

FACULTY OF SCIENCES  
DEPARTMENT OF PURE AND APPLIED SCIENCE

2023 2 EXAMINATIONS

---

COURSE CODE: CHM314

COURSE TITLE: ENVIRONMENTAL CHEMISTRY

TIME: 2 HOURS

INSTRUCTION: Answer question one and any other three questions.

**QUESTION ONE**

1a. Enumerate and explain briefly possible major soil pollutants (10 marks)

1b. Using chemical equations only, show the mechanism of either tetraoxosulphate (vi) acid ( $H_2SO_4$ ) or trioxonitrate (v) acid ( $HNO_3$ ) formation in the atmosphere.

(5 marks)

1bii. What is the environmental consequence(s) of formation of tetraoxosulphate (vi) acid ( $H_2SO_4$ ) and trioxonitrate (v) acid ( $HNO_3$ ) in the atmosphere.

(5 marks)

1c. Unit operations and unit processes are terminologies used in wastewater treatment. Explain. (2 marks)

1d. State the different applications of chemical oxygen demand (COD) data. (3 marks)

**QUESTION TWO**

2a. State the application (s) of Atomic Absorption Spectrometry (AAS) (3 marks)

2b. Describe briefly the principle of atomic absorption spectrometry (AAS) (6 marks)