

One and a half hours - online

**UNIVERSITY OF MANCHESTER
DEPARTMENT OF COMPUTER SCIENCE**

User Experience

Date: Friday 24th January 2020

Time: 14:00 - 15:30

**This is an online examination. Please answer ALL Questions
The examination is worth a total of 30 marks**

**Use Blackboard to answer all questions. Use the SEPARATE answerbook for Notes and
Diagrams - these will be marked**

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This is a CLOSED book examination

Electronic calculators may be used in accordance with the University regulations

Section A

This section is multiple choice. Answer ALL questions from this section.
Write your answer directly into the box provided for each question.

a) Which are four principles of efficient design (Usability)? (Knowledge) (1 mark)

- A. Scalability, Self Description, Progressive Disclosure, Perceivability;
- B. Simplicity, Learnability, Understandability, Situational Awareness;
- C. Consistency, Stability, Familiarity, Robustness.
- D. Familiarity, Stability, Openness, Robustness;
- E. Self Description, Scalability, Openness, Understandability;

b) What are 4 aspects of which the principles of Engaging Experience are built up on (hint - NOT the Principles themselves)? (Comprehension) (1 mark)

- A. Dynamics, Interactology, Arousal, Excitification;
- B. Group Dynamics, Flow, Funology, Gamification;
- C. Dynamics, Gamification, Interactology, Arousal;
- D. Interactology, Group Dynamics, Gamification, Flow;
- E. Group Dynamics, Gamification, Funology, Arousal.

c) Why is conforming to scientific principles key to good ethical designs? (Application) (1 mark)

- A. Science is ethical;
- B. Scientific principles ensure good ethics;
- C. If the science is bad the experiment will have been performed for nothing;
- D. Science and ethics are the same;
- E. Ethical design is a scientific principle.

d) What are the five key properties of UX? (Knowledge) (1 mark)

- A. Robust, Efficient, Effective, Affective, Engaging;
- B. Utility, Effective, Learnable, Efficient, Engaging;
- C. Affective, Utility, Effective, Efficient, Robust;
- D. Utility, Effective, Engaging, Efficient, Affective;
- E. Effective, Robust, Utility, Affective, Engaging.

e) How does UX relate to previous Human Factors work? (Comprehension) (1 mark)

- A. They aren't related;
- B. UX is mostly about product design;
- C. UX is mostly about interface engineering;
- D. UX is just another name for HCI.
- E. UX adds emotion and fun to mainstream HCI;

f) Which of the following are methods of collecting information from the user? (Application) (1 mark)

- A. Social, Participant Observation, Scenarios, Persona;
- B. Interviews, Flow-Chart, Focus Group, Scenarios;
- C. User Stories, Participant Observation, State Transition Diagram, Interviews;
- D. Participant Observation, Interview, Focus Group, Social;
- E. Flow-Chart, User Stories, Scenarios, Interviews.

g) Which are four principles of Emotional design? (Knowledge) (1 mark)

- A. Oneness, Personality, Ego-ness, Flow;
- B. Quality, Flow, Pleasantness, Aesthetics;
- C. Learnability, Flow, Quality, Visualness;
- D. Aesthetics, Oneness, King Principle, Personality;
- E. Personality, Satisfaction, Openness, Oneness.

h) What are the 4 aspects on which the principles of Affective Experience are built (hint - NOT the Principles themselves)? (Comprehension) (1 mark)

- A. Reflective, Objective, Aesthetic, Visceral;
- B. Reflective, Visceral, Aesthetic, Artistic Narrative;
- C. Reflective, Aesthetic, Temporal, Subjective;
- D. Reflective, Artistic Narrative, Temporal, Visceral;
- E. Generous, Reflective, Artistic Narrative, Visceral.

i) What terms describe the user's temporal (time-spans) engagement (from Law's 2009 paper)? (Knowledge) (1 mark)

- A. Unanticipated, Momentary, Episodic, Cumulative;
- B. Anticipated, Momentary, Sardonic, Cumulative;
- C. Anticipated, Monetary, Episodic, Cumulative;
- D. Anticipated, Momentary, Episodic, Cumulative;
- E. Anticipated, Momentary, Episodic, Reductionist.

j) Which of the following are informal methods of conveying information to the developer? (Knowledge) (1 mark)

- A. Use Cases, User Stories, State Transition Diagrams;
- B. User Stories, Scenarios, UML Diagrams;
- C. Use Cases, Personas, Wireframe Diagrams;
- D. Personas, Scenarios, UML Diagrams;
- E. State Transition Diagrams, UML Diagrams, Wireframe Diagrams.

