



# MACHAKOS UNIVERSITY

University Examinations for 2020/2021

SCHOOL OF HEALTH SCIENCES

DEPARTMENT OF PUBLIC AND COMMUNITY HEALTH

THIRD YEAR FIRST SEMESTER EXAMINATION FOR

BACHELOR OF SCIENCE (PUBLIC HEALTH)

HPH305: SOLID WASTE MANAGEMENT

DATE: 10/8/2021

TIME: 8:30 – 10:30 AM

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## INSTRUCTIONS:

This paper consists of two sections A and B

### SECTION A

#### Specific Instructions

- This section has one question
- The question is compulsory
- The question is 30 marks

#### QUESTION ONE (30 MARKS)

- Explain three (3) reasons why it is important to have a sound solid waste management program (3 marks)
- Explain the key steps employed in solid waste management (5 marks)
- Explain the different ways of source reduction in solid waste management (3 marks)
- State any three (3) main pieces of legislation applicable to solid waste management in Kenya (3 marks)
- You are to advise a client on choosing an ideal solid waste management receptacle. Explain what you will consider before making the decision to buy (3 marks)
- Explain four (4) factors that affect the generation of solid wastes (4 marks)
- Explain why it is important to carry out solid waste analysis (3 marks)

- h) State six (6) legal frameworks that a public health officer can refer to when enforcing solid waste management practices (3 marks)
- i) Using relevant examples, differentiate between waste recycling and waste re-use (3 marks)

## **SECTION B:**

### **Specific Instructions**

- **This Section has four (4) questions**
- **Answer any two (2) questions**
- **Each question is 20 marks**

### **QUESTION TWO (20 MARKS)**

- a) Discuss the various collection methods you would consider as the waste management manager of your county (10 marks)
- b) During a field trip to Dandora dumpsite in Nairobi, you notice a number of activities taking place at the dumpsite. Of serious concern to you is the number of people at the site carrying one activity or the other and the fact that the dumpsite is located in a densely populated residential area. Explain, the health implications that would emanate from what you observed. (10 marks)

### **QUESTION THREE (20 MARKS)**

- a) Describe the role of community involvement and participation in solid waste management (10 marks)
- b) Discuss the main problems associated with landfills as a method of waste disposal (10 marks)

### **QUESTION FOUR (20 MARKS)**

- a) Explain the factors to consider when selecting a site for sanitary landfilling. (10 marks)
- b) Solid wastes can also be hazardous in nature. Identify one such type of waste and explain the characteristics that would make it qualify as a hazardous waste. (10 marks)

### **QUESTION FIVE (20 MARKS)**

- a) Explain the advantages of using an incinerator as a waste disposal method. (10 marks)
- b) Explain the challenges facing municipal solid waste management in Kenya. (10 marks)