



Technical University of Mombasa

Faculty of Engineering and Technology

DEPARTMENT OF MEDICAL ENGINEERING

DIPLOMA IN MEDICAL ENGINEERING
(DME JAN 2013/S-PT Y2)

EHL 2202

SANITATION AND ENVIRONMENTAL MANAGEMENT

SPECIAL/SUPPLEMENTARY EXAMINATIONS

SERIES: JUNE 2013
TIME: 2 HOURS

INSTRUCTIONS TO CANDIDATES:

You should have the following for this examination

- Answer booklet

Question **ONE** is **COMPULSORY** and any other **TWO**
This paper consists of **2 PRINTED** pages

QUESTION ONE (COMPULSORY)

- (a) Outline **FOUR** advantage and **FOUR** disadvantage of Pour-flush latrine compared to ventilated improved pit (VIP) latrine **(8 marks)**
- (b) With the aid of diagram, describe the construction of pour-flush latrine. **(12 marks)**
- (c) (i) State **SIX** effects of Acid Rain on the environment.
(ii) Differentiate between Re-use and Recycling method when dealing with municipal waste **(10 marks)**

QUESTION TWO

- (a) Describe the effect of air pollutants on the following.
(i) Human Health
(ii) Materials and Aesthetics
(iii) Aquatic Ecosystems
(iv) Climate **(12 marks)**
- (b) Outline any **FOUR** factors to be considered in determining the method of waste disposal. **(8 marks)**

QUESTION THREE

- (a) (i) State any **FOUR** disease caused by poor sanitation
(ii) Distinguish between photochemical smog and Industrial drug in the society. **(8 marks)**
- (b) Explain the function of the following bacteria in the waste management. **(12 marks)**
(i) Acrostic bacteria
(ii) Anaerobic bacteria
(iii) Facultative bacteria.

QUESTION FOUR

- (a) Outline the advantage and disadvantage of inaneration method of waste disposal. **(8 marks)**
- (b) Explain the process of sewage treatment by waste stabilization ponds/lagoon **(12 marks)**

QUESTION FIVE

- (a) (i) State any **FOUR** factors that determine the danger or toxicity of chemical substances.
(ii) Explain the following types of chemical exposure.
(I) Acute exposure
(II) Chronic exposure
(III) Supertonic exposure. **(10 marks)**
- (b) (i) State any **TWO** affects caused by Ozone layer depletion.
(ii) Differentiate the following term.
I) Pont source and non-Pont source
II) Primary and secondary pollutes **(10 marks)**