

9 Human–Computer Interaction (AFB)

This question is concerned with methods that might contribute to the design of a novel wearable device, which can provide unobtrusive cues to the user, helping them to negotiate social situations. The device is configured by the user with a web interface to an XML database that specifies many different types of social obligations and challenges that the user wishes to deal with. It also uses artificial intelligence techniques to predict appropriate actions based on the user’s social media history.

- (a) Explain the difference between formative and summative HCI research methods. [2 marks]
- (b) Describe two *formative* empirical research methods that could contribute to the development of the novel wearable device, one that results in qualitative data, and one that results in quantitative data. For *each* method, describe what attributes would be expected of good quality data. [6 marks]
- (c) Describe two *summative* empirical research methods that could contribute to the development of the novel wearable device, one that results in qualitative data, and one that results in quantitative data. For *each* method, describe what attributes would be expected of good quality data. [6 marks]
- (d) Describe two *analytic* research methods that could be used to compare specific options in the design of the novel wearable device, one that expresses those options in qualitative terms, and one that expresses options in quantitative terms. [6 marks]