

UNIVERSITY OF ESWATINI
DEPARTMENT OF GEOGRAPHY, ENVIRONMENTAL SCIENCE AND
PLANNING

FINAL EXAMINATION, DECEMBER 2018

BSc., B.Ed. (Secondary) Science

TITLE OF PAPER: WASTE MANAGEMENT PLANNING

COURSE NUMBER: GEP317

TIME ALLOWED: THREE (3) HOURS

INSTRUCTIONS:

1. ANSWER THREE QUESTIONS
2. SECTION A IS COMPULSORY
3. ANSWER ANY TWO QUESTIONS FROM SECTION B
4. ILLUSTRATE YOUR ANSWERS WITH EXAMPLES AND USE APPROPRIATE TERMINOLOGY

ALLOCATION OF MARKS: QUESTION 1 (COMPULSORY) CARRIES 40
MARKS, WHILE THE REST CARRY 30
MARKS EACH

THIS QUESTION PAPER SHOULD NOT BE OPENED UNTIL PERMISSION IS
GRANTED BY THE INVIGILATOR

GEP327: WASTE MANAGEMENT PLANNING - DECEMBER 2018

**SECTION A
COMPULSORY**

QUESTION 1

- a) Discuss the key components of a well-designed integrated waste management strategy. (30 marks)
- b) Discuss the process and consequences resulting from the following observation by a passerby:
“Whenever I drive past the Manzini dumpsite, I am always met by a pungent smell, most often like that of a rotten egg”. (10 marks)
(40 marks)

**SECTION B
ANSWER ANY TWO QUESTIONS**

QUESTION 2

- a) Define the following terms:
- i) White goods (3 marks)
 - ii) Pyrolysis (3 marks)
 - iii) Hazardous waste (3 marks)
 - iv) Composting (3 marks)
 - v) Material recovery facility (3 marks)
- b) Explain the ‘waste hierarchy’ and draw a diagram to illustrate the various levels. (15 marks)

(30 Marks)

QUESTION 3

Using appropriate illustrations, discuss the design of a sanitary landfill.

(30 Marks)

QUESTION 4

Discuss the process of undertaking a waste analysis and characterization study (WACS).

(30 Marks)

QUESTION 5

- a) Why is waste segregation important? Briefly discuss. (6 marks)
- b) Discuss the key characteristics of a suitable landfill site. (16 marks)
- c) Discuss one key legislation that is used to regulate waste in Eswatini.

(8 marks)

(30 Marks)