Name of student **:**  Isaac Mayen Mading

Course : Diploma in water hygiene and sanitation

Registration number : D002

Assignment number : 4

Date of submission : 5/1/2019

* 1. Explain what municipal solid waste (MSW) means.

These are wastes consisting of every item such as product packaging; grass clopping, furniture, clothing, bottles and cans, food scraps, newspapers, appliance, consumer electronics and batteries. These comes from homes, institution such as schools and hospitals and commercial sources such as restaurant and small businesses

* 1. Explain the importance of the following MSW properties in solid waste management or treatment.

The importance of following municipal solid waste in solid waste management is to reduce the operation cost, by reducing the waste load at source; this is to minimize the cost of generation of waste. These municipal solid waste properties can be used to generate energy. Several technologies have been developed that makes the processing of MSW for energy cleaner and more economical; these properties include landfill, combustion and gas.

* 1. Outline the advantages and disadvantages of source separation of MSW

**Advantages**

1. Decrease air and water pollution from landfill activity.
2. Net saving from avoiding negative impacts on the environment, on worker health, on energy, and on resources from the production of virgin materials.
3. Improve balance of trade from substituting recycled for imported virgin material
4. Communities with source separation programs are seen to be forward-looking
5. Benefits from a sense of personal involvement in conservation activities.

**The disadvantages of source separation are;**

1. Only a portion of the waste generated can be recovered.
2. It leaves a mixed waste residue that has somewhat lower fuel content than un-separated lower content than un-separated mixed waste.
3. It strongly depends on individual participation and cooperation.
4. It required modification of the costly collection equipment used by both municipal and private haulers. ( https/www.priceton.ede)
   1. Discuss the challenges faced in disease surveillance.

The challenges faced in disease surveillance are;

Most of disease surveillance designed to provide the data to central levels with no coordination between those collecting it, analyzing it or those that are going to use for decision making. Also lack of resources coupled with no prioritization of disease surveillance in term of budget and allocation. Capacity to conduct disease surveillance is also affected by lack of coordination between the national and the state levels which often delays both case and the outbreak detection which can defeat the purpose of conducting the disease surveillance. Other issues affecting the disease surveillance include weak infrastructures and concept to operate the surveillance systems technically and financial resources alongside the road accessibility. Politics also another challenge faced in disease surveillance, because some times when disease surveillance has been carried out government want the disease surveillance results be kept secret because they regard the disease outbreak as secret which place the team in difficult position after the surveillance. The technical challenge faced in disease surveillance is testing for disease is sometimes difficult especially in our Country, South Sudan because it is expensive. ([**https://academic.oup.com**](https://academic.oup.com/)**)**

* 1. Explain 5 diseases that can be prevented by observing proper sanitation.

The 5 diseases that can be prevented though proper sanitation observation are;

Diarrhea, diarrheal diseases are caused by poor sanitation and contaminated water. Some of the long term issues caused from contaminated water include skin lesion, skin bladder and lung cancer. Most people are at risk for developing abdominal pain and watery diarrhea because of depending on water supplies that may be contaminated and do not have water supply that is safe.

Cholera, is a bacterial infection through intestinal tract, which cause severe diarrhea and if not treated can cause severe dehydration and death, observing proper sanitation and hygiene can prevent this infection

Acute respiratory infection can also be cause by poor sanitation, most it’s cases are the one of the most death especially in children, Combining the cases of diarrheal diseases and respiratory infections, uncontrolled sanitation and hygiene is the leading cause of death in children.

Malaria, this is series disease caused by parasite carried by certain type of mosquitoes. People are affected when bitten by mosquitoes.

This can be done by reducing the mosquito population in households and communities by eliminating stand water (caused by poor drainage and uncovered water tanks) can be an important factor in reducing malaria cases.

Trachoma, this is an eye infection spread mainly through poor hygiene cause by lack of adequate water supplies and unsafe environmental sanitation condition.

REFFERENCES:

([**https://academic.oup.com**](https://academic.oup.com/)**)**

( https/www.priceton.ede)