Examiners' commentary 2017–2018

CO3348 Interaction design – Zone A

General remarks

This examination aimed to test candidates' general understanding of the syllabus, involving application of knowledge to a variety of scenarios. It is important to read and answer questions carefully. Only **three** out of five questions should be answered and if you answer more, only the **first three** will be marked.

In general, whilst there were some outstanding answers, a common weakness was simply reproducing "textbook" answers rather than fitting what was known to the context of the question.

Comments on specific questions

Question 1

Design scenario

This question was concerned with techniques of user-centred design and how they can be used in early design stages. The focus of the answer should be on knowledge of user requirements elicitation techniques, methods of testing and user requirements and, finally, an awareness of the characteristics of users in different usage situations.

Part (a) required candidates to explain how they would gather user/task requirements through different data collection techniques (observation, questionnaires, interviews/structured interviews, ethnographic involvement). Good marks were achieved where the technique was accurately described and was relevant to the design scenario described. Excellent marks were awarded if answers justified and showed the relevance of the use of the technique in this context. **Three** techniques were required; if only two techniques were provided, this immediately cost a third of the marks available; if only one technique was provided, this immediately cost two thirds of the marks available.

For Part (b), good answers identified contributing factors about the user population, both physical and cognitive, and considered interaction style (such as point, touch screen interaction, and so on.) and the physical ergonomics and cost considerations of such a device. They took note of formal requirements for accessibility and any significant needs and traits of the intended users. They provided a detailed and realistic plan of activity, encompassing user-centred design methods and strategies for eliciting user requirements. The most effective examples followed a timetabled and implementable outline of an evaluation plan, again justifying their own choice from a variety of possible evaluation strategies. Excellent marks were awarded for realistic consideration of the specific context, rather than a generic statement with no reference to the context being considered; breadth of knowledge; correct details; and appropriate justifications.

Question 2

Evaluation

This question was concerned with standard and well-documented HCI usability assessment strategies/evaluation techniques. The focus of the answer was on user-centred HCI design.

For Part (a), there is no one agreed approach to setting criteria, but excellent answers reflected on the context of the exploration in the question and justified the choice from among the common methods that include: (i) brainstorming with the design team and/or clients; (ii) making reference to published literature; (iii) a priori reasoning; (iv) focus groups; (v) surveys.

For Part (b), good answers reflected on the application context being explored. Measurements focused around navigation, wayfinding and speed taken to access correct, or desired, information. A quantifiable observable example would be: finding information via links to be achieved successfully within a set time, or with a set number of minimum clicks. Again, there was no one correct answer but marks were given for thoughtful, justified and appropriate choices and realism.

For Part (c), good answers described in a practical way how a sorting method could be deployed. For example, sorting methods (e.g. Clustering, Mind Maps, generic card-sorting procedures) can be used to determine relationships between objects in design. So, a possible approach is to take all objects in the interface and ask users to sort them according to relationships. These logical groupings can then be compared to the layout (groupings) of the interface to give an idea of how well users' mental models have been transferred to the design.

For Part (d), an excellent answer went beyond simply describing heuristic evaluation but also described how this form of expert evaluation could be organised to prompt meaningful conversations by evaluators. This would have included, for example, set up, briefing, separate evaluations, and regrouping together to rank severity.

Question 3

Essay

This question required candidates to demonstrate practical knowledge in the domain of augmented reality with respect to the usability of AR services by users. In some cases, this question was poorly answered, with the most common faults being:

- a very short essay
- shallow or non-specific analysis.

Good answers were written in essay style, with a coherent structure (for example, introduction, discussion with balanced argument and finished by drawing conclusions). Excellent answers also showed evidence of wider reading or experience, providing the candidates with more material from which to form strong, coherent arguments.

Question 4

Usability

This question required candidates to demonstrate knowledge of usability and an understanding of how usability is affected for users with a disability.

For Part (a) candidates were expected to identify criteria such as learnability, memorability and constraints. In particular, it is useful to assess the relative importance of these issues within different potential user demographics as considered under the principle of constraints. Some answers were weak because

students considered their experience or interest in technology rather than considering usability principles such as haptic feedback without needing to look at a button based remote control.

For Part (b) candidates were expected to identify criteria such as consistency, affordance and mental effort. In particular candidates were expected to consider the relative importance of these issues within the specific user demographics. Weak answers had stereotypical views of older people as being over 50 years old and by definition technophobic, rather than demonstrating how the ageing process might affect users' ability to work with particular technologies.

Part (c) required concrete knowledge of the consequence of different disabilities on usability in the context of this scenario. Weak answers gave superficial scenarios such as blind people not being able to see the on-screen remote, but excellent answers explained why blind people would be using a TV and how they used audio description.

Question 5

Design scenario

This question aimed to test candidates' ability to demonstrate understanding and apply knowledge to this specific design scenario.

Part (a) required candidates to write their own scenarios for the design specification given. There was not one correct answer to this question, but marks were awarded for demonstrating skill and ability to construct realistic scenarios which can lead to prototype development and then to evaluation.

For Part (b), good answers included well-designed mock-up sketches (for example, wireframes, storyboards, user flow diagrams, and so on.) as well as useful descriptions.

Part (c), required an outline of an evaluation plan including users, a timetable, methods, and metrics in the description. Good answers provided detail and realistic sequencing. The evaluation method should be appropriate for the task and the choice should be fully justified. The description of users should include the number of users, and how they would be found, together with a brief description of their characteristics. Answers should also mention the data to be collected, and how it would be analysed, as well as the performance measures to be used. Excellent answers would justify the choices made.