



(Knowledge for Development)

**KIBABII UNIVERSITY**  
**UNIVERSITY EXAMINATIONS**  
**2022/2023 ACADEMIC YEAR**  
**THIRD YEAR FIRST SEMESTER**  
**UNIVERSITY MAIN EXAMINATIONS**  
**BACHELOR OF BEE & BED**

**COURSE CODE: ESM 313**      **COURSE TITLE: CHEMISTRY**  
**EDUCATION**

**DATE: 20/12/2022**

**TIME: 9-11AM**

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**INSTRUCTIONS TO CANDIDATES**

Answer Question One and Any TWO other (2) Questions

TIME: 2 Hours

This Paper Consists of 2 Printed Pages. Please Turn Over.

**QUESTION ONE: COMPULSORY (30 MARKS)**

- a) Give a brief description of the teacher's role in the Chemistry practical lesson (4 marks)
- b) Outline four important ideas in Dalton's theory (4 marks)
- c) Outline four purposes of classroom tests (4 marks)
- d) Describe the relationship between the syllabus, lesson plan, curriculum and the scheme of work (4 marks)
- e) State **three** ways a Chemistry teacher can use to collect real specimens for an experiment in chromatography (3 marks)
- f) State **three** likely causes of fires in the Chemistry laboratory (3 marks)
- g) Outline **four** advantages of short answer questions in a Chemistry test (4 marks)
- h) Outline four stages of evolution of a Chemistry equation (4 marks)

**QUESTION TWO (20 MARKS)**

- a) State **two** domains of learning Chemistry at secondary school (2 marks)
- b) Briefly describe **five** situations that frequently occur in Chemistry labs and call for first aid. (10 marks)
- c) Explain **four** factors that a Chemistry teacher should pay attention to when preparing and storing chemicals in a lab. (8 marks)

**QUESTION THREE (20 MARKS)**

- a) Discuss **five** disadvantages of teaching Chemistry without a lesson plan (10 marks)
- b) Discuss **five** factors a teacher should consider when choosing a chart to use in class. (10 marks)

**QUESTION FOUR (20 MARKS)**

- a) Identify **four** factors that make planning a key component of teaching Chemistry (4 marks)
- b) Give a brief description of the **four** key attitudes that a Chemistry student should have by the end of the course. (8 marks)
- c) Discuss any **four** elements that should be considered when designing a secondary school Chemistry lab's layout. (8 marks)

**QUESTION FIVE (20 MARKS)**

- a) Cite **five** obstacles to utilizing resources effectively in Chemistry teaching. (10 marks)
- b) Classroom observation is a practical evaluation of curriculum implementation that takes place through actual visits to lessons in progress. Describe **five** factors that the evaluator should consider to ensure effective observation. (10 marks)