



**UNIVERSITY OF COLOMBO, SRI LANKA**

UNIVERSITY OF COLOMBO SCHOOL OF COMPUTING

**DEGREE OF BACHELOR OF INFORMATION TECHNOLOGY ( EXTERNAL)**

*Academic Year 2014/2015 – 2<sup>nd</sup> Year Examination – Semester 3*

***IT3405 – User Interface Design***  
***PART 1 - Multiple Choice Question Paper***

***01<sup>st</sup> March, 2015***  
***(ONE HOUR)***

Important Instructions :

- The duration of the paper is **1 (one) hour**.
- The medium of instruction and questions is English.
- The paper has **25 questions** and **06 pages**.
- All questions are of the MCQ (Multiple Choice Questions) type.
- All questions should be answered.
- Each question will have 5 (five) choices with **one or more** correct answers.
- All questions will carry equal marks.
- There will be a penalty for incorrect responses to discourage guessing.
- The mark given for a question will vary from 0 (*All the incorrect choices are marked & no correct choices are marked*) to +1 (*All the correct choices are marked & no incorrect choices are marked*).
- Answers should be marked on the special answer sheet provided.
- Note that questions appear on both sides of the paper.  
If a page is not printed, please inform the supervisor immediately.
- Mark the correct choices on the question paper first and then transfer them to the given answer sheet which will be machine marked. **Please completely read and follow the instructions given on the other side of the answer sheet before you shade your correct choices.**

1) Identify a device(s) which is/are not part of user interface of a personal computer.

- |                |         |         |
|----------------|---------|---------|
| (a) Microphone | (b) UPS | (c) CPU |
| (d) Keyboard   | (e) LCD |         |

2) How does the user interface design affect the software development?

- |                                                    |
|----------------------------------------------------|
| (a) Proper planning a software development project |
| (b) Identify the core functionality of the system  |
| (c) Design of interaction in the workflow          |
| (d) Development of the training manuals            |
| (e) Usability of the system                        |

3) Hypertext and its protocol had a direct impact on the user interface design. Who was the key architect of this technology?

- |                       |                    |                     |
|-----------------------|--------------------|---------------------|
| (a) Douglas Engelbart | (b) Alan Kay       | (c) Tim Berners Lee |
| (d) Vannevar Bush     | (e) J.R. Licklider |                     |

4) What is/are true with respect to processing in the human memory?

- |                                                                                |
|--------------------------------------------------------------------------------|
| (a) Stimuli affect sensory memory.                                             |
| (b) Rehearsal transfers things from long term to short term memory.            |
| (c) The decay in LTM is fast.                                                  |
| (d) Episodic and Semantic description facilitate the retrieval actual content. |
| (e) Attention affects to store data in the STM.                                |

5) Which of the following is/are true with respect to human user capabilities for interaction?

- |                                                                             |
|-----------------------------------------------------------------------------|
| (a) Humans can hear frequencies from 25Hz to 15KHz.                         |
| (b) Human attention is not disturbed due to jerks in the background sounds. |
| (c) Middle ear transmits sound waves as vibrations to outer ear.            |
| (d) Auditory reaction time is more than visual time.                        |
| (e) Sensitivity in fingers is not important for touch typing speed.         |

6) What is a/are correct method(s) of reasoning in the problem solving process?

- |               |               |                |
|---------------|---------------|----------------|
| (a) Deduction | (b) Induction | (c) Conduction |
| (d) Reduction | (e) Inclusion |                |

- 7) The user interaction is different in batch processing compared to real time processing. Which of the following is/are correct in a batch processing environment compared to real time environment?
- |                               |                                 |
|-------------------------------|---------------------------------|
| (a) Immediate feedback        | (b) Longer processing time      |
| (c) Large amount of data      | (d) Integrated input and output |
| (e) Higher cost of processing |                                 |
- 8) What is/are possible in multimodal interaction?
- |                                             |
|---------------------------------------------|
| (a) input several things at the same time   |
| (b) only single touch interaction           |
| (c) multiple modes for interaction          |
| (d) cannot combine several inputs at once   |
| (e) unconscious interaction in short cycles |
- 9) Complete the following incomplete sentence.  
Tangible user interface is .....
- |                                                                      |
|----------------------------------------------------------------------|
| (a) a name given for graphical user interface                        |
| (b) demonstrated using peripheral devices                            |
| (c) in between physical devices and information                      |
| (d) demonstrated when a mobile phone is placed on a surface computer |
| (e) based on the multi-touch and multi-user interaction              |
- 10) Indirect interaction connects a user and a computer implicitly in several ways. Which of the following is/are such indirect interaction(s)?
- |                                                         |
|---------------------------------------------------------|
| (a) Clicking on a menu item.                            |
| (b) Highlighting spelling mistakes in a word processor. |
| (c) Changing a font of letters in a word processor.     |
| (d) Saving files to recover in an abnormal shutdown.    |
| (e) Opening a new window.                               |
- 11) Assume that "You typed user name and password of an online system and pressed the Enter key instead of the login button. After 10 seconds, there were no changes in the screen and you observed a spelling mistake in the user name. You corrected it and then pressed the login button. You successfully logged into the system". How do you describe this situation?
- |                                                           |
|-----------------------------------------------------------|
| (a) There was a slip due to user error.                   |
| (b) There was a mistake due to user error.                |
| (c) It was due to a consistency issue in the interaction. |
| (d) It was due to a visibility issue in the interaction.  |
| (e) It was nothing to do with user action.                |

