

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

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

## $1^{ST}$ YEAR $1^{ST}$ SEMESTER 2016/2017 ACADEMIC YEAR

## **MAIN CAMPUS**

COURSE CODE:

HDC 2113

COURSE TITLE:

WASTE MANAGEMENT

EXAM VENUE:

STREAM:

EXAM SESSION

TIME:

1½ HOURS

### **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)
  - a) Polluter pays principle
  - b) Sustainable development
  - c) 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)
- 2. 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)