a system is to remember how to use, once learned.
- A. Learnability
 - B. Utility
 - C. Memorability
 - D. None of them
6. Which of these are attributes of usability?
- A. Learnability
 - B. Generalisability
 - C. Cognitive psychology
 - D. All of the above
7. Which from the following is the advantage of menu-based interfaces?
- A. Low memory requirements
 - B. Self-explanatory
 - C. Appropriate for beginners
 - D. All of the above
8. A computer expert produces command-lines based solution for the user. Which of the following is probably **NOT** likely to happen once the system is implemented?
- A. It will be welcomed by all staff
 - B. All staff will comfortable after they master the command lines
 - C. Most staff will want to become computer experts to use it
 - D. Most staff will feel demoralized and will not want to use the system
9. _____ is the process by which we use the knowledge we have to draw conclusions or infer something new about the domain of interest.
- A. Problem Solving
 - B. Decision Making
 - C. Reasoning
 - D. None of them

10. Consistency means design interfaces have similar operations and use similar elements for similar tasks. What happens when consistency breaks down?
- A. Hire experts to fix the problem
 - B. Designer have to learn more to understand consistency
 - C. Increases learning burden on user, making them more prone to errors
 - D. Have to find other initials or combinations of keys, thereby breaking the consistency rule
11. An icon of a folder which imitate the real folder is an example of :
- A. Recognition rather than recall Principle
 - B. Perception.
 - C. Mental model
 - D. Direct manipulation
12. User drags a folder to make a copy of its contents. An animation appears on the screen, showing files moving from one folder to another. This is an example of:
- A. Visibility
 - B. Mapping
 - C. Feedback
 - D. Affordance
13. Below are criteria in understanding users' needs **EXCEPT**:
- A. Need to take into account what people are good and bad at
 - B. Consider what might help people in the way they currently do things
 - C. Think through what might provide quality user experiences
 - D. Only listen to what people want and do not get them involved
14. Unlike traditional observation, guided observation:
- A. Sets strict guidelines for session activities
 - B. Sets strict guidelines for session lengths
 - C. Includes some interaction with participants
 - D. Reduces error introduced by the experimenter

15. Designers need to understand the people who will use their systems and products. People may have differences in various ways in as below **EXCEPT**:
- A. Social
 - B. Psychological
 - C. Nature
 - D. Physical
16. "*The relationship between the groups and it reflects surrounding scope of the content*". Which Organizational System suitable describes the statement above?
- A. Structure
 - B. Scheme
 - C. Visual
 - D. Navigation bar
17. Organizational Schema is a method to organizing data content for user interface. Below are the ways to organize data using Organizational Scheme **EXCEPT**:
- A. Alphabetical
 - B. Chronological
 - C. Database
 - D. Geographical
18. In organizing data content in user interface, there are two systems can be used. One of the systems is Organizational Scheme. Below are the examples of way to organize data using Organizational Scheme **EXCEPT**:
- A. Database
 - B. Geographical
 - C. Chronological
 - D. Alphabetical
19. "*Similar things should be group together and should separate from things that are different*". The statement describes _____ principle.
- A. Alignment
 - B. Contrast
 - C. Proximity
 - D. Consistency

20. Which of the following is recognized as a kind of prototypes?
- A. Interactive sketches
 - B. Beta versions
 - C. Conceptual models
 - D. Paper storyboard
21. Which of the following is a method used in Discovery – Interpretation?
- A. Use cases
 - B. Storyboarding
 - C. Primary stakeholder's profiles
 - D. Sketches
22. In designing interactive system, designer should understand _____ in order to get requirement of the system.
- A. People
 - B. Model
 - C. Activities
 - D. Technology
23. In PACT (People-Activity-Context-Technology) framework, there are many character of "activity" that designer need to consider. One of the features is _____.
- A. Design Rules
 - B. Standard
 - C. Temporal aspects
 - D. Principles
24. Those steps are approaches to get to know the user in the usability engineering lifecycle **EXCEPT**:
- A. Run thinking aloud test
 - B. Draw up a user profile
 - C. Assume the role of an apprentice learning from the master craftsman
 - D. Observe representative users

25. _____ evaluation describes the common practice in which designers informally get feedback from users or consultants to confirm that their ideas are in-line with users' needs.
- A. Field Studies
 - B. Predictive Evaluation
 - C. 'Quick and Dirty'
 - D. Usability Testing

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SECTION B (Total: 75 marks)

INSTRUCTION: Answer THREE questions only.

