

MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY
POSTGRADUATE DIPLOMA IN EDUCATION
2023/2024 ACADEMIC YEAR, SEMESTER I
ECG 4153: METHODS OF TEACHING CHEMISTRY
MAIN EXAM
TIME: 3 HRS.

INSTRUCTIONS:

Answer question 1 and any other 3 questions.

Question 1 - 24 mks

- Discuss three critical purposes that chemistry fulfils in the society. Give relevant and specific examples. 6 mks
- Identify and discuss three objectives of the Teacher Education program and especially to a chemistry teacher-trainee 6 mks
- As a country, Kenya has outlined eight national goals of education. Two of these are to *promote sound moral and religious values* and to *promote social equality and responsibility*. As a chemistry teacher, how would you contribute towards their achievement. (6 mks)
- Discuss three aims of Competence Based Education. Be sure to give examples. (6 mks)

Question 2 - 12 mks

- Discuss any 2 limitations of objective tests. (4marks)b)
- Explain 4 circumstances in which demonstration is a suitable teaching method. (4marks)
- Discuss any 2 physical resources in the teaching and learning of chemistry. (4marks)

Question 3 - 12 mks

- As a teacher, which strategies would you use to change learners' negative attitude towards chemistry as a subject (4marks)
- Explain any 2 steps you would take as a teacher to minimize hazards in a high school chemistry laboratory. (4 marks)
- Chemistry as a science can be viewed as either static or dynamic. Discuss (4 mks)

Question 4 - 12 mks

- Explain 4 reasons why a chemistry teacher should develop schemes of work. (4mks)
- The use of projects is critical to the teaching of chemistry because it cultivates many important skills and abilities in the learner. Validate this statement. (4mks)

- c. As a high school chemistry teacher, how would you prepare your students for a long educational excursion? (4mks)

Question 5 - 12 mks

Molarity is a topic in the chemistry that many students often find challenging.

- a. Discuss two reasons why this is the case? (2 mks)
- b. As a chemistry teacher, what strategies would you use to help your students out of this difficulty (2 mks)
- c. Develop a lesson plan to teach any part of the topic to your students (8 mks)