



# MACHAKOS UNIVERSITY

University Examinations for 2021/2022 Academic Year

SCHOOL OF EDUCATION

DEPARTMENT OF EARLY CHILDHOOD EDUCATION

THIRD YEAR SECOND SEMESTER EXAMINATION FOR

BACHELOR IN EDUCATION

ECT304: TEACHING METHODS-BIOLOGY

DATE: 14/12/2021

TIME: 8:30 – 10:30 AM

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## INSTRUCTIONS

*Answer question One and any Two Others.*

1. a) Explain any **three** (3) reasons as to why Biology is important for Career Development. (6 marks)
- b) Describe how **a selected Method of Teaching** can be applied to the teaching of **Cell organelles, function and adaptations**. (12 marks)
- c) Prepare an 80-minute Lesson Plan on the topic **Food Tests**. Include the Test for: **Starch, Reducing Sugars, Proteins**. (12 marks)
2. Outline the steps you would follow in planning for a Biology Practical on **the use of the Dichotomous Key**. Consider the following organisms; **COCKROACH, TORTOISE, EARTHWORM, GRASSHOPPER, HOUSE FLY, BEE**. (20 marks)
3. a) Explain **four ways in which** Biology has contributed to the fight against diseases. (8 marks)
- b) Choose a topic from the Biology Syllabus for Secondary Schools and describe how you would teach it using the Discussion Method. (12 marks)
4. Explain the significance of each of the following components of a Lesson Plan:  
The Objectives. (5 marks)
  - (i) The Timing of each step. (2 marks)
  - (ii) The Learning Activities. (5 marks)
  - (iii) The Teaching Resources. (5 marks)
  - (iv) The Remarks. (3 marks)
5. **Write a brief essay on ONE** of the following topics: (20 marks)
  - (i) The Values of science in Biology.
  - (ii) Women Scientists in Biology.
  - (iii) The use of ICT in teaching Biology.
  - (iv) Assessment of procedures in Biology.