

**BONDO UNIVERSITY COLLEGE**  
**BUSIA LEARNING CENTRE**  
**SCHOOL OF HEALTH SCIENCES**  
**DIPLOMA IN COMMUNITY HEALTH AND DEVELOPMENT**  
**1<sup>ST</sup> YEAR 1<sup>ST</sup> SEMESTER EXAMINATION (SEPT – DEC., 2012)**

**COURSE CODE:** HCD 2113

**TITLE:** WASTE MANAGEMENT

**DATE: TIME:**

**DURATION:** 2 hours

**INSTRUCTIONS**

**Section A: Answer ALL Questions (Total 30 marks)**

1. Explain any three factors that influence the quantities and composition of wastes ( 3 marks)
2. State any three options of waste disposal in Kenya ( 3 marks)
3. List any six ways of classification of E – Wastes (3 marks)
4. Describe aeration theory (3 marks)
5. Describe any three environmental consequences of poor e – waste handling ( 3 marks)
6. Describe waste stabilization ponds (3 marks)
7. Briefly discuss the following;
  - i. Incineration (3 marks)
  - ii. Composting (3 marks)
  - iii. Recycling ( 3 marks)
8. In community storage, what factors would you consider in solid wastes ( 3 marks)

**Section B: Answer any TWO Questions (Total 15 marks each)**

1. Discuss the alternatives to surface disposal (15 marks)
2. With the aid of a diagram, describe the Conventional stages in sewage treatment (15 marks)
3. Discuss waste water composition

Discuss solid waste management in the following areas;

  - i. Domestic wastes (5 marks )
  - ii. Agricultural waste (5 marks)
  - iii. Commercial waste ( 5 marks)

## **Course Outline**

### **The basic knowledge of solid and liquid wastes and their management in public health**

Public health aspects of solid wastes, solid waste management, disposal methods in urban and rural areas, disposal of corpses and dead animals, public health transmissions, design and construction of excreta disposal methods, disposal of liquid wastes, industrial liquid wastes, the processes in sewage treatment and its management, stream pollution and natural purification. Waste water treatment and waste water parameters, river pollution control, preliminary, primary, secondary and tertiary waste water treatment, Activate sludge, percolating filters, waste stabilization ponds, aeration theory, removal kinetics, waste water treatment for small communities, industrial waste water treatment, anaerobic treatment, sea outfalls, sludge treatment and disposal, E - Waste management