



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE
AND TECHNOLOGY**
UNIVERSITY EXAMINATIONS 2012/2013
**1ST YEAR 2ND SEMESTER EXAMINATIONS FOR THE DEGREE
OF BACHELOR OF SCIENCE IN COMMUNITY HEALTH AND
DEVELOPMENT & BACHELOR OF SCIENCE IN PUBLIC
HEALTH**
(MAIN)

COURSE CODE: ESD 3121

COURSE TITLE: WASTE MANAGEMENT COURSE

DATE: 24/4/2013 TIME: 9.00-11.00AM

DURATION: 2 HOURS

INSTRUCTIONS

- 1. This paper contains TWO sections.**
- 2. Answer ALL questions in section A (Compulsory) and ANY other Two questions in section B.**
- 3. Write all answers in the booklet provided**

SECTION A: Answer ALL QUESTIONS in this section

1. What is waste management? (3 marks)
2. Give any three methods used for storage of waste before final disposal. (3 marks)
3. Differentiate sewage and sewerage. (3 marks)
4. Explain why landfills is a recommended method of waste disposal but can be a source of pollution. (3 marks)
5. Outline various dry / non-water conservancy excreta disposal methods. (3 marks)
6. Identify any three major micro-organisms of significant to improper disposal of waste. (3 marks)
7. Name any six types of diseases that are spread through excreta materials. (3 marks)
8. Highlight any three factors that would influence use of and type of sanitary facilities for excreta disposal. (3 marks)
9. Briefly explain how recycling could be helpful in health and economy. (3 marks)
10. Illustrate and describe the concept of the 4Fs in disease transmission. (3 marks)

SECTION B: Answer ANY TWO QUESTIONS in this section

Q1.

- (a) Composting and incineration are some of the disposal methods of solid waste. State three pros and three cons of each. (12 marks)
- (b) Explain the three significant strategies in waste minimization. (6 marks)
- (c) Elaborate the term “polluter pays” as a concept in waste management. (2 marks)

Q2.

- (a) Describe any five on-site waste disposal options. (5 marks)
- (b) Describe the five key components of solid waste management. (7½ marks)
- (c) To ensure an optimum waste minimization programmes, a wide ranging strategy integrating waste management systems must be employed. With appropriate illustration, give an account of five of the basic parts of waste minimization strategy. (7½ marks)

Q3.

- (d) Identify three methods of excreta disposal and in each, outline three advantages and three disadvantages. (12 marks)
- (e) Describe eight problems associated or connected with improper excreta disposal. (8 marks)

Q4.

- (a) Explain two major approaches applicable in wastewater treatment plants. (8 marks)
- (b) Write notes on each of the following as applied to waste stabilization ponds;
 - (i) Anaerobic ponds; (ii) Facultative ponds; (iii) Maturation ponds(12 marks)