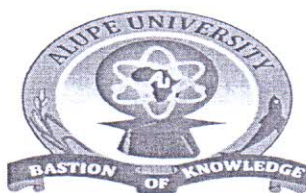


CHE 401



ALUPE UNIVERSITY

OFFICE OF THE DEPUTY VICE CHANCELLOR

ACADEMICS, RESEARCH AND STUDENTS AFFAIRS

UNIVERSITY EXAMINATIONS

2022/2023 ACADEMIC YEAR

FOURTH YEAR FIRST SEMESTER REGULAR MAIN
EXAMINATION

FOR THE DEGREE OF BACHELOR OF
EDUCATION SCIENCE

COURSE CODE: CHE 401

COURSE TITLE: INDUSTRIAL AND APPLIED CHEMISTRY

DATE: 19/12/2022

TIME: 9-12 NOON

INSTRUCTION TO CANDIDATES

- SEE INSIDE

THIS PAPER CONSISTS OF 2 PRINTED PAGES

PLEASE TURN OVER

REGULAR – MAIN EXAM

CHE 401: INDUSTRIAL AND APPLIED CHEMISTRY

STREAM: BED (Scie)

DURATION: 3 Hours

INSTRUCTIONS TO CANDIDATES

- i. Answer *ALL* questions.
- ii. Diagrams may be used whenever they serve to illustrate the answer.
- iii. Do not write on the question paper.

Question One

Explain the extractive metallurgy of iron (12 Marks)

Question Two

- a) Using a flow diagram, describe the manufacturing process of aspirin (8 Marks)
- b) Explain several metal extraction processes (4 Marks)

Question Three

- a) Draw a schematic diagram of a crude oil reservoir (2 Marks)
- b) Explain the batch process for soap manufacture (10 Marks)

Question Four

Describe examples of unit operations in a chemical industry (12 Marks)

Question Five

Explain in detail the composition of crude petroleum (12 Marks)

Question Six

- a) Explain how the NPK fertilizer is manufactured (4 Marks)
- b) List the major components cement in terms of metal oxides and the respective raw materials from which they are derived (6 Marks)
