



# KISII UNIVERSITY

## UNIVERSITY EXAMINATIONS

**FIRST YEAR EXAMINATION FOR THE AWARD OF THE  
DEGREE OF DOCTOR OF PHILOSOPHY IN CURRICULUM INSTRUCTION  
SECOND SEMESTER, 2021/2022  
(APRIL, 2022)**

**EDCI 902: COMPUTER TECHNOLOGY IN EDUCATION**

**STREAM: Y1 S2**

**TIME: 3 HOURS**

**DAY: WEDNESDAY, 9:00 – 12:00 P.M.**

**DATE: 20/04/2022**

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### **INSTRUCTIONS**

- 1. Do not write anything on this question paper.***
- 2. Answer question one (Compulsory) and any other TWO questions.***

### **QUESTION ONE**

- Describe the benefits of e-learning over the traditional learning system [5 Marks]
- ICT increases teacher efficiency and can reduce teachers' time spent performing administrative tasks (Koszalka& Wang, 2002). Justify this statement. [5 Marks]
- Justify the reason why Technology application in education is improving teaching and learning innovation [5 Marks]
- Discuss the following application of computer based Instruction;
  - Drill and Practice [1 Mark]
  - Tutorial [1 Mark]
  - Simulation [1 Mark]
  - Instructional Game [1 Mark]
  - Problem-Solving [1 Mark]

## **QUESTION TWO**

- a) Digital divide is one of the major challenges in the implementation and use of ICT in schools. Discuss the current trend of ICT digital divide in Kenya. [10 Marks]
- b) Discuss **FIVE** key Educational Resources available on the Internet and how they are applied in education. [10 Marks]

## **QUESTION THREE**

- a) Discuss the relevance of computer application in the following areas in education systems;
- i). Computers as research Tools [3 Marks]
  - ii). Computers as thinking tools [3 Marks]
  - iii). Computers as problem solving tools [3 Marks]
  - iv). Computer as a creative tools [3 Marks]
- b) Usability goals are mainly concerned with meeting usability criteria. Name at least 4 of the usability criteria and briefly explain each. [6 Marks]

## **QUESTION FOUR**

- a) Discuss the issues preventing the effective use of computers in education. [10 Marks]
- b) The Internet holds great potentials in education. Justify this statement in relation to the importance and limitation of internet in education. [10 Marks]

## **QUESTION FIVE**

- a) Students' higher-order thinking skills are enhanced in learning environments where ICT is used (Boshuizen&Wopereis, 2003). Discuss [10 Marks]
- b) Discuss the areas of application of Multimedia in a learning system citing relevant examples [10 Marks]