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ALUPE UNIVERSITY

**OFFICE OF THE DEPUTY VICE CHANCELLOR
ACADEMICS, RESEARCH AND STUDENTS AFFAIRS**

UNIVERSITY EXAMINATIONS

2022/2023 ACADEMIC YEAR

**FIRST YEAR FIRST SEMESTER REGULAR MAIN
EXAMINATION**

**FOR THE POST GRADUATE DIPLOMA IN
EDUCATION.**

COURSE CODE: CIM 721J

COURSE TITLE: SPECIAL METHODS IN CHEMISTRY

DATE: 20TH DECEMBER, 2022

TIME: 9AM – 12NOON

INSTRUCTION TO CANDIDATES

- SEE INSIDE

THIS PAPER CONSISTS OF 3 PRINTED PAGES

PLEASE TURN OVER

CIM 721J: SPECIAL METHODS IN CHEMISTRY

STREAM: BED

DURATION: 3 Hours

INSTRUCTIONS TO CANDIDATES

- i. Answer Question **ONE** and any other **TWO** questions
- ii. Do not write on the question paper

Question One

- a) Explain **THREE** situations where demonstrations can be used as a method to teach chemistry. (3 Marks)
- b) Outline **FOUR** benefits of records of work in teaching of chemistry. (4 Marks)
- c) Explain why it is necessary for a teacher to rehearse before a practical lesson. (2 Marks)
- d) Distinguish between deductive and inductive reasoning and show how both are incorporated in the scientific method. Use relevant illustrations from chemistry teaching. (6 Marks)
- e) Highlight three importances of instructional objectives in chemistry instruction. (3 Marks)
- f) Outline the justification for involving learners in experiment work in Chemistry in secondary school. (2 marks)

Question Two

- a) Discuss five factors that a secondary school Chemistry teacher should take into consideration when selecting a teaching method for use in chemistry instruction. (10 marks)
- g) Discuss five reasons why chemistry should be included in the school curriculum. (10 Marks)

Question Three

- a) Discuss five basic process skills a student would acquire from chemistry teaching. (10 Marks)

- b) Explain five importance of improvisation of chemistry teaching resources from the learner's immediate environment. (10 Marks)

Question four.

- a) Identify five considerations a chemistry teacher should make in lesson planning. (10 Marks)
- b) Distinguish between assessment and evaluation in chemistry instruction. (4 Marks)
- c) Discuss three differences between formative assessment and summative assessment in chemistry instruction. (6 Marks)

Question five

- a) Discuss five challenges of integrating the use of Information Communication Technologies in teaching chemistry in Kenyan public secondary schools. (10 Marks)
- b) The use of virtual laboratories is gaining popularity in chemistry instruction. Explain giving five reasons to justify this statement. (10 Marks)
