



TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF ENVIRONMENT & HEALTH SCIENCES

UNIVERSITY EXAMINATION FOR:

DIPLOMA IN ENVIRONMENTAL SCIENCE

DES17S/YEAR2/SEMESTER2

AES2209: WASTE MANAGEMENT AND ENVIRONMENTAL POLLUTION

END OF SEMESTER EXAMINATION

SERIES: AUGUST 2019

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 (30MARKS)

- a) List **FIVE** notable aims of industrial sewage treatment (5Marks)
- b) Highlight **THREE** main components of an integrated waste management strategy (3Marks)
- c) Land filling is not an economic alternative for solid waste disposal. Briefly explain (2Marks)
- d) State **THREE** key characteristics of a sanitary landfill that distinguish it from an open dump (3Marks)
- e) State **FIVE** significant factors that changes mass per unit volume of solid waste (5Marks)

- f) Outline two merits of incineration in solid waste management (2Marks)
- g) State **FIVE** concrete sources of indoor air pollution in informal settlement (5Marks)
- h) Enumerate appropriate modern source reduction strategies in waste management (5Marks)

QUESTION 2

Municipal waste management is a positive investment and not an economic burden.

Discuss (15Marks)

QUESTION 3

- a) Detail health effects of hazardous chemical wastes in a modern society today (10Marks)
- b) Density is a critical factor in the design of solid waste management system. Explain (5Marks)

QUESTION 4

- a) Describe dependable methods in controlling photochemical smog (10Marks)
- b) Explain biochemical properties of municipal waste (5Marks)

QUESTION 5

Discuss modern community waste education and awareness strategies (15Marks)