

**QUALIFICATION CODE : 102104T4HSS**

**QUALIFICATION : HEALTH SERVICES SUPPORT PROVIDER- LEVEL 5**

**UNIT CODE :**MED/CU/HSS/BC/06/5/A

**UNIT OF COMPETENCY : ENVIRONMENTAL LITERACY**

**WRITTEN ASSESSMENT**

**INSTRUCTIONS TO CANDIDATE**

1. In this assessment, you will be required to answer **WRITTEN** questions.
2. You have **TWO** hours to answer all the questions.
3. In section A and B, indicate your answer by WRITING THE CORRECT CHOICE ON THE PROVIDED ANSWER BOOKLET.
4. ANSWER ALL QUESTIONS in section A, B and C
5. Use BLUE INK only when answering your answer
6. The paper consists of **TWO** sections: **A**, B **and C**
7. Candidates should answer the questions in **English**

**SECTION A: Multiple Choice Questions (20 marks)**

*Answer all Questions in this section*

1. What is the primary objective of the Environmental Management and Coordination Act 1999
   1. Regulating noise pollution
   2. Promoting sustainable development
   3. Managing hazardous waste disposal
   4. Standardizing PPE requirements
2. Which legislation focuses on regulating solid waste management in Kenya
   1. Environmental Management and Coordination Act 1999
   2. Occupational Safety and Health Standards (OSHS)
   3. Solid Waste Act
   4. International Environmental Protocols
3. What are examples of storage methods for environmentally hazardous materials
   1. Recycling and composting
   2. Incineration and landfilling
   3. Reduce, reuse, recycle
   4. Pollution control measures
4. Which of the following is a common disposal method for hazardous wastes
   1. Recycling
   2. Composting
   3. Incineration
   4. Reusing
5. PPE (Personal Protective Equipment) used in line with environmental regulations primarily aims to:
   1. Minimize resource usage
   2. Enhance worker safety
   3. Reduce noise pollution
   4. Control air pollution
6. OSHS standards primarily focus on:
   1. Noise pollution control
   2. Employee health and safety
   3. Waste management procedures
   4. Resource availability assessment
7. Which of the following is NOT a type of pollution
   1. Air pollution
   2. Soil pollution
   3. Solid waste
   4. Water pollution
8. Environmental pollution control measures include all EXCEPT:
   1. Waste minimization
   2. Recycling
   3. Incineration without emission controls
   4. Air and water quality monitoring
9. Which of the following is NOT a type of solid waste
   1. Municipal waste
   2. Industrial waste
   3. Hazardous waste
   4. Liquid waste
10. Procedures for solid waste management involve:
    1. Disposal only
    2. Collection, segregation, and disposal
    3. Recycling only
    4. Landfilling only
11. Noise pollution can be minimized by:
    1. Increasing industrial activities
    2. Using soundproof materials
    3. Ignoring community complaints
    4. Amplifying machinery noise
12. Methods for calculating current usage of resources include:
    1. Estimating waste generated
    2. Analyzing purchasing strategies
    3. Monitoring air pollution levels
    4. Consulting stakeholders
13. The 3Rs (Reduce, Reuse, Recycle) aim to:
    1. Increase resource consumption
    2. Maximize waste generation
    3. Minimize resource wastage
    4. Promote environmental pollution
14. Environmental strategies should primarily address:
    1. Increasing resource depletion
    2. Community needs and expectations
    3. Ignoring resource availability
    4. Reducing stakeholder consultation
15. The Montreal and Kyoto Protocols focus on:
    1. International trade regulations
    2. Climate change and ozone depletion
    3. Resource management strategies
    4. Industrial waste disposal methods
16. Good housekeeping practices include:
    1. Disregarding environmental incidents
    2. Resolving problems encountered
    3. Ignoring stakeholder feedback
    4. Avoiding resource minimization
17. Identification of programs and activities involves:
    1. Analyzing work processes
    2. Setting roles and responsibilities
    3. Consulting with stakeholders
    4. Monitoring and evaluation
18. Periodic monitoring and evaluation of environmental activities aim to:
    1. Maintain status quo
    2. Gather feedback from stakeholders
    3. Ignore environmental incidents
    4. Avoid data analysis
19. Documentation of recommendations and submission involves:
    1. Avoiding management support systems
    2. Sustaining and enhancing programs
    3. Ignoring environmