



# MACHAKOS UNIVERSITY

University Examinations 2019/2020

SCHOOL OF EDUCATION

DEPARTMENT OF EDUCATIONAL COMMUNICATION AND

TECHNOLOGY (COMTECH)

THIRD YEAR SECEOND SEMESTER EXAMINATION FOR

BACHELOR OF EDUCATION (SPECIAL NEEDS)

BACHELOR OF EDUCATION (SCIENCE)

BACHELOR OF EDUCATION (ARTS)

ECT 304: TEACHING METHODS-BIOLOGY

DATE: 9/11/2020

TIME: 8:30 – 10:30 AM

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INSTRUCTIONS: Answer Question One and Any Other Two

## QUESTION ONE (COMPULSORY) (30 MARKS)

- Explain any two (2) reasons as to why Biology is important for Career Development. (4 marks)
- Describe how the **Project Method** can be applied to the teaching of **Adaptation of plants to their habitat**. (12 marks)
- Prepare an 80-minute Lesson Plan on the topic **Food Tests**. Include the Test for: **Starch, Reducing Sugars, Proteins**. (14 marks)

## QUESTION TWO (20 MARKS)

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**.

## QUESTION THREE (20 MARKS)

- Explain how Biology has contributed to the fight against diseases. (8 marks)
- Choose a topic from the Biology Syllabus for Secondary Schools and describe how you would teach it using the Discussion Method. (12 marks)

#### **QUESTION FOUR (20 MARKS)**

Explain the significance of each of the following components of a Lesson Plan:

- i) The Objectives.
- ii) The Timing of each step.
- iii) The Learning Activities.
- iv) The Teaching Resources.
- v) The Remarks.

#### **QUESTION FIVE (20 MARKS)**

Write a brief essay on **one** of the following topics:

- i) Values of science.
- ii) Women Scientists in Biology.
- iii) The use of ICT in teaching Biology.
- iv) Assessment of procedures in Biology.