



UCSC

University of Colombo, Sri Lanka

University of Colombo School of Computing



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

Academic Year 2025 — 2nd Year Examination — Semester 4

IT4106 — User Experience Design

Part 1 - Multiple Choice Question Paper

(2 Hours for both Part 1 and Part 2)

Important Instructions

- This paper has **two (2) parts, Part 1 and Part 2**.
- The total duration of **both Part 1 and Part 2 is 2 hours**.
- The final mark for the paper will be determined by averaging the scores of Part 1 and Part 2, each of which is graded out of **100**.
- The medium of instructions and questions is English.
- This paper (Part 1) has **25 MCQ questions** on **6 pages**. Answer **all** questions.
- Each question will have **5 (five)** choices with **ONE OR MORE** correct answers.
- There will be a penalty for incorrect responses to discourage guessing.
- The mark given for a question will vary from -1 (All the incorrect choices are marked & no correct choices are marked) to +1 (All the correct choices are marked & no incorrect choices are marked). However, **the minimum mark per question would be zero**.
- Answers should be marked on the **special answer sheet** provided.
- Note that questions appear on both sides of the paper. If a page or part of a page is not printed, please inform the supervisor/invigilator 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.**
- Any electronic device capable of storing and retrieving text, including electronic dictionaries, smartwatches, mobile phones, and Calculators are **not** allowed.
- *All Rights Reserved*. This question paper can NOT be used without proper permission from the University of Colombo School of Computing.

1) Which of the following statements about usability goals is/are correct?

(a) Effectiveness is a usability goal
(b) Efficiency is not a usability goal
(c) Being aesthetically pleasing is a usability goal
(d) Learnability is a usability goal
(e) Being emotionally fulfilling is a usability goal

2) Which of the following statements about affordances is/are correct?

(a) An affordance is the perceived and actual property of an object that suggests how it can be used
(b) A good affordance helps communicate to the user what actions are possible
(c) “Affordance” means making a product cheaper to manufacture
(d) A flat push-plate on a door affords pushing, whereas a handle affords pulling
(e) Affordances apply only to physical products

3) Which of the following best describes the relationship between Interaction Design (IxD) and User Experience (UX) Design?

(a) IxD and UX are unrelated
(b) IxD is a subset of UX design
(c) UX design is a subset of IxD
(d) IxD concerns only back-end logic
(e) IxD and UX are identical terms

4) Which of the following statements about interface metaphors is/are correct?

(a) They exploit users’ familiar knowledge to make the unfamiliar understandable
(b) Examples include the desktop, the recycle bin and the search engine
(c) A poorly chosen metaphor can constrain designers and mislead users
(d) They always guarantee an efficient interface for experts
(e) When overextended, they can conflict with established design principles

5) When conceptualising interaction, designers distinguish between assumptions and claims. Which of the following statement/s is/are correct?

(a) An assumption is something taken for granted that actually requires further investigation
(b) An assumption is a statement of fact already proven by user testing
(c) An assumption and a claim mean exactly the same thing
(d) A claim is a measurable usability target
(e) Assumptions never need to be questioned once design begins

6) Which of the following best distinguishes Augmented Reality (AR) from Virtual Reality (VR)?

(a) AR replaces the real world while VR augments it
(b) AR overlays digital content onto the real world, whereas VR immerses the user in a fully computer-generated environment
(c) AR and VR are interchangeable
(d) VR works only on mobile phones
(e) AR always blocks all view of the surroundings

7) Which of the following is/are (a) valid design implication(s) of how human memory works?

(a) Support recognition rather than relying on recall
(b) Menus and icons work because recognising is easier than recalling
(c) Deliberately overload working memory to keep users alert
(d) Reducing users' memory burden generally improves usability
(e) Users never develop personal strategies to aid memory

8) Which of the following statements about emotional design and expressive interfaces is/are correct?

(a) The visceral level concerns a product's immediate look-and-feel and first impressions
(b) The reflective level relates to the meaning of a product and the user's self-image
(c) Expressive elements such as icons, sounds and animations can reassure users and convey system state
(d) Positive affect tends to narrow users' thinking and make them less tolerant of minor difficulties
(e) Aesthetically pleasing designs are often perceived as easier to use

9) Which of the following statements about affective computing and persuasive technologies is/are correct?

(a) Affective computing enables systems to recognise and respond to users' emotions
(b) Emotion recognition may infer states from facial expression, voice or physiological signals
(c) Persuasive technologies are designed to change users' attitudes or behaviours
(d) Affective computing assumes emotions are irrelevant to interaction
(e) Expressive or anthropomorphic agents can shape users' emotional responses

10) Which of the following statements about questionnaire design is/are correct?

(a) Closed questions restrict responses to a fixed set and are easier to analyse quantitatively
(b) Open questions allow free-form answers and yield richer qualitative data
(c) Likert scales measure attitudes or level of agreement
(d) Leading questions and jargon improve response quality
(e) Questionnaires can reach large, dispersed samples at low cost

11) Which of the following statements about observation as a data-gathering technique is/are correct?

(a) It can be carried out in the field or in controlled settings
(b) Direct observation watches users live, whereas indirect observation uses recorded data such as videos or system logs
(c) The think-aloud technique asks participants to verbalise their thoughts while doing tasks
(d) Observation can only produce quantitative data
(e) Ethnography immerses the researcher in the users' environment

12) Which of the following is/are (a) Common type(s) of requirements?