12) Which of the following **is/are true** with respect to ergonomics in the human-computer interaction?

- (a) It consists of principles to optimize human well-being and overall system performance.
- (b) It addresses the overall system performance to increase the user satisfaction.
- (c) Technology used for visual display units affects the ergonomics.
- (d) It is a matter to be considered by only users.
- (e) Failure to address ergonomics may result in a legal case.

13) Which of the following **is/are correct** with respect to menu based interaction?

- (a) WIMP stands for Windows, Icon, Mouse, Pointer.
- (b) Voice instructions could be used to extend the menu interaction.
- (c) GUI interfaces organize interaction hierarchy using menus.
- (d) Ribbon does not support a menu hierarchy.
- (e) Pop up menu is a context independent interaction.

14) What is a/are valid reason(s) to carry out PACT analysis in the user interface design?

- (a) Activities establish the requirements for technologies.
- (b) Technologies offer opportunities for requirement.
- (c) Technology does not change the nature of activities.
- (d) Context does not affect activities.
- (e) Context affects the technology to be used.

15) What is user-centred design?

- (a) It is a methodology based on usability.
- (b) It is based on the user experience of other products that user has used.
- (c) User only shares what is known but not a partner of a design process.
- (d) User is the main focus when decisions of designs are taken.
- (e) It does not consider organizational objectives.

16) What is/are the role(s) of mental model in the human computer interaction?

- (a) Mental model allows the user to explore a particular interaction.
- (b) It is independent from what the user understands about the system.
- (c) Interaction affects the development of the mental model.
- (d) Mental model may not be attached to a particular metaphor for the interaction.
- (e) Mental model only affects the initial interaction.

17) Which of following is/are correct about scenarios in the user centred design?

- (a) They could be used to validate a design.
- (b) It is possible to have more than one scenario for a given system.
- (c) They are known as Use Cases in the analysis and design.
- (d) They are easy to illustrate the workflow to end users.
- (e) They are easy to identify interaction errors.

18) Which of the following is/are considered to be 5Es of Usability?

- (a) Error of Tolerance
- (b) Experience
- (c) Effectiveness
- (d) Enhancement
- (e) Efficiency

19) Which of following is/are true with respect to accessibility?

- (a) Accessibility affects only non-disable users.
- (b) Accessibility is a matter to be considered prior to usability.
- (c) Accessibility is a legal requirement in every country.
- (d) Designing for different user groups is a way to address the accessibility.
- (e) Accessibility is an ethical requirement but not a legal requirement.

20) What is/are “golden rules” in the navigation design?

- (a) When have you been
- (b) Where are you going
- (c) Where are you
- (d) When are you
- (e) What can you do

21) What is the main emphasis of task analysis compared to system analysis?

- (a) Main focus is user
- (b) Analyze the existing and future tasks
- (c) Analyze the desired way of doing tasks
- (d) Collect feedback of satisfaction
- (e) Observe the user behavior

22) Why do you have to develop a prototype?

- (a) Get the feedback about the development process
- (b) Improve the interface design
- (c) Re-verification of clear requirements
- (d) Demonstrate the capacity of development team
- (e) Fix uncertain issues in advance

23) Complete the following incomplete sentence.

Paper prototypes .....

- (a) are high fidelity prototypes.
- (b) are usable to demonstrate all features.
- (c) show how to use the traditional interface widgets.
- (d) are low cost alternatives of animated prototypes.
- (e) could be developed using authoring tools.

24) Which of the following is/are true with regard to user support in a system?

- (a) Binding F1 and help system is a requirement of consistency.
- (b) FAQ is just a facility to find quick information outside of user support.
- (c) Different user support systems are aimed at different types of users.
- (d) Tab and arrow keys are used in user support systems.
- (e) The online help system is not a better alternative to manage user support.

25) The interactive cycle given in Norman's Interaction Model is

- (a) Intention- system- execution- evaluation.
- (b) Goal- execution- system- evaluation.
- (c) Prototype- evaluation- system- execution.
- (d) Intention- execution- system – evaluation.
- (e) Goal- evaluation- system- execution.