



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

UNIVERSITY EXAMINATIONS 2012/2013

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

MAIN

COURSE CODE: ECT 333

COURSE TITLE: SPECIAL METHODS FOR TEACHING CHEMISTRY

DATE: 4.5.2013 TIME: 14.00-16.00PM

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) Discuss the levels at which planning may be done in schools (5mks)
 (b) Construct a suitable lesson plan to teach the topic “temporary and permanent changes” to a form one class in a double lesson (10mks)
 (c) Which factors should you consider in preparing lesson notes. (3mks)
 (d) Distinguish between deductive and inductive reasoning and show how both are incorporated in the scientific method. Use relevant illustrations from chemistry teaching (6mks)
 (e) What are the advantages and challenges of using the modern, open – plan laboratory design in chemistry teaching (6mks)

2. (a) Argue the case for the use of practical work in the teaching and learning of chemistry (5mks)
 (b) Highlight the characteristics, merits and short comings of each of these three practical activities (small group class, tender demonstration and investigation). (12mks)
 (c) Why should it be mandatory for the chemistry teacher to always rehearse an experiment before presenting it to students (3mks)

3. (a) Design a 3 week scheme of work to teach the topic: methods of preparing salts; given that chemistry has been allocated four (4) lessons per week for the class in your school. (12mks)
 (b) List the principals that have guided you in the “building” of any 3 of the columns of the schemes of work constructed above. (3 mks)
 (c) Identify any benefits for using a scheme of work in your planning to teach chemistry. (5mks)

4. (a) Justify the use of local materials in the school environment in teaching chemistry. (6mks)
 (b) Explain the ASEI/ PDSI movement of teaching and learning of chemistry (10mks)
 (c) Highlight the challenges that face the chemistry teacher’s efforts to improve materials for teaching (4 mks)

5. Evaluation is key to teaching chemistry. Discuss this statement. (20 mks)