



# THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

**A. M. E. C. E. A**

**MAIN EXAMINATION**

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**AUGUST - DECEMBER 2015 TRIMESTER**

**FACULTY OF EDUCATION**

**DEPARTMENT OF UNDERGRADUATE STUDIES IN EDUCATION**

**REGULAR PROGRAMME**

**ED 313: SUBJECT METHODS BIOLOGY**

**Date: DECEMBER 2015**

**Duration: 3 Hours**

**INSTRUCTIONS: Answer Question ONE and ANY other THREE Questions**

- Q1. a) Briefly explain the following
- i Scientific method. **(2 marks)**
  - ii Terrarium. **(2 marks)**
  - iii Cooperative learning. **(2 marks)**
- b) Identify THREE scientific skills that biologists require while carrying out research. **(3 marks)**
- c) Briefly explain THREE reasons why a biology teacher should have a biological garden within a school. **(3 marks)**
- d) I Outline THREE reasons why a scheme of work is vital in the teaching and learning of biology. **(3 marks)**
- ii State the purpose of 'remarks' column in a scheme of work. **(1 mark)**
- e) I State TWO advantages of using demonstration method while teaching biology. **(2 marks)**

- ii Identify TWO circumstances that are appropriate for the use of project method in teaching biology. **(2 marks)**
- iii State THREE ways through which lecture method could be made more effective in the teaching of biology. **(3 marks)**
- f) Give TWO reasons why secondary schools should teach biology. **(2 marks)**
- Q2. Critically analyze the merits of using resource persons in the teaching of biology. **(15 marks)**
- Q3. Analyze the preparations that a biology teacher needs to make before, during and after field visit to a green house located 50km away from the school. **(15 marks)**
- Q4. Use the information below to make a 40 min lesson plan  
Topic: Photosynthesis  
Subtopic: Factors influencing photosynthesis  
Level: F2 **(15 marks)**
- Q5. a) With the aid of relevant examples, explain how a teacher can use a computer in teaching and learning of biology. **(5 marks)**
- b) Describe safety precautions that a biology teacher should put in place to safeguard against laboratory accidents. **(10 marks)**
- Q6. a) Explain THREE purposes of examinations in the teaching and learning of biology. **(3 marks)**
- b) Given the topic “respiration develop six items based on the six levels in the blooms taxonomy of cognitive development. **(12 marks)**

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