**MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**P.O. Box 972-60200 – Meru-Kenya.**

**Tel: 020-2069349, 061-2309217. 064-30320 Cell phone: +254 712524293, +254 789151411**

**Fax: 064-30321**

**Website:** [**www.must.ac.ke**](http://www.must.ac.ke) **Email:** **info@mucst.ac.ke**

**University Examinations 2015/2016**

THIRD YEAR FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN COMMUNITY HEALTH DEVELOPMENT

**HPC 3301: INTRODUCTION TO PRINCIPLES OF WASTE MANAGEMENT**

 **DATE: NOVEMBER 2015 TIME: 2 HOURS**

**INSTRUCTIONS:** *Answer question* ***one*** *and any other* ***two*** *questions*

**QUESTION ONE (30 MARKS)**

1. Define solid waste. (3 Marks)
2. Define leachate. (3 Marks)
3. Explain what litter is. (3 Marks)
4. Explain what waste water is. (3 Marks)
5. Explain the word hygiene. (3 Marks)
6. Define sanitation. (3 Marks)
7. Explain what garbage is. (3 Marks)
8. Explain what an effluent is. (3 Marks)
9. Describe a septic tank. (3 Marks)
10. Explain what a sewer is. (3 Marks)

**QUESTION TWO (20 MARKS)**

Imagine that you are the technical officer responsible for the waste management in a busy town. The National Ministry of Environment is vigorously pursuing a programme of improving the disposal of solid waste and waste water. They are concerned about the pollution of a water course by the town’s solid waste dump. As a member of steering committee, you are required to circulate a paper for discussion before the meeting.

There are three proposals for the next meeting. The first is to consider a compost method of waste disposal. Municipal authorities are supposed to provide capital cost of the plant while the proceeds shall be shared out equally with the consortium of business men.

The second proposal is to construct an incinerator which is capable of destroying chemical waste. The capital cost of the plant shall be repaid within 10 years by charging a fee of certain waste from neighbouring counties. The third proposal is to dispose of all waste in a scientifically operated landfill by means of loans from World Bank for the purchase of earthmoving machinery and gas extraction equipment.

Discuss in details the investigations you would carry out. (20 Marks)

**QUESTION THREE (20 MARKS)**

Discuss the importance of solid waste management in relation to Public Health. (20 Marks)

**QUESTION FOUR (20 MARKS)**

You have been appointed as a director of a cleansing services in a busy refuse tip with effect from next month. You visit the tip and realize there are large numbers of children and adults sorting through the solid waste, collecting items and materials that they can sell or re-use.

Discuss the problems associated with the scavengers and the action you would take to control their presence and activities. (20 Marks)