

**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY SCHOOL OF HEALTH SCIENCES**

**UNIVERSITY EXAMINATION FOR –DIPLOMA IN COMMUNITY HEALTH AND DEVELOPMENT**

**1ST YEAR 1ST SEMESTER 2016/2017 ACADEMIC YEAR**

**MAIN/E-LEARNING**

**COURSE CODE: HDC 2113**

**COURSE TITLE : WASTE MANAGEMENT**

**EXAM VENUE: STREAM: E-LEARNING**

**DATE : 08/09/16**

**EXAM SESSION: 9.00 – 10.30 AM**

**TIME : 1 ½ HRS \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Instructions:**

1. **Answer all questions in section A (Compulsory) and ANY other 2 questions in Section B.**
2. **Candidates are advised not to write on the question paper.**
3. **Candidates must hand in their answer booklets to the invigilator while in the examination room.**

**SECTION 1: ANSWER ALL QUESTIONS (30 MARKS)**

1. Define the following concepts (3 marks)

1. Polluter pays principle
2. Sustainable development
3. Scope of waste management

2. List 6 health risks associated with poor waste disposal in urban areas (3 marks)

3. Briefly explain 3 benefits of waste (3 marks)

4. State any three sources of waste sighting one example each (3 marks)

5. Briefly explain 3 principles of composting (3 marks)

6. State 3 characteristics of wastes for sustainable incineration (3 marks)

7. State any three sources of stream pollution (3 marks)

8. Differentiate between biodegradable and non biodegradable waste and give an example of each (3 marks)

9. State the three benefits of processing waste (3 marks)

10. Briefly explain any three types of health care wastes (3 marks)

**SECTION 2: ANSWER ANY 2 QUESTIONS (30 MARKS)**

1. a) Discuss the principles of solid waste management (10 marks)

b) Discuss the benefits of a sanitary land fill (5 marks)

1. a) Waste hierarchy is the cornerstone of waste management. Discuss this statement (10 marks)

b) Discuss the challenges facing developing countries in waste management (5 marks)

3. a) Briefly explain the constituents of liquid waste (5 marks)

 b) Discuss the conventional stages of liquid waste management (10 marks)

4. a) Briefly explain any three principles of composting (6 marks)

b) Discuss the steps involved in composting (9 marks)