



# **MAASAI MARA UNIVERSITY**

**REGULAR UNIVERSITY EXAMINATIONS**

**2023/2024 ACADEMIC YEAR**

**THIRD YEAR FIRST SEMESTER**

**SCHOOL OF EDUCATION**

**COURSE CODE: ECI 3119-1**

**COURSE TITLE: SPECIAL METHODS IN  
BIOLOGY**

**DATE: 6/12/2023**

**TIME: 0830-1030 HRS**

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**INSTRUCTIONS TO CANDIDATES**

*This paper consists of **TWO** printed pages. Please turn over*

*Answer Question **ONE** and any other **TWO** questions*

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

- a) Discuss how a teacher can make learning of biology visible according to John Hattie (2012) Visible learning Theory. **(8 Marks)**
- b) Describe the steps involved in the scientific method and provide examples of how each step can be applied in a biology practical. **(12 Marks)**

### **QUESTION TWO**

- a) You are planning to use mastery learning approach in teaching biology. Explain 5 learning experiences you will implement during the lesson. **(10 Marks)**
- b) Discuss 5 ways of ensuring culture sensitivity during teaching. **(5 Marks)**

### **QUESTION THREE**

- a) Explain 5 learning experiences that a biology teacher can involve his/her learners when applying inquiry/problem solving method in teaching. **(10 Marks)**
- b) Giving 5 points, discuss the notion that quality of learning depends on the teacher. **(5 Marks)**

### **QUESTION FOUR**

- a) Explain the 5 assumptions of the Participation Model of learning and how a teacher can apply them in teaching of biology. **(5 Mark)**
- b) During Teaching Practice, a teacher planned to teach “**Factors influencing the rate of photosynthesis**”. Based on the provided topic, make a 40 minutes lesson plan to effectively teach the topic based on the Maasai Mara Lesson plan format. **(10 Marks)**

### **QUESTION FIVE**

- a) Giving 5 reasons explain why teaching resources are emphasized in teaching biology. **(5 Mark)**
- b) Discuss five components that should be included when designing the preparation room in a biology laboratory. **(10 Marks)**

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