## COMPUTER SCIENCE TRIPOS Part IA 75%, Part IB 50% – 2020 – Paper 3

## 5 Interaction Design (hg410)

(a) During your practical session, you were asked to create a working Weather App for a chosen primary stakeholder that worked on a desktop or a laptop. This was done in three stages: (i) gathering requirements and data, (ii) designing a lo-fi prototype, and (iii) implementing a hi-fi prototype.

CUSTOM stakeholder analysis is one of the approaches used for gathering and analysing requirements. Describe what requirements gathering and analysis is and list its main aims. Describe the four different kinds of stakeholder in a CUSTOM analysis, providing for each an example stakeholder from the Weather App your group has developed. [6 marks]

- (b) Describe three limitations of task analysis. Explain whether any of these limitations would affect the analyses of the tasks for the Weather App developed during your practical session or not, and why. [4 marks]
- (c) Consider each of the findings below and the associated summary statement about it. For each one, comment on whether the finding supports the statement.
  - (i) <u>Finding</u>: Two out of four people who filled in the questionnaire ticked the box that said they prefer not to use the ring-back facility on their cell phone.
    <u>Statement</u>: Half of the users do not use the ring-back facility.
  - (ii) Finding: Joan who works in the design department was observed one day walking for 10 minutes to collect printout from the high-quality colour printer. <u>Statement</u>: Significant time is wasted by designers who have to walk a long distance to collect printout.
  - (iii) <u>Finding</u>: A data log of 1000 hours of interaction with a website recorded during January, February, and March records 8 hours spent looking at the helpfiles. <u>Statement</u>: The website's helpfiles were used less than 1% of the time during the first quarter.

[6 marks]

(d) A company has been asked to design and implement a system for visually impaired people. The main requirement is that the system will work with a lightweight device that the user can wear on her forehead, and the device will allow the user to hear colour by turning colour into sound frequencies. So, instead of seeing the world in grayscale, the user will be able to hear a symphony of colour, and even listen to faces and paintings. Consider how you would use Heuristic Evaluation and Cognitive Walkthrough techniques to evaluate this system. How would the two evaluation techniques compare for evaluating this system and why? [4 marks]