



AMREF INTERNATIONAL TRAINING CENTRE

Qualification Code : 0521 0654 B
Qualification : Environmental Science Level 6
Unit Code : ENV/CU/SCI/CR/04/6/A
Unit of Competency : Environmental Pollution and Waste Management

WRITTEN ASSESSMENT

Time: 3 Hours

INSTRUCTIONS TO CANDIDATE

1. This paper has two sections A and B
2. You are provided with a separate answer booklet
3. Marks for each question are as indicated
4. Do not write on the question paper

This paper consists of three (3) printed pages. Candidates should check the question paper to ascertain that all the pages are printed as indicated

SECTION A: (40 MARKS)

Answer ALL the questions in this section

1. Define the following terms
 - a) Waste management (2 Marks)
 - b) Waste disposal (2 Marks)
2. Wastewater often results from domestic and industrial manufacturing processes. It can be treated through different methods. State THREE advantages of physio-chemical waste-water treatment system (3 Marks)
3. Quality of air has become a matter of concern in both developing and developed countries. Name FOUR parameters used to measure the quality of air (4 Marks)
4. Although the usage of plastic bags had gained popularity in Kenya, in 2017 the Kenyan government banned it. Highlight FOUR reasons why the use of plastic bags was banned (4 Marks)
5. Sound above 65 Decibels (dB) is considered noise pollution. Identify FOUR considerations considered in the measurement of noise levels according to The Environmental Management and Coordination Act (EMCA), 1999, in Kenya (4Marks)
6. Waste management plays a vital role in ensuring we pass onto the next generation an environment that is free from pollution. Highlight TWO types of e-waste management processes (4 Marks)
7. There are policies and regulations set by environmental organizations to help conserve the environment from pollution. Distinguish the following principles of environmental policy;
 - a) Pre-cautionary principle (2 Marks)
 - b) Polluter-pay principle (2 Marks)

8. For good agricultural produce, there is need for good quality soil. Outline any FOUR soil pollution control measures (4 Marks)
9. If the waste released to the environment is not well taken care of, then we are likely to bare the consequences. State FIVE negative impacts of an improper solid waste management system by a county government in Kenya (5 Marks)
10. When solid or gaseous particles are released into the air, they end up polluting the air quality. Differentiate between sulfurous smog and photochemical smog (4 Marks)

SECTION B: (60 MARKS)

Answer any THREE questions in this section.

11. You are charged with overseeing the construction of a landfill facility in county X.
 - a) Discuss in details FIVE factors you would consider in choosing the site for the facility (10 Marks)
 - b) Explain briefly FIVE major challenges facing waste management in Nairobi (10 Marks)
12. Manufacturing companies in industrial areas are the major producers of hazardous wastes in Kenya according to National Environmental Management Authority (NEMA).
 - a) Explain FIVE characteristics of hazardous substance (10 Marks)
 - b) Describe FIVE conditions that a transporter of hazardous waste must meet (10 Marks)
13. County X embarked on community sensitization on environmental pollution targeting business people within its jurisdiction.
 - a) Explain FIVE importance of community sensitization on pollution and waste management (10 Marks)

- b)** Describe the procedure followed when mobilizing and sensitizing the community (10 Marks)

14. Waste segregation has made it possible for organic wastes to be collected separately

- a) Explain **THREE** main categories of organic wastes (6 Marks)
- b) Discuss the **SEVEN** most appropriate management options for such wastes identified above (14 Marks)

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