



**UNIVERSITY OF SWAZILAND  
SUPPLEMENTARY EXAMINATION PAPER**

**PROGRAMME:** BSC ABE 4  
BSC FSNT 4

**COURSE CODE:** ABE 405

**TITLE OF PAPER:** SANITATION AND WASTE MANAGEMENT

**TIME ALLOWED:** TWO (2) HOURS

**SPECIAL MATERIAL REQUIRED:** NONE

**INSTRUCTIONS:** ANSWER QUESTION ONE AND ANY TWO  
OTHER QUESTIONS.

**DO NOT OPEN THIS PAPER UNTIL PERMISSION HAS BEEN  
GRANTED BY THE CHIEF INVIGILATOR**

**SECTION A. COMPULSORY QUESTION**

**Question One**

- a. Describe two environmental conditions that you would consider when choosing a site for construction of a septic tank. **(10 marks)**
- b. Describe how a primary water treatment process differs from a secondary water treatment process? **(10 marks)**
- c. Describe what composting is and discuss its relevance in both waste and environmental management. **(10 marks)**
- d. Describe two of the factors fundamental for resource recovery in a waste management system. **(10 marks)**

**SECTION B. ANSWER ANY TWO QUESTIONS**

**Question Two**

- a. Developing and enforcing regulations and carrying out public information and education programmes are some of the elements of integrated waste management. Explain the relevance of these elements in a waste management system. **(15 marks)**
- b. Explain what is sanitation is and its importance in human health. **(10 marks)**

**Question Three**

- i. The use of private septic tanks is recommended for less populated areas such as rural areas as well as suburbs. Discuss the reasons why stating the potential hazard to the environment. **(15 marks)**
- ii. Describe four key factors you would consider to hasten decomposition of organic materials in a compost pile. **(15 marks)**

**Question Four**

- a. Discuss five factors to be considered when designing a waste management system.

**(30 marks)**