



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL OF BIOLOGICAL, PHYSICAL MATHEMATICS AND ACTUARIAL SCIENCES
BACHELOR OF EDUCATION (SCIENCE) WITH IT
THIRD YEAR FIRST SEMESTER EXAMINATIONS**

**ECT 333/ECB 2331: SPECIAL METHODS OF TEACHING CHEMISTRY
SPECIAL/RESIT EXAMINATIONS**

UNIVERSITY EXAMINATIONS: 2021/2022 ACADEMIC YEAR

**ANSWER ALL QUESTIONS IN SECTION A AND ANY TWO QUESTIONS IN SECTION B
SECTION A: ANSWER ALL QUESTIONS**

QUESTION ONE (COMPULSORY) (30 MARKS)

- a) Identify the purpose (**any five**) of a scheme of work in preparation for the delivery of a chemistry syllabus (10 marks)
- b) Objectives of a teaching a particular topic should be **SMART**. Explain. (10 marks)
- c) A lesson plan should follow the ASEI approach. Explain. (10 marks)

QUESTION 2 (20 MARKS)

Briefly discuss the following approaches in teaching chemistry in a secondary school. (20 marks)

- a) Expository
b) Heuristic
c) Inductive-deductive
d) Technique-complex

QUESTION 3 (20 MARKS)

Explain how the following factors influence the teaching methodology. (20 marks)

- a) Teacher
b) Learner
c) Subject
d) Resources

QUESTION 4 (20 MARKS)

- a) Discuss the following **three main domains** of learning: (12 marks)
- i. Cognitive
 - ii. Psychomotor
 - iii. Affective
- b) Briefly explain the storage, safety and use of Chemicals in a Chemistry Laboratory (8 marks)

QUESTION 5 (20 MARKS)

- a) Outline the general overview of Science education in secondary schools (5 marks)
- b) Give the a record of work for the topic “**melting point of naphthalene**” (5 marks)
- c) Briefly explain any FIVE philosophical factors a Chemistry teacher should understand with respect to Science education. (5 marks)
- d) Briefly discuss the origin of chemistry (5 marks)

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