



UNIVERSITY OF COLOMBO, SRI LANKA



UNIVERSITY OF COLOMBO SCHOOL OF COMPUTING

DEGREE OF BACHELOR OF INFORMATION TECHNOLOGY (EXTERNAL)
Academic Year 2015/2016 – 2nd Year Examination – Semester 3

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

8th May, 2016
(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 the 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.

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

2) Which of the following is/are true about perceptual computing?

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| (a) It uses voice commands, facial recognition, and gesture controls. |
| (b) Sensor data is used to find out the user's intentions. |
| (c) It requires direct interactions with the computing devices. |
| (d) It could be implemented without sensors. |
| (e) It removes the interface between the user and the device. |

3) Which individual proposed the idea of “man-computer symbiosis” which can be explained as the coupling of human brains and computing machines tightly to revolutionize information handling?

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| (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 Long Term Memory (LTM) of humans?

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| (a) It is not continuously overwritten. |
| (b) Finding patterns in data makes it easier to remember. |
| (c) The capacity of the LTM is severely limited. |
| (d) In LTM, it is always easy to retrieve. |
| (e) Rehearsal affects storing data in LTM. |

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

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| (a) The movement and changes in luminance may not affect recognition. |
| (b) Overcompensation could result in optical illusions. |
| (c) Context always creates ambiguity. |
| (d) Optical illusions can occur due to ambiguity. |
| (e) Visual acuity is a kind of ability to perceive detail. |

6) What is/are the main reason/s for prototyping?

- (a) To improve the usability of a system
 - (b) To test the capacity of the development team
 - (c) To improve the skills of the interface designers
 - (d) To eliminate the design errors of a system
 - (e) To experiment with alternative designs
- 7) Which of the following is/are **not** (a) PACT elements?
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|--------------------|-----------------|
| (a) People | (b) Communities |
| (c) Attractiveness | (d) Techniques |
| (e) Context | |
- 8) What is/are the advantage/s of multimodal interaction?
- (a) Communicating more information per time unit
 - (b) Facilitates alternative ways to communicate
 - (c) Enabling more conscious interaction
 - (d) Require little computational requirements
 - (e) Better acceptance among inexperienced users
- 9) Which of the following technique/s can be used to involve users in the design and development process of a product?
- (a) Interviews and questionnaires
 - (b) Usability testing
 - (c) On-site observations
 - (d) Code reviews
 - (e) Acceptability testing
- 10) Which of the following statement/s is/are true with regard to human errors?
- (a) Slips can be minimized by better interface design.
 - (b) Mistakes can be avoided by giving feedback to the user.
 - (c) Providing many ways of input can reduce human errors.
 - (d) Increasing visibility can also increase human error.
 - (e) Making mistakes is unavoidable.
- 11) Decoding QR code using an app in a smart phone could be considered as (an) example/s of

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| | (a) Web computing. | (f) |
| | (b) Ubiquitous computing. | (g) |
| | (c) Pervasive computing. | (h) |
| | (d) Soft computing. | (i) |
| | (e) Wearable computing. | (j) |
- 12) Which of the following is/are true with respect to ergonomics in the human-computer interaction?
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| (a) Ergonomics lowers operational costs of running a business.
(b) Ergonomics improves workplace processes and procedures.
(c) Ergonomics cannot be achieved by workspace arrangement.
(d) Ergonomics improves employee's health.
(e) Ergonomics does not affect employee's job satisfaction. |
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- 13) Which of the following is/are elements of a form based interface?
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| (a) Activities
(c) Radio buttons
(e) Message boxes | (b) Regions
(d) Blocks |
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- 14) According to ISO 9241 standard, which of the following is/are correct with respect to usability standards?
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| (a) Effectiveness, robustness and learnability
(b) Effectiveness, efficiency and satisfaction
(c) Flexibility, effectiveness and learnability
(d) Easy-to-Learn, efficiency and error-tolerance
(e) Easy-to-Use, effectiveness and efficiency |
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- 15) "You are going to log into a system. 10 seconds later, nothing appears on the screen and you are not sure whether the system is working", which of following usability principle/s can be used to describe this situation?
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| (a) Visibility
(c) Synthesizability
(e) Feedback | (b) Observability
(d) Predictability |
|--|---|
- 16)

Which of the following is/are considered as (a) usability guideline/s?

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|-------------------------|------------------------|
| (a) Don't make me think | (b) Make it curious |
| (c) Make it readable | (d) Make it accessible |
| (e) Make it graphical | |

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

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| (a) They are always descriptions of real users of the system. |
| (b) They help the users of the system to understand it more. |
| (c) They help the designers to understand the users deeply. |
| (d) They are some representative users. |
| (e) It is important to develop several personas for a new system. |

18) Which of the following is/are rarely used in human computer interaction?

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|-------------------|--------------------|
| (a) Body movement | (b) Smell |
| (c) Vision | (d) Touch (Haptic) |
| (e) Taste | |

19) Which of the following statement/s is/are true with regard to menus?

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| (a) Menus help better navigation. |
| (b) Keyboard accelerators give the same effect as menu items. |
| (c) Number of items does not affect the menu. |
| (d) Pie menus, pop-up menus, and pull-down menus are types of main menus. |
| (e) User interaction may affect the appearance of the menu. |

20) How do you analyze the differences about people in PACT analysis?

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|--------------|-------------------|
| (a) Physical | (b) Demographical |
| (c) Legal | (d) Psychological |
| (e) Social | |

21) Which of the following statement/s is/are correct with regard to computing devices?

- (a) QWERTY arrangement of keys on the keyboard is optimal for typing.
- (b) Thumbwheels are used to improve precision in Computer Aided Design (CAD).
- (c) Scanners convert paper into a bitmap.
- (d) Optical Character Recognition (OCR) converts a bitmap to editable text.
- (e) Accuracy of speech recognition does not depend on the user.

22) Observation is the main tool for task analysis. Identify key things to be observed in the task analysis?

- (a) What is the context of a task?
- (b) What does the user need to know?
- (c) What does the user do?
- (d) Who helps the user to carry out the task?
- (e) What are the objects with which the user interacts?

23) The usability principle/s that support/s an evaluation of a software system is/are,

- (a) Visibility
- (b) Structure
- (c) Reusability
- (d) Conviviality
- (e) Recovery

24) Why do we need a help system for an application?

- (a) To educate the end user about the application
- (b) To guide the user to complete a task
- (c) To identify the future needs of the end user
- (d) To show the benefits of a product
- (e) To assist the user when he could not solve a problem in the application

25) Which of the following statement/s is/are true about assistive technologies?

- (a) They reduce the accessibility issues of differently abled people.
- (b) The web browser that spells out a web page is an example of assistive technology.
- (c) Screen enlarger is not an example of an assistive technology.
- (d) Ability to input voice as a substitute for mouse/keyboard controls
- (e) On-screen virtual keyboard is an example of an assistive technology.