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UNIVERSITY EXAMINATIONS 2023/2024

FIRST YEAR SECOND SEMESTER EXAMINATION FOR DIPLOMA IN POST GRADUATE
EDUCATION

ECG 4153: METHODS OF TEACHING CHEMISTRY

DATE: APRIL 2024

TIME: 2 HOURS

INSTRUCTIONS: Answer Question ONE and any other THREE questions.

QUESTION ONE (24 MARKS)

- a) How can digital tools and simulations enhance the learning experience of students in chemistry and facilitate their conceptual understanding of material? (8 marks)
- b) Explore the concept of differentiated instruction in teaching chemistry. How can educators adapt teaching strategies to accommodate diverse learning needs and abilities in the classroom? (8 marks)
- c) Discuss the importance of hands-on laboratory experiences in teaching chemistry. In other words, how do laboratory activities contribute to the development of scientific inquiry skills and critical thinking abilities in students? (4 marks)
- d) How can teachers use records of work to assess student progress and inform instructional decisions in chemistry education? (4 marks)

QUESTION TWO: 12 MARKS

Using the form II Chemistry syllabus design a CBC compliant lesson plan to teach a topic of your choice. Justify your choice of teaching/learning methods for the lesson.

QUESTION THREE: 12 MARKS

In what ways does the teaching of chemistry in schools support the nation's goal of promoting social cohesion, cultural diversity, and national unity? Give pertinent examples.



QUESTION FOUR: 12 MARKS

- a) Chemistry teachers often teach the periodic table to their students. What role did the development of the periodic table play in the advancement of chemistry? In essence, why do we insist on students learning it? (6 marks)
- b) Discuss three ways in which Kenya's goals of education align with the teaching and learning of chemistry (6 marks)

QUESTION FIVE: 12 MARKS

- a) What role does teacher education program play in addressing educational equity and social justice? (6 marks)
- b) How does teacher education promote collaboration and community among educators? (6 marks)

