



KENYATTA UNIVERSITY

EXAMINATION FOR THE DEGREE OF DOCTOR OF PHILOSOPHY IN EDUCATION

EMP 904: COMPUTER TECHNOLOGY IN EDUCATION

2ND SEMESTER 2023/2024

TIME: 3 HOURS

INSTRUCTIONS: Answer ALL Questions In Section A and THREE Questions In Section B.

SECTION A:

Question 1

20 marks

- a) Discuss how Artificial Intelligence (AI) can be effectively integrated into educational systems to enhance learning outcomes. (4 marks)
- b) Examine the role of Virtual Reality (VR) and Augmented Reality (AR) in transforming pedagogical approaches at the doctoral level. (4 marks)
- c) Suggest TWO ways of improving the *Kusoma* Learning Management System (LMS) to foster collaborative and self-directed learning among doctoral students. (4 marks)
- d) Assess the impact of Massive Open Online Courses (MOOCs) on accessibility to advanced academic content, collaboration among researchers, and potential challenges faced in maintaining academic rigor and integrity in online learning environments. (4 marks)
- e) Discuss how educational institutions can leverage Learning Analytics (LA) to improve decision-making, enhance student engagement, and ensure the effectiveness of educational interventions. (4 marks)

SECTION B: ANSWER ANY TWO QUESTIONS.

(30 marks)

Question 2

Explore the process of selecting computer technology in education, considering current trends, pedagogical approaches, digital learning platforms, and assessment tools. (15 marks)

Question 3

Explain the design and evaluation aspects of educational technology, considering instructional design models (e.g, ADDIE, SAM), backward instructional design, and formative/summative evaluation methods. (15 marks)

Question 4

Examine the theoretical foundations of educational technology and discuss the pivotal role of theory in shaping educational practices. (15 marks)

Question 5

Discuss the applications of the following theories and model of computer technology in educational settings: Technology Acceptance Model (TAM), Diffusion of Innovations, SAMR Model. (15 marks)