Please use the answer booklet provided.

Question 1

- (a) User interface design is the design of user interfaces for machines and software, such as computers, home appliances, mobile devices, and other electronic devices, with the focus on maximizing the user experience and helps user interaction.
- i. Give a daily life example of interaction between human and computer. State the importance of having good design in supporting our daily tasks. (6 marks)
 - ii. List and discuss **THREE (3)** main elements to be considered when design the website for users? (6 marks)
- (b) A well designed user interface is comprehensible and controllable, helping users to complete their work successfully and efficiently, and to feel competent and satisfied.
- i. As an interface designer, provide reasons why 'Match Between System and Real World' in Usability Principles is important to be considered when designing an interface for children. (5 marks)
 - ii. A well design user interface helps users to complete their work successfully. Discuss **TWO (2)** Usability Design principles and give example for each. (8 marks)

Question 2

(a) Dialog box or dialogue box is a new window that appears above the rest that lists additional information, errors, or options.

- i. Figure 1 is a dialog box error message from a process of saving a file. Based on the figure, identify disadvantage of such error message design and justify your answer.

(4 marks)

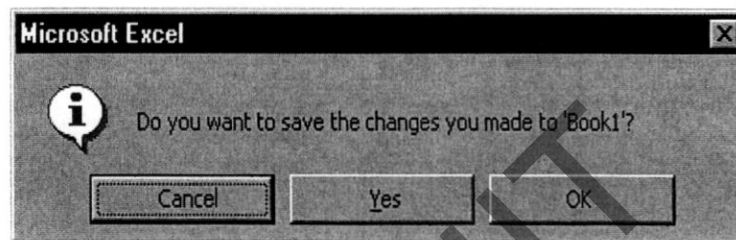


Figure 1: Dialog box error message

- ii. From question i) above, draw solution for a dialogue box design.

(4 marks)

(b) User Interface Designer makes technology easy and intuitive for people to use. User Interface Designers work on the areas where users directly interact with technology, such as the images on a computer screen.

- i. Discussed **TWO (2)** consequences if Interface Designer fails to understand user.

(4 marks)

- ii. Suggest **TWO (2)** good practices to ensure the user requirement will be delivered accordingly.

(4 marks)

(c) There are factors to be considered when Interface Designer plans to select prototyping as a method for user testing.

- i. Give **THREE (3)** examples of prototype.

(6 marks)

- ii. Discuss why High Fidelity Prototype is better than Low Fidelity Prototype?

(3 marks)

Question 3

- (a) Assume that you are developing a Global Positioning System (GPS) application.
- i. Discuss **THREE (3)** approaches in design that can be applied to attract user's attention.
(12 marks)
 - ii. Organizational Schema structure of content organization can be found in GPS application. By giving an example for each method of Organizational Schema, discuss how the method applies in GPS application.
(6 marks)
 - iii. There are two methods of Organizational Structure, Hierarchy and Database. Select only **ONE (1)** and explain the function of selected Organizational Structure. Provide example of its application in GPS application.
(4 marks)
- (b) User interface (UI) prototyping is an iterative analysis technique in which users are actively involved in the mocking-up of the UI for a system.
- i. Discuss which prototype that you will choose if you are going to create a GPS application for a client. Gives reasons.
(3 marks)

Question 4

- (a) Task analysis is the process of learning about ordinary users by observing them in action to understand in detail how they perform their tasks and achieve their intended goals. It is a method used by designer to design interface for user.
- i. How Task Analysis helps designer with design the user interface for user?
(2 marks)
 - ii. Sketch Hierarchical Task Analysis for submitting assignment to UniKL e-learn.
(10 marks)
 - iii. Identify the plans for user in submitting assignment through e-learn.
(1 mark)
- (b) A user interface sketch, or *sketch*, is a mock-up of a graphical user interface that you can create when you design an application. Sketch an example of UniKL e-learning system for a student that has a combination of proximity and alignment in Visual Organization.
(12 marks)

END OF EXAMINATION PAPER