

CIM 221



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

UNIVERSITY EXAMINATIONS

2023/2024 ACADEMIC YEAR

SECOND YEAR SECOND SEMESTER REGULAR MAIN
EXAMINATION

FOR THE DEGREE OF BACHELOR OF
EDUCATION SCIENCE

COURSE CODE: CIM 221

COURSE TITLE: BIOLOGY EDUCATION I

DATE: 15/04/2024

TIME: 2.00-5.00 P.M.

INSTRUCTIONS TO CANDIDATES

- SEE INSIDE

THIS PAPER CONSISTS OF 4 PRINTED PAGES

PLEASE TURN OVER

CIM 221: BIOLOGY METHODS I

STREAM: BED (Science)

DURATION: 3 Hours

INSTRUCTIONS TO CANDIDATES

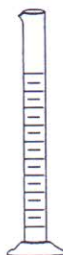
- i. Answer Question ONE and any other two questions.*
 - ii. Diagrams should be used whenever they serve to illustrate the answer.*
 - iii. Do not write on the question paper.*
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Question One

- a) What is science? (2 Marks)
- b) Using illustrations, explain the meaning of biology education and show what differentiates it from other types of education. (4 Marks)
- c) Scientific ideas are subject to change. Discuss this statement with respect to the nature of science (3 Marks)
- d) Explain the relationship between philosophy and education as applied in the learning of Biology. (6 Marks)
- e) Differentiate assimilation and accommodation as applied by Piaget in the theory of learning. (4 Marks)
- f) The following are some apparatuses used in biology laboratory experiments. Provide their correct names. (3 Marks)



A



B



C

- g) Critique four considerations for improvisation in biology teaching. (4 Marks)
- h) Describe the procedure for making Benedict's solution in the laboratory. (4 Marks)

Question Two

- a) Discuss five features of science that give it a distinctive character as a mode of inquiry. (10 Marks)
- b) Describe five integrated science process skills in Biology. (10 Marks)

Question Three

- a) Outline ten main characteristics of educational psychology as used in Biology Education. (10 Marks)
- b) Explain five principles of classical conditioning. (10 Marks)

Question Four

- a) The table below shows a list of equipment and materials used in the biology laboratory. Copy and complete the table by providing the improvised version of the items listed (10 Marks)

Equipment/material	Improved version
i. Bunsen burner	
ii. Beaker	
iii. Measuring cylinder	
iv. Reagent bottle	
v. Petri-dish	
vi. Hand lens	
vii. Insect net	
viii. Formalin	
ix. Aquatic plants	
x. Sucrose	

- b) Discuss five importance of improvisation in biology teaching. (10 Marks)

Question Five

- a) The following is a list of some common biology reagents. Complete the table for description, use, procedure and result. (10 Marks)

Reagent	Description	Use	Procedure	Result
Calcium hydroxide solution				
Citric acid solution				

- b) Discuss five safety standards of student conduct in the classroom, laboratory, and in the field while studying biology. (10 Marks)
