



OFFICE OF THE DEPUTY PRINCIPAL  
ACADEMICS, RESEARCH AND STUDENTS' AFFAIRS

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## UNIVERSITY EXAMINATIONS

### 2018/2019 ACADEMIC YEAR

SECOND YEAR SECOND SEMESTER REGULAR EXAMINATION

**FOR THE DEGREE OF BACHELOR OF  
EDUCATION (SCIENCE)**

**COURSE CODE: CIM 223**

**COURSE TITLE: PHYSICS EDUCATION I**

**DATE: 26<sup>TH</sup> APRIL, 2019**

**TIME: 9.00 AM – 12.00 PM**

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### INSTRUCTION TO CANDIDATES

- SEE INSIDE



**THIS PAPER CONSISTS OF 3 PRINTED PAGES**

**PLEASE TURN OVER**

CIM 223  
**CIM 223: PHYSICS EDUCATION I**

**STREAM: BED (Science)**

**DURATION: 3 Hours**

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**INSTRUCTIONS TO CANDIDATES**

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

**Question One**

- a) Briefly describe the following in regard to science
  - i. Alternative framework (2 Marks)
  - ii. Dynamic view of science (2 Marks)
- b) Explain Sir Karl Popper's views on science (8 Marks)
- c) Describe the problem solving stages in science (8 Marks)
- d) Explain any four process skills that learners develop when learning Physics (8 Marks)
- e) State two safety devices in the laboratory (2 Marks)

**Question Two**

- a) Describe the developmental stages according to Jean Piaget's theory (12 Marks)
- b) Explain four implications of the above theory to Physics instruction (8 Marks)

**Question Three**

- a) Explain six circumstances that can make a teacher opt for demonstrations experiments in Physics lessons (6 Marks)
- b)
  - i. Define the term improvisation (2 Marks)

ii. State any three laboratory equipment that can be improvised (3 Marks)

iii. Explain how improvisation in (ii) above can be achieved. (9 Marks)

**Question Four**

a) Distinguish between science and technology (4 Marks)

b) Explain eight technologies that existed in traditional African societies (16 Marks)

**Question Five**

a) Give any six importance of science knowledge to the general public. (6 Marks)

b) State any six laboratory rules (6 Marks)

c)i. Which laboratory design best suits a secondary school setting? (1 Mark)

ii. With appropriate explanations give reasons for your answer in (i) above (7 Marks)

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