

CIM 221



OFFICE OF THE DEPUTY PRINCIPAL
ACADEMICS, RESEARCH AND STUDENT AFFAIRS

UNIVERSITY EXAMINATIONS

2019/2020 ACADEMIC YEAR

SECOND YEAR SECOND SEMESTER REGULAR EXAMINATION

FOR THE DEGREE OF BACHELOR OF
EDUCATION SCIENCE

COURSE CODE: CIM 221

COURSE TITLE: BIOLOGY EDUCATION I



DATE: 28TH OCTOBER, 2020

TIME: 2:00 – 5:00 PM

INSTRUCTION TO CANDIDATES

- SEE INSIDE

THIS PAPER CONSISTS OF THREE PRINTED PAGES

PLEASE TURN

REGULAR – MAIN EXAM
CIM 221: BIOLOGY EDUCATION I

STREAM: BED (Science)

DURATION: 3 Hours

INSTRUCTIONS TO CANDIDATES

- i. Answer question **ONE** and any other **TWO** questions.
- ii. Do not write on the question paper.

Question One

- a) Give **FOUR** reasons why science education is important (4 Marks)
- b) State **FIVE** roles of a teacher in the laboratory (5 Marks)
- c) State **FIVE** major tenets of the nature of science (5Marks)
- d) Differentiate between formative and summative assessment (4 Marks)
- e) State the **FOUR** major philosophies of learning (4 Marks)
- f) Give **FOUR** benefits of improvisation in biology (4 Marks)
- g) Outline four factors to be considered when putting up a biology laboratory (4 Marks)

Question Two

- b) Describe the **SIX** stages of the science process (6 Marks)
- c) Outline the science process skills in biology (14 Marks)

Question Three

- a) Describe the four stages of Jean Piagets theory of cognitive development. (15 Marks)
- b) What are the implications of Piagets theory to learning. (5 Marks)

Questions Four

- a) Explain **FIVE** qualities of a modern school laboratory. (10 Marks)
- b) Outline **TEN** safety precautions to be observed in the science laboratory (10 Marks)

Question Five

- a) Outline EIGHT manipulative skills for assessment in biology practical (8 Marks)
- b) Describe how to prepare the following laboratory reagents
- i) Biuret's reagent
 - ii) Iodine
 - iii) Benedict's solution (12 Marks)
