



**JARAMOGI OGINGA ODINGA UNIVERSITY  
OF SCIENCE & TECHNOLOGY**

**UNIVERSITY EXAMINATIONS 2012/2013**

**3<sup>RD</sup> YEAR 1<sup>ST</sup> SEMESTER EXAMINATION FOR THE DEGREE  
OF BACHELOR OF EDUCATION (SCIENCE) WITH IT**

**MAIN**

**COURSE CODE: ECT 332**

**COURSE TITLE: SPECIAL METHODS FOR TEACHING BIOLOGY**

**DATE: 2.5.2013      TIME: 9.00-11.00AM**

**DURATION: 2 HOURS**

**INSTRUCTIONS**

- 1. This paper consists of 5 Questions.**
- 2. Answer Question 1 (Compulsory ) and any other 2 questions**
- 3. Write your answers on the answer booklet provided**

1. (a) Compare and contrast the dynamic and the static view points of science education (6mks)
- (b) Define the term Ecology, habitat, biomass, ecosystem, carrying capacity and ecological niche (5mks)
- (c) Identify the a biotic (physical) and biotic (biological) factors in a given ecosystem. Based on this information. (1mks)
- i. Construct according to Bondo University format and write a two week scheme of work to cover all the content areas and skills mentioned (10mks)
- ii. construct a one hour evaluation instruments to test knowledge of content and higher order skills, in two sections: Section I- Short answer questions and Section II – Essay questions (8mks)
  
2. (a) Using an example, describe a teaching method you could use to practically show learners how to use a science equipment property (6mks)
- (b) What three considerations would you bear in mind in planning for this method? (6mks)
- (c) Write a one period lesson plan to use (8mks)
  
3. Explain the ASEI / PDSI movement of teaching and learning of science (20 mks)
  
4. (a) Explain the meaning of teaching and learning resources citing examples (6mks)
- (b) Explain factors a teachers has to put in mind during selection of teaching and learning resources (6mks)
- (c) State and explain characteristics of a good chart to be used in a biology lesson (8mks)
  
5. Explain challenges biology teachers encounter during teaching and learning of the subject (20mks)