



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF HEALTH SCIENCES

UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE

PUBLIC HEALTH/COMMUNITY HEALTH AND DEVELOPMENT

1st YEAR 2nd SEMESTER 2019/2020 ACADEMIC YEAR

KISUMU CAMPUS

COURSE CODE: HDP 3132

COURSE TITLE: WASTE MANAGEMENT

DATE: 15/08/2019

EXAM SESSION: 9.00 – 11.00 AM

TIME: 2.00 HOURS

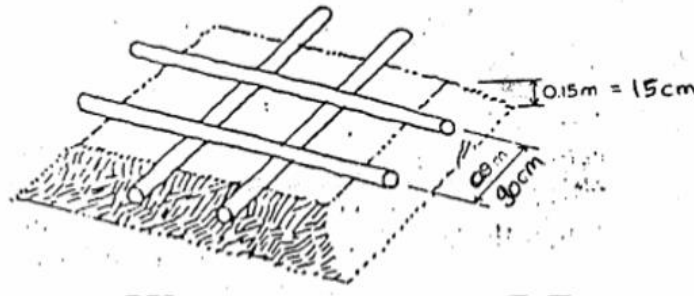
Instructions:

- 1. Answer all the questions in Section A and 2 questions in Section B.**
- 2. Candidates are advised not to write on the question paper.**
- 3. Candidates must hand in their answer booklets to the invigilator while in the examination room.**

SECTION A

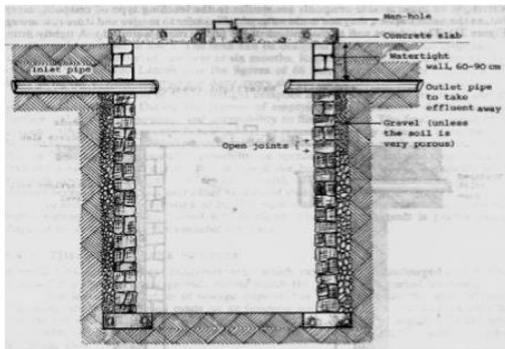
Answer all the questions in Section A (30MARKS)

- a) Define the following
- i. Waste (2 marks)
 - ii. Hazardous Wastes (2 marks)
- b) Highlight the Three main sources of wastes (3 marks)
- c) What are the two classifications of solid wastes? (2 marks)
- d) Study the diagram below and explain the type of solid waste disposal method it is. (3 marks)

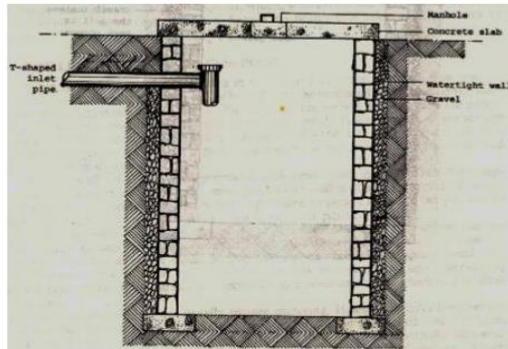


- e) What are the three classifications of liquid waste/sewage (3 marks)
- f) What are the impacts of wastes onto the environment? (4 marks)
- g) List at least Four components of sewage waste water (4 marks)
- h) Describe the differences in functionality of the diagram below (4 marks)

Leaching Type vs Watertight Cesspools



Leaching type of Cesspool



Watertight Cesspool

- i) What are the points of contacts of wastes with human beings? (3 marks)

SECTION B 40 (MARKS)

Answer any Two questions in this Section (Each Question 20 MKS).

QUESTION TWO (20 MARKS)

- a) Discuss at least Five classifications of wastes according to their origin and type (10 marks)
- b) Discuss the impacts of wastes if not managed properly (10 marks)

QUESTION THREE (20 MARKS)

- a) Define the following terms (8 marks)
 - i. Biodegradation
 - ii. Effluent
 - iii. Dumping
 - iv. Sewerage
- b) Describe the six main functional elements of solid waste management system (12 marks)

QUESTION FOUR (20 MARKS)

- a) Other than composting, describe Five common solid waste disposal methods. (10 marks)
- b) What are the points to be considered before selecting one particular sewage disposal technique? (4 marks)
- c) Waste Water treatment methods are grouped into three general categories, briefly describe them. (6 marks)

QUESTION FIVE (20 MARKS)

- a) Discuss how to dispose the solid contaminated wastes (10 marks)
- b) Describe how to dispose contaminated sharps (10 marks)