



**UNIVERSITY OF SWAZILAND
FINAL 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.

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GRANTED BY THE CHIEF INVIGILATOR**

SECTION A. COMPULSORY QUESTION

Question One

- a. Explain what biogas is and its potential social, environmental and economic benefits. /15 marks
 - b. Discuss two methods that may be used by a local government to minimise waste generation. /10 marks
 - c. Explain the importance of policy when setting up a waste management system by a local government. /10 marks
 - d. Explain what sanitation is and why it is important? /5 marks
- [40 marks]**

SECTION B. ANSWER ANY TWO QUESTIONS

Question Two

- a. Explain the meaning of the following terms as used in sanitation and waste management;
 - i. Water washed diseases /5
 - ii. Sanitary landfill /10
 - iii. Solid waste /5
 - iv. Improved sanitation /5
 - v. On-site sanitation /5
- (30 marks)**

Question Three

- a. Briefly explain the importance of the following factors when designing a waste management system;
 - i. Waste size and density
 - ii. Population size
 - iii. Type of waste / 15 marks

- b. Describe the environmental conditions where the use of septic tanks would be appropriate. **/10 marks**
 - c. Describe the health and environmental risks associated with solid waste if poorly managed. **/5 marks**
- [30 marks]**

Question Four

- a. Discuss the potential hazards for the following types of waste and describe the recommended ways of disposing such waste;
 - i. Clinical waste /10
 - ii. Domestic waste /10
 - iii. Laboratory waste /10**[30 marks]**