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*[Knowledge for Development]*

## **KIBABII UNIVERSITY**

### **UNIVERSITY EXAMINATIONS 2017/2018 ACADEMIC YEAR**

#### **END OF SEMESTER EXAMINATIONS YEAR ONE SEMESTER ONE EXAMINATIONS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY (INFORMATION TECHNOLOGY)**

**COURSE CODE : PIT 910**

**COURSE TITLE : PHILOSOPHY OF COMPUTING**

**DATE: 21/10/2018**

**TIME: 9 AM -12.00 NOON**

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#### **INSTRUCTIONS TO CANDIDATES**

**ATTEMPT ANY FOUR (4) QUESTIONS**

### Question One (25 marks)

Traditionally philosophical discussions on moral responsibility have focused on the human components in moral action. Accounts of how to ascribe moral responsibility usually describe human agents performing actions that have well-defined, direct consequences.

- a) Distinguish between moral responsibility, legal liability and accountability [6 marks]
- b) Explain what is meant by the problem of “Many Hands” in a computing context and discuss how this problem complicates attribution of responsibility [7 marks]
- c) Computing presents a particular case for understanding the role of technology in moral responsibility. Discuss the role of technology in moral responsibility and show how this has complicated attribution of responsibility [12 marks]

### Question Two (25 marks)

- a) Distinguish between deontological and Consequentialism ethical theories [4 marks]
- b) Giving appropriate examples challenge the argument that classic ethical theories such as deontological and Consequentialism are sufficient to deal with computer ethic issues [5 marks]
- c) Some philosophers argue that computing ethics issues are unique and they require a totally new approach to deal with. Hence according to them computer ethics should be treated as a new discipline. Explain why this argument is disputable [4 marks]
- d) Explain the innovative and the professional ethics viewpoints of computer ethics clearing pointing out where the two converge. [6 Marks]

### Question Three (25 marks)

- a) Distinguish between Strong AI and Soft AI [4 marks]
- b) Discuss THREE issues that limits development of AI [9 marks]
- c) Discuss FOUR issues that make AI a point of moral concern? [12 marks]

### Question Four (25 marks)

- a) Giving relevant reasons provide an argument against the following justifications for studying computer ethics
  - i) We should study computer ethics because doing so will make us behave like responsible professionals.

- ii) We should study computer ethics because doing so will teach us how to avoid computer abuse and catastrophes.
  - iii) We should study computer ethics because the advance of computing technology will continue to create temporary policy vacuums.
  - iv) We should study computer ethics because the use of computing permanently transforms certain ethical issues to the degree that their alterations require independent study.
  - v) We should study computer ethics because the set of novel and transformed issues is large enough and coherent enough to define a new field.
- b) Giving relevant reasons provide an argument in support of the following justifications for studying computer ethics
- c) James Moor defines computer ethics as a field concerned with “policy vacuums” and “conceptual muddles” regarding the social and ethical use of information technology
- i) Explain what a “policy vacuum” is and show how these vacuum arise as a result of technology advancement [4 marks]
  - ii) Explain the conceptual muddle surrounding the field of computer ethics [3 marks]

**Question Five (25 marks)**

- a) Universities “A” place computer science department in the faculty of engineering, University “B” place it in the faculty of science while University “C” place it in mathematics department. Provide an argument to :
- i) Justify each of these decisions [9 marks]
  - ii) Challenge each of these decisions [9 marks]
- b) Provide an argument to justify why the school housing computer science at Kibabii University is called “*School of computing and Informatics*” [7 marks]

**Question Six (25 marks)**

- a) Just like the real world, virtual worlds have ontology. Justify this statement [6 Marks]
- b) Being virtual is not the same as being unreal and conversely virtual entities can also be recognized as unreal. Discuss this argument with aid of examples [6 marks]
- c) Physical reality and ordinary social reality can usually only be simulated in virtual environments, whereas institutional reality can in large part be ontologically reproduced in virtual environments. Justify this statement giving examples. [6 marks]
- d) In view of internet banking and online shopping scenarios, discuss the problem posed by the interpretation of institutional entities in virtual environments as opposed to their interpretation in ordinary reality. [7 marks]