



*(Knowledge for Development)*

**KIBABII UNIVERSITY**  
**UNIVERSITY EXAMINATIONS**  
**2021/2022 ACADEMIC YEAR**  
**FOURTH YEAR SECOND SEMESTER**  
**SUPPLEMENTARY EXAMINATIONS**

**FOR THE DEGREE OF BACHELOR OF SCIENCE IN BIOLOGY AND  
EDUCATION SCIENCE**

**COURSE CODE: SBL 428**

**COURSE TITLE: EVOLUTIONARY BIOLOGY**

**DATE: 22<sup>ND</sup> NOVEMBER 2022      TIME: 2.00 -4.00 PM**

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**INSTRUCTIONS TO CANDIDATES**

Answer Question one (1) and any other two (2) Questions. Question one is compulsory and carries 30 marks, the other Questions carry 20 marks each.

**TIME: 2 Hours**

This paper consists of 3 printed pages. Please Turn Over



KIBU observes ZERO tolerance to examination cheating

### Question One

- a) Define:
  - i. Coevolution (2 marks)
  - ii. Adaptation (2 marks)
  - iii. Fossils (2 marks)
  - iv. Adaptive radiation (2 marks)
- b) List the processes that lead to speciation (5 marks)
- c) Give any three types of fossils (3 marks)
- d) Discuss the wahlund effect (5 marks)
- e) Evolution critical in medicine. Justify. (4 marks)
- f) Is evolution an art, a science or both? Explain your answer. (5 marks)

### Question Two

Sexual dimorphisms exists between many living organisms. Justify this occurrence using relevant examples. (20 marks)

### Question Three

The discovery of fossil and archaeological evidence in evolutionary studies has been patchy.

- i. Why is it so? (10 marks)
- ii. What alternative evolutionary approach would you recommend in this case? Justify your selection. (10 marks)

### Question Four

Cultural evolution has largely impacted human medicine. Using relevant examples, discuss this statement. (20 marks)

### Question Five

Discuss the processes leading to evolution. (20 marks)