

15



KIBABII UNIVERSITY

UNIVERSITY EXAMINATION

ACADEMIC YEAR 2020/2021

FIRST YEAR FIRST SEMESTER REGULAR EXAMINATION

DOCTOR OF PHILOSOPHY IN INFORMATION TECHNOLOGY

COURSE CODE: PIT 910 COURSE TITLE: PHILOSOPHY OF INFORMATION AND
COMMUNICATION TECHNOLOGY

DATE: 28/05/2021

TIME: 9.00 a.m – 12.00 P.M

DURATION: 3 Hours

INSTRUCTIONS TO CANDIDATES

Answer Question ONE (compulsory) and any other TWO (2) Questions
All questions carry a maximum of 20 marks each

KIBU observes ZERO tolerance to examination cheating

This Paper Consists of 4 Printed Pages. Please Turn Over. ➔



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SECTION A (compulsory questions)**Question One (20 marks)**

- (a) Identify the different disciplines of computing (6 marks)
- (b) Discuss the philosophical differentiating aspects of the different computing disciplines (14 marks)

SECTION B (students to choose any two)**Question two (20 marks)**

According to Kathy L. Schuh & Sasha A. Barab in the article “Learning Perspectives”, philosophical perspectives are worldviews that define the nature of the world, the individual’s place in it, and the possible relationships to that world and its parts. The authors argue that learning and instructional theories are developed with respect to a particular set of assumptions regarding what it means to know and learn. Theoretical perspectives such as behaviorism, cognitivism, cognitive constructivism, sociocultural/historicism, and situativity theory provide frameworks for describing learning and designing instruction. Finding roots in philosophy, these perspectives differ with respect to their ontological and epistemological assumptions.

Briefly discuss the distinctions between the following philosophical perspectives

- (i) Cognitivism
- (ii) Empiricism
- (iii) Epistemology
- (iv) Idealism
- (v) Objectivism
- (vi) Ontology
- (vii) Pragmatism
- (viii) Rationalism
- (ix) Realism
- (x) Relativism

Question Three (20 Marks)

Information and Communication Technology (ICT) is a relatively a new discipline compared to the older subjects such as Computer Science, Engineering and Mathematics. The diversity and inter-disciplinary nature of ICT and the multiplicity of its uses in other sciences make it hard to define ICT and to prescribe how ICT research should be carried out. Your Faculty has planned to introduce a post graduate academic module on the “Philosophy of ICT” in the next academic year. You have been tasked to draw up the course content for this module for approval by the senate.

Discuss in principle five thematic areas that the course outline should contain. Justify your choices.

Question four (20 Marks)

Guy Longworth, in the publication "Rationalism and Empiricism" argues that rationalism and empiricism are two positions within epistemology that the study of philosophy relies on to theories about knowledge.

In the context of scientific knowledge, discuss your own understanding of the concepts of

- (i) Rationalism
- (ii) Empiricism,

Clearly bring out the similarities and differences between the two concepts.

Question Five (20 Marks)

Research on ICT for development (ICT4D) involves assumptions on the nature of ICT innovation and on the way such innovation contributes to socio-economic development. Chrisanthi Avgerou, in the article "Discourses on ICT and development [*Journal for Information Technologies and International Development*, vol 6, no 3, pp1-18 (2010)] identifies two perspectives regarding the nature of the ICT innovation process in developing countries namely as technology transfer and diffusion, and as a socially embedded action. The author also identifies two perspectives on the development transformation towards which ICT is understood to contribute namely, progressive transformation and disruptive transformation.

REQUIRED

Taking the case of Kenya as a developing country, discuss the role that ICT has played with regard to:

- (i). Technology transfer and diffusion
- (ii). Being a socially embedded action
- (iii). Progressive transformation
- (iv). Disruptive transformation