

MACHAKOS UNIVERSITY 2019
SUPLIMENTARY EXAMINATIONS

ECT304: TEACHING METHODS-BIOLOGY (SUPPLEMENTARY).

- Q1. (A) Explain **four (4) ways in which** Biology is important for a student who will pursue a Science career. (8 marks).
- (B) Given the pictures of *Tortoise, Earthworm, Grasshopper and Snail*, explain the steps you would use to demonstrate to learners how to use the *Dichotomous Key*. (10 marks).
- (C) Prepare an 80 minute Lesson Plan on the topic *the function and adaptation of cell-organelles*. (12 marks).
- Q2. (a) Using a named topic, illustrate the difference between Experimental Biology and Theoretical Biology. (8 marks).
- (b) Discuss any *four (4) attitudes of Science* promoted through the teaching of Biology. (12 marks).
- Q3. Choose a topic from the Biology Syllabus for Secondary Schools and describe how you would teach it using the **Project Method** with emphasis on:
- (i) Prior preparations before the Project.
 - (ii) Resources you would require to facilitate learning.
 - (iii) Orientation points and guidelines for learners' readiness.
 - (iv) Follow-up activity to consolidate learning points.
- Q4. ***Explain and illustrate*** the steps in the Scientific Method. (20 marks).
- Q5. Write a brief essay on **one (1)** of the following topics: (20 marks).
- (i) The stages of Experimentation in Biology.
 - (ii) Class Demonstration as a method of teaching Biology.
 - (iii) Practical Test on Mammalian Bones.
 - (iv) Metacognitive tools in learning Biology.
 - (v) Constructivist approach to the teaching of Biology.
 - (vi) The use of ICT in teaching Biology.