Section B

Answer ALL questions from this section.

1. Briefly describe two 'pros' (advantages) of gamification? Include each 'pro' along with a one sentence description for each to gain full marks (Knowledge) (2 marks)

2. What is the single most important reason for having a set of ethical procedures governing experimentation with human participants? Include a one sentence description of 'what' and a short description of 'why' to gain full marks (Comprehension) (2 marks)

3. You are suffering from the 'Too-Little-Time' constraint and need to get a formative evaluation with 20 people (employees of the factory commissioning your new production line software) underway very quickly. At this stage you only need qualitative results – how would you go about getting this information in the fastest time possible, and why would you be cautious? Include a paragraph description for how you go about this (the tools and techniques you choose), and a one paragraph discussion of why you should be cautious to gain full marks. (Application) (4 marks)

4. What are the eight key ethical principles (give a brief rationale for each)? To get full marks you should demonstrate substantive knowledge of the topic with in-depth analysis. You may want to use examples (and diagrams if appropriate) to help your analysis (Analysis) (4 marks)

5. Why is it difficult to know if the affective principles have been captured in your software correctly? And describe how you might address this difficulty. To get full marks you should demonstrate substantive knowledge of the question and substantive ability to synthesise information learnt in another part of the unit. You may want to use examples (and diagrams if appropriate) to help your analysis (Synthesis) (4 marks)

6. Ars Technica discusses 'Social network structure helps trends emerge from simple interactions' - <http://arstechnica.com/>

'Everyone knows that you want skinny jeans tucked into your boots. Ten years ago everyone knew that you wanted boot cut jeans to go over your boots. But how does everyone know these things? How does one option out of all the possible alternatives get chosen as the standard and then reach universal acceptance?

The origin and emergence of social conventions has long beguiled cognitive scientists, sociologists, linguists, and philosophers. Prominent ideas have assumed that institutionalised mechanisms – like a centralised authority or incentives for collective agreement – are required for shared conventions to become prevalent. Newer social evolutionary ideas, by contrast, have suggested that networks of locally interacting individuals can spontaneously and unintentionally self-organise to produce global coordination, even in the absence of formal institutions.

This sort of self-organisation has been very difficult to demonstrate, especially on any meaningful scale. Now, a mathematician and a sociologist have teamed up to show that global social conventions can in fact emerge spontaneously from local interactions, even though the people involved have no idea that they are coordinating anything. There's just one condition: the people have to be hyper-connected".

In around 250 words, discuss this in terms of the topics surrounding User Experience.

You should interpret the article, add your insight (using experience created from your UX/CS training), and produce a 'mash-up' of the two focusing on aspects of the article you think are important, rationalising why, and linking it to other work you have read, work you have done or seen, prior knowledge, or real world experience. Apply a knowledge of information not explicitly taught in the unit. Detail any use of formal/informal sources your ideas are based on (these can be formal such as [Law, 2009] or informal such as 'recent news article on BBC detailing xyz'). You should include argument, ideas, opinions and thoughts and show a critical analysis or secondary interpretation.

I understand that it can be difficult to not just produce a summary (but a summary is often never required). Think to yourself, what do I bring to this 250 words, could anyone have created the 250 words by just reading the article and without your training and insight? If the answer to the last question is 'yes' then you will lose marks; instead change your answer by adding your insight based on your expertise. To get full marks you should demonstrate the ability to apply a knowledge of information not explicitly taught in the unit. Wide-ranging use of sources located by the candidate. Argument, ideas, opinions and thoughts based on formal sources, and showing a critical analysis or secondary interpretation. You may want to use examples (and diagrams if appropriate) (Creativity) (4 marks)