

LAIKIPIA



UNIVERSITY

UNIVERSITY EXAMINATIONS

SECOND SEMESTER 2023/2024 ACADEMIC YEAR

**THIRD YEAR EXAMINATION FOR THE DEGREE OF
BACHELOR EDUCATION (ECDE)**

ECDE 323: METHODS OF TEACHING ECDE MATHEMATICS

STREAM: R

TIME: 2 HRS

DAY: THURSDAY (8.30-10.30AM) DATE: 18/4/24

THIS QUESTION PAPER CONSISTS OF THREE (3) PAGES

PLEASE DO NOT OPEN UNTIL THE INVIGILATOR SAYS SO.

INSTRUCTIONS: Answer question **ONE (COMPULSORY)** and any other **TWO** questions

QUESTION ONE (30 MARKS)

(a) Using examples, differentiate between the following terms as used in competency based curriculum (CBC) mathematics;

- i. Strand
- ii. Specific learning outcome
- iii. Learning experiences
- iv. Pertinent and contemporary issues (8 marks)

(b) Describe any four universal aims of teaching mathematics (8 marks)

(c) Distinguish between (i) teaching method and (ii) teaching strategy in CBC mathematics (4 marks)

d) Using four examples, discuss the importance of the scheme of work in teaching CBC mathematics (8 marks)

e) Using examples, explain the following terms as used in CBC mathematics.

- i. Mathematics concept
- ii. Mathematics skill (2marks)

QUESTION TWO (20 MARKS)

a. (i) Discuss Bruner’s stages in the teaching and learning of mathematical concepts (6 marks)

(ii) Identify two implications of Bruner’s stages in the teaching of ECDE mathematics.(2 marks)

b. (i) Explain the meaning of a “theme” in the teaching of ECDE mathematics and give an example. (4 marks)

ii) (i) Describe the four main strategies of teaching ECDE mathematics. (8 marks)

QUESTION THREE (20 MARKS)

- a. (i) Discuss Piaget's stages in the development of a child's mind, and relate the stages to mathematics. (8 marks)
- (ii) Identify two implications of Piaget's stages in the teaching of ECDE mathematics. (2 marks)
- (b) Explain any five methods of teaching ECDE mathematics. (10 marks)

QUESTION FOUR (20 MARKS)

- a) (i) Outline three characteristics of a learner centered strategy. (3 marks)
- ii) Discuss the relevance of Vygotsky's social cultural theory in the teaching and learning of mathematics. (3 marks)
- iii) Distinguish between expository and heuristic strategies in mathematics (4 marks)
- (b) (i) You are going to prepare a lesson on the topic "Number value."
 -Write one possible outcome that the learners might be involved in during the lesson. (2 marks)
 -State two experiences that the learners might be involved in during the lesson. (2 marks)
 -State two possible teaching aids that can make the lesson effective. (2 marks)
- (ii) Using four reasons, explain the importance of a lesson plan in mathematics. (4 marks)

QUESTION FIVE (20 MARKS)

- (a) (i) Identify five reasons why teaching and learning materials are important in ECDE mathematics. (5 marks)
- (ii) Discuss five qualities that a good teaching material should at least possess one of them. (5 marks)
- (b) Discuss five methods of assessing learners in ECDE mathematics. (10 marks)