



# **MAASAI MARA UNIVERSITY**

## **UNIVERSITY REGULAR EXAMINATIONS 2019/2020 ACADEMIC YEAR THIRD YEAR SECOND SEMESTER**

### **SCHOOL OF EDUCATION B. Ed (Science)**

**COURSE CODE: ECI 3119**

**COURSE TITLE: SUBJECT METHODS IN BIOLOGY**

**DATE: 16<sup>TH</sup> DECEMBER, 2019**

**TIME:1100-1300**

#### **INSTRUCTIONS TO CANDIDATES**

Question ONE is compulsory

Answer any other TWO questions

### **QUESTION ONE (Compulsory)**

- a) Give five Justifications why the dynamic view of scientific knowledge is the most appropriate view for a Competency Based Curriculum. **(10 Marks)**
- b) In a practical lesson in a Form Two class students investigated whether light was necessary for photosynthesis. Identify one factor that should remain constant and four factors that should be varied in this experiment in order to get accurate results. **(10 Marks)**
- c) Elaborate how a Biology teacher should conduct a Biology lesson guided by the following theories:
- i. Constructivist theory **(4 Marks)**
  - ii. Social Constructivist theory **(6 Marks)**
- (10 Marks)**

### **QUESTION TWO**

- a) A biology teacher intends to give her students an experiment to carry out some investigations. Explain five preparations the teacher should do before the actual time for the experiment. **(10 Marks)**
- b) Explain any five safety regulations that a biology teacher should enforce to minimize hazards and guarantee learners' safety in a Biology laboratory. **(10 Marks)**

### **QUESTION THREE**

- a) Explain five points on how a Biology teacher should engage learners in the first step of an Inquiry Based Learning (IBL) lesson. **(10 Marks)**
- b) A Biology teacher wanted her learners to explain why the number of rats had increased in a given village after the community poisoned and killed hawks. Identify five questions that the teacher would ask the learners to guide them explain the reasons for increase in rat's population and the Biological principle behind the observation. **(10 Marks)**

**QUESTION FOUR**

a) Explain five ways of conducting a discussion to ensure effective learning takes place.

**(10 Mark)**

b) Explain five reasons that may discourage a teacher from taking her students on a field trip to learn marine Biology.

**(10 Marks)**

**QUESTION FIVE**

a) As a Biology teacher, you have been assigned the task of identifying and selecting suitable supplementary Biology textbooks for the school. Identify five qualities that would guide you in making suitable selections.

**(10 Marks)**

b) Discuss five reasons why Biology teachers should use teaching materials in their lessons.

**(10 Marks)**

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