



---

# TECHNICAL UNIVERSITY OF MOMBASA

---

Faculty of Applied and Health Sciences

Department of Environment & Health Sciences

**UNIVERSITY EXAMINATION FOR:**

**BACHELOR OF SCIENCE IN ENVIRONMENTAL HEALTH**

**BSEH 16J/YEAR 3/SEMESTER 2**

**APH 4312: LIQUID WASTE MANAGEMENT**

**SPECIAL/ SUPPLIMENTARY EXAMINATIONS**

**SERIES: SEP 2018**

**TIME: 2 HOURS**

***Instructions to Candidates***

This paper consists of FIVE questions

Answer question ONE (COMPULSORY) and any other TWO questions.

***This paper consists of two printed pages.***

***Mobile phones are NOT allowed in the examination room***

---

## QUESTION ONE

- A). Define the following terms 5 marks
- a) Sewage
  - b) Effluent
  - c) Dry weather flow
  - d) Sub main sewers
- B). Describe the physical composition of liquid waste 4 marks
- C). Outline the sources of liquid waste 4 marks
- D). Briefly discuss 3 sampling methods used for water analysis 4 marks
- E). Describe the various types of drainage systems 4 marks

F). Explain the public health importance of liquid waste 4 marks

G).list any 5 drainage rules 5 marks

**QUESTION TWO**

Discuss the design and functioning of waste water stabilization pond 20 MARKS

**QUESTION THREE**

Describe the liquid waste management hierarchy 20 MARKS

**QUESTION FOUR**

Discuss the factors to consider while setting up sewage treatment plant 20 MARKS

**QUESTION FIVE**

Discuss the key challenges in managing liquid waste in Kenya 20 MARKS