

MAASAI MARA UNIVERSITY

REGULAR UNIVERSITY EXAMINATIONS 2023/2024 ACADEMIC YEAR THIRD YEAR FIRST SEMESTER

SCHOOL OF EDUCATION COURSE CODE: ECI 3118-1 COURSE TITLE: SUBJECT METHODS IN CHEMISTRY

DATE:

TIME:

INSTRUCTIONS TO CANDIDATES

This paper consists of **TWO** printed pages. Please turn over

Answer Question ONE and any other TWO questions

ANSWER QUESTION ONE AND ANY OTHER TWO

(a) Discuss the importance of teaching secondary school chemistry both to an individual and the society. (10mrks)

(b) Outline and explain at least five barriers to effective teaching and learning of chemistry. (10 marks)

 (a) Safety consideration are key in planning and execution of chemistry practical and experiments. Give three such safety measures that need to be considered.

(6mrks)

(b)Select a topic in secondary school chemistry and explain how ICT integration can be used in place of practical/experiment that poses danger to the learners and the environment. (2 marks)

(c) State and explain five advantages of using "hands on " activities in the teaching of chemistry. (10mrks)

3. (a) Outline and describe at least three professional documents that a effective teacher of chemistry should always prepare and use. (6mrks)

(b) The 21st Century teacher should possess and inculcate in learners the basic and integrated science process skills. Outline and describe briefly 5 such process Skills. (10mrks)

(c) Give two factors a teacher needs to observe in order to make a demonstration lesson effective. (4mrks)

4. (a)Discuss three instructional (pedagogical) methods in the teaching of chemistry that are reflective of a competent teacher in the modern world. (6mrks)
(b) Explain five circumstances in which the use of lecture method is encouraged (10mrks)

(c) What is the importance of improvisation in the teaching of chemistry? (4marks)

- (a) Identify at least three methods of assessment used in secondary school chemistry. (6mrks)
 - (b) Outline five reasons why assessment and evaluation is important in Chemistry. (10mrks)

(c) Project work in chemistry is experiential in nature. Outline two aspects of the environment that learners need to address in carrying out project work. **(4mrks)**