(a) Functional — what the product should do
(b) Data — the type, volatility, size and accuracy of data
(c) Environmental — the physical, social, organisational and technical context
(d) User characteristics — the users' skills, experience and abilities
(e) Aesthetic requirements that override all usability and UX goals

13) Which of the following statements about personas is/are correct?

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| (a) A persona is a detailed, representative description of a typical user, based on real user research data |
| (b) It usually includes a name, characteristics, goals and context, often with a photo |
| (c) It must be an exact profile of one specific real interviewee |
| (d) Teams often develop several personas, sometimes naming a primary persona |
| (e) Personas keep representative users' needs in focus during design |

14) Which of the following best describes a scenario in interaction design?

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| (a) A step-by-step text description of a user's exact physical interactions with a device interface |
| (b) An informal narrative story of how a specific user uses a product to achieve a goal in a real-world context |
| (c) A fictional profile detailing a target user's demographics, attitudes, and core technical skills |
| (d) A visual flowchart showing all possible paths and decision points a user can take through an application |
| (e) A high-level description of a system's required features, system states, and technical constraints |

15) Which of the following statements about approaches to qualitative analysis is/are correct?

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| (a) Identifying themes inductively lets patterns emerge from the data |
| (b) Categorising deductively applies a pre-existing scheme to the data |
| (c) Critical incident analysis examines significant events in detail |
| (d) Qualitative analysis must always end in statistical significance tests |
| (e) Analysis is often iterative, mixing inductive and deductive moves |

16) Which of the following is/are (a) correct practice(s) when interpreting and presenting findings?

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| (a) Data cleansing, such as checking anomalies and impossible values, should precede analysis. |
| (b) Investigators should avoid letting existing beliefs or biases shape interpretation |
| (c) It is acceptable to make claims beyond what the data supports, to strengthen the story |
| (d) The presentation method should fit the goals and the target audience |
| (e) Presentation styles include structured notations, stories and summarising |

17) Which of the following statements correctly distinguish between conversation analysis, discourse analysis, and interaction analysis?

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| (a) Conversation analysis examines the fine detail of spoken interaction, such as turn-taking. |
| (b) Discourse analysis is strongly interpretive, focusing on meaning and context |
| (c) Interaction analysis is inductive and video-based, covering talk and non-verbal use of artefacts |
| (d) Conversation analysis relies mainly on large numerical datasets from experiments |
| (e) Discourse analysis ignores context entirely |

18) Which of the following statements about storyboards is/are correct?

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| (a) A storyboard is a series of sketches showing how a user progresses through a task |
| (b) It is a form of low-fidelity prototyping often used together with scenarios |
| (c) It can be created by turning each step of a scenario into a scene |
| (d) Storyboards require fully functional code to be useful |
| (e) They help explore and communicate an interaction sequence early and cheaply |

19) Which of the following statements about card-based prototypes and journey maps is/are correct?

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| (a) Card-based prototypes use index cards to model individual interaction steps and screens |
| (b) Cards can be shared with users and stakeholder teams to get quick, informal feedback |
| (c) A set of static prototype cards can automatically serve as a complete customer journey map |
| (d) In journey mapping, a linear timeline best suits a repeating cycle, while a wheel layout best suits a single linear service |
| (e) Journey maps are typically built to map the experience of a specific persona in a given scenario |

20) Which of the following best distinguishes evolutionary prototyping from throwaway prototyping?

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| (a) Throwaway prototypes evolve directly into the final product |
| (b) In evolutionary prototyping the prototype evolves into the product, whereas throwaway prototypes are discarded and the product is built afresh |
| (c) Both require the prototype to be discarded |
| (d) Evolutionary prototyping skips all testing |
| (e) Throwaway prototyping is only for high-fidelity prototypes |

21) Which of the following is/are (a) valid reason(s) for building prototypes?

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| (a) To test the technical feasibility of an idea |
| (b) To clarify vague or ambiguous requirements |
| (c) To let users and stakeholders try out and react to design ideas |
| (d) To help choose between alternative design options |
| (e) To guarantee that no further evaluation is ever needed |

22) Which of the following statements about usability testing is/are correct?

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| (a) It is traditionally conducted in controlled (laboratory) settings |
| (b) It measures how usable a product is for intended users doing typical tasks |
| (c) Common measurements include task completion time, number of errors, and user satisfaction |
| (d) It allows evaluators to control the testing environment and reduce external influences on performance |
| (e) It studies long-term, real-world use in natural settings over extended periods |

23) Which of the following do/does not belong to Jakob Nielsen's ten usability heuristics?

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| (a) Visibility of system status |
| (b) Error prevention |
| (c) Recognition rather than recall |
| (d) Maximise information density on every screen |
| (e) Help and documentation |

24) Which of the following statements about a cognitive walkthrough is/are correct?

(a) It simulates how a user solves problems at each step of a task
(b) It takes a cognitive perspective focused on ease of learning for new or exploratory users
(c) At each step, evaluators ask whether the user will know what to do and notice that progress is being made
(d) It requires a large sample of end-users to take part
(e) It is an inspection method that can be carried out without involving users

25) Which of the following best distinguishes formative evaluation from summative evaluation in user experience design?

(a) Formative evaluation assesses a finished product, whereas summative evaluation is conducted during the design process
(b) Formative evaluation is conducted during design to improve a product, whereas summative evaluation assesses a finished or near-finished product
(c) Both formative and summative evaluations are carried out only after product release
(d) Formative evaluation never involves users, whereas summative evaluation always involves users
(e) Summative evaluation is only used for evaluating paper prototypes

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