



**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 (Model Paper)***  
***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 device(s) which ***directly*** is/are used in the human-computer interaction

- |                         |             |         |
|-------------------------|-------------|---------|
| (a) Speakers            | (b) UPS     | (c) USB |
| (d) Multi-touch surface | (e) Printer |         |

2) What is/are the important features in a “good” interface,

- |                               |  |                              |
|-------------------------------|--|------------------------------|
| (a) Only graphical components | (b) Mono chrome colors                 | (c) Help assistant character |
| (d) Customizable Features     | (e) Audio notification for user inputs |                              |

3) Who is the inventor of mouse?

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

4) What is/are frequency ranges that human could hear?

- |                     |                     |                     |
|---------------------|---------------------|---------------------|
| (a) 20 Hz to 30 kHz | (b) 20 Hz to 15 kHz | (c) 50 Hz to 15 kHz |
| (d) 10 Hz to 15Hz   | (e) 10 Hz to 15kHz  |                     |

5) Which of the following is/are true with respect to human hearing?

- |  |
|--|
| (a). Humans can hear frequencies from 20Hz to 15Hz               |
| (b). Humans can attend sounds over background noise              |
| (c). Less accurate distinguishing of low frequencies than high   |
| (d). Middle ear transmits sound waves as vibrations to inner ear |
| (e). Hearing perception is faster than visual perception         |

6) What is/are the way(s) used to process information in the mind?

- |                     |                      |               |
|---------------------|----------------------|---------------|
| (a) Watching        | (b) Reading          | (c) Reasoning |
| (d) Problem solving | (e) Error correcting |               |

7) Which of the following is/are technology/technologies used for indirect interaction?

- |  |                    |
|--|--------------------|
| (a) OCR                                | (b) LTM            |
| (c) Non-volatile memory in flash disks | (d) Virtual memory |
| (e) Data compression                   |                    |

8) Scan Code is .....

- (a) a digital signal sent from keyboard
- (b) generated using scanners
- (c) depends on the OS of target device
- (d) a unique code for all devices
- (e) a digital signal sent from mouse

9) Rich interaction consists of .....

- (a) sensor based monitoring of the user activities
- (b) equipment with very high cost
- (c) capturing user activities and context with respect to location and time
- (d) dialog based capturing of the user context
- (e) wearable computing devices

10) Direct interaction connects man and machine explicitly in several ways. Which of the following is/are such interaction?

- |  |   |   |
|--|---|---|
| (a) Clicking a button                        | (b) Highlighting spelling mistake in a word processor | (c) Changing a font in a word processor |
| (d) Recovering files in an abnormal shutdown | (e) Open a tab in a browser                           |   |

11) "You typed the user name and password of an online system and pressed the Enter key instead of pressing login button. After 10 seconds, there were no changes in the screen and you then pressed the login button. You then successfully logged into the system". How do you describe this situation?

- (a) There was a slip due to user action
- (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 observation(s) regarding ergonomics in the user interaction ?

- (a). Increase of the processing power helps to implement some ergonomic designs
- (b). Ergonomic addresses only the physical design
- (c). Sensors could hardly enhance the ergonomic designs
- (d). It is a matter for both user and designer
- (e). Ergonomic is an ethical requirement

13) Query Based Interfaces (QBI) is an immerging interfaces for information retrieval. Identify correct statement (s) with respect to QBI

- (a) A phrase is an unstructured query
- (b) All search engines do not support QBI
- (c) SQL could be used to develop QBI
- (d) QBI supports only textual data retrieval
- (e) QBI could be developed for both structured and unstructured information repositories

14) Which of the following is/are correct with respect to PACT analysis? It ...

- (a) is carried out as a part of feasibility study
- (b) adds value to requirement analysis
- (c) identifies the best solution with respect to users
- (d) hardly helps to carry out User Centered Design
- (e) helps to identify the contextual issues

15) User Centered Design (UCD) is the way to make a product sustainable. Which of following is/are correct with respect to UCD?

- (a) It is independent from materials for design
- (b) Its main concern is user preferences than functional requirements
- (c) It does not emphasize the empirical evaluation
- (d) It considers both tangible and intangible components in the interaction
- (e) It doesn't need checklists or guidelines

16) What are main components that could be used to formulate the mental model of a user?

- (a) User's Goals
- (b) Organization Goals
- (c) Message
- (d) Expectation
- (e) Constraints

17) What is a scenario in interface design?

- (a) It is a story about the background of users
- (b) It is a story about how users will use it
- (c) It is a story about users interaction
- (d) An important approach to design a system
- (e) Not a practical approach in some situations

18) Which of following is/are effective rules used in usability?

- (a) Don't make me think
- (b) Don't make it readable
- (c) Make it obvious
- (d) Make it curious
- (e) Show my way

19) Usability principles are complementary in a particular design. Which of the following statements(s) is/are acceptable with respect to usability principles?

- (a) Colors affect the visibility irrespective of user group
- (b) Visibility could be enhanced by using haptic interaction
- (c) Style and consistency are not important for user experience
- (d) Textual notations are enough to make something familiar
- (e) Affordance may be affected due to slips and errors in the design

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

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

21) What is/are the benefits of task analysis? It ...

- (a) identifies system requirements
- (b) supports to prepare system documentation
- (c) improves help facilities
- (d) reduces the time spent for system analysis
- (e) reduces the staff allocated for the system development

22) Which is/are true with respect to prototypes?

- (a) Prototypes can be used to train users in advance
- (b) Business analysts can discuss user requirements using prototypes
- (c) Developers can demonstrate to customers their skills in software development
- (d) It is possible to capture requirements not identified by system investigators
- (e) Prototypes can be used in incremental development

23) Which of the following is/are correct with respect to fidelity in prototyping?

- (a) High fidelity prototypes look like the final product
- (b) Low fidelity prototypes contains only limited features
- (c) Low fidelity prototypes are used later in the project
- (d) High fidelity prototypes are used early in the project
- (e) Appearance is unrealistic in some high fidelity prototypes

24) Which of the following is/are different types of user support in applications

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|------------------------|--|---------------------|
| (a) Tutorial           | (b) Knowledge base with detail explanation | (c) Quick reference |
| (d) Task specific help | (e) FAQ                                    |                     |

25) The difference between the user's formation of the action to reach the goal is referred to as

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|------------------------|---------------------------|-----------------------|
| (a) Slips              | (b) Mistakes              | (c) Gulf of execution |
| (d) Gulf of evaluation | (e) Interface differences |                       |

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