One and a half hours

UNIVERSITY OF MANCHESTER
SCHOOL OF COMPUTER SCIENCE

User Experience

Date: Friday 15th May 2015
Time: 14:00 - 15:30

Answer ALL Questions from Section A
Write your answers directly on the exam paper. Only answers written in the boxes on the exam paper will be marked.

Answer ONE Question from Section B, use a separate answerbook for this Section

This is a CLOSED book examination

The use of electronic calculators is permitted provided they are not programmable and do not store text

[PTO]
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) What are the four main principles of effective design (Accessibility)? (1 mark)

A. Openness, Perceivability, Operability, Robustness;
B. Openness, Perceivability, Operability, Understandability;
C. Perceivability, Operability, Understandability, Robustness;
D. Learnability, Perceivability, Operability, Understandability;
E. Flexibility, Perceivability, Operability, Robustness.

b) Which are the three principles of Engaging design? (1 mark)

A. Fun, Progression, Play;
B. Social Dynamics, Progression, Play;
C. Social Dynamics, Progression, Enjoyment;
D. Enjoyment, Progression, Play;
E. Enjoyment, Fun, Play.

c) What does Affective Computing mean? (1 mark)

A. Understanding emotions;
B. Enabling computers to recognise, express, and have emotions;
C. We can add emotions at design time;
D. Makes computing more efficient;
E. Makes computing more effective.
d) Given the need to rapidly create an interface prototype for a specific user need, which software design methodology would you use? (1 mark)

A. Cowboy;
B. Iterative;
C. Waterfall;
D. Agile;
E. Spiral.


e) Which list below contains a condition not normally associated with 'Combinatorial Impairment'? (1 mark)

A. Sight, Hearing, Physical Coordination;
B. Hearing, Physical Coordination, Ageing;
C. Physical Coordination, Sight, Cognition;
D. Sight, Cognition, Physical Coordination;
E. Cognition, Situational Impairment, Hearing.


f) Which of the following are Specialist Input Devices? (1 mark)

A. Binary Switch, Touch Interface, Blink Switch, Gaze Detection;
B. Binary Switch, Head Operated Mouse, Speech Input, Gaze Detection;
C. Binary Switch, Head Operated Mouse, Blink Switch, The Written Word;
D. Binary Switch, Head Operated Mouse, Blink Switch, Gaze Detection;
E. Gesture Recognition, Head Operated Mouse, Blink Switch, Gaze Detection.
g) What are 4 barriers to Effective Experience (1 mark)

A. Visual Impairment, Hearing Impairment, Situational Impairment, Combinatorial Impairment;
C. Visual Impairment, Hearing Impairment, Situational Impairment, Computational Impairment;


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

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


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

A. Utility, Effective, Efficient, Affective, Engaging;
B. Robust, Effective, Efficient, Affective, Engaging;
C. Utility, Effective, Efficient, Learnable, Engaging;
D. Utility, Effective, Efficient, Affective, Robust;
E. Utility, Effective, Robust, Affective, Engaging.
j) What are the two main danger points to remember when undertaking UX / Participatory Design? (1 mark)

A. Testing the design and ethical failures;
B. Testing the design and group think;
C. Group think and ethical failures;
D. Ethical failures and experimenter bias;
E. Experimenter bias and testing the design.
Section B

Answer ONE question from this section.

1. a) List four, of the five, main principles proposed by the Xerox Star team. (Bookwork)  
   (2 marks)

   b) What is the single most important reason for having a set of ethical procedures  
   governing experimentation with human participants? (Bookwork)  
   (2 marks)

   c) How would you go about getting the ‘what’, in a Requirements Elicitation (Formative  
   Evaluation)? (Discussion with Example)  
   (6 marks)

   d) You are suffering from the ‘Just–In–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? (Application of Technique)  
   (4 marks)


   “The BBC has revealed a new Doctor Who game helps kids to learn to code. The  
   Doctor and the Dalek is available now on Android, iOS, and Amazon app stores,  
   and combines a platforming adventure with an introduction to Boolean logic-based  
   programming.

   Early levels offer a fairly basic platformer experience, intercut with coding puzzles  
   that must be solved in order to progress. Switching to isometric ‘TARDIS cam,’  
   with a command line at the bottom of the screen, the first is simple–tell the Dalek to  
   change his outer shell colour and speak to the Doctor, a total of two instructions from  
   a selection of two. The second starts to introduce more complex commands in order  
   to move the Dalek (affectionately called ‘Lumpy’), fire on a Cyberman, and activate  
   a switch. As they progress, players will start to learn ‘if this, then that’ concepts, and  
   can take those principles into free play levels.

   The interface is simple, dropping commands onto a timeline, almost like a video  
   editing program. Programming talent is measured by the number of commands used  
   to achieve the objective at hand, with players rewarded for the cleanest, shortest  
   code with power-ups allowing Lumpy to float and use stun blasts.’  

   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. (Create) (6 marks)
2. a) What is the ‘skeptic’ view of Gamification? (Bookwork) (2 marks)

b) Describe the Task Analysis Method as it relates to Requirements Elicitation (Bookwork) (2 marks)

c) What is the scientific method and why is it important in UX? (Discussion with Example) (6 marks)

d) You only have 2 weeks to elicit some user data. How do you go about this? (Application of Technique) (4 marks)

e) 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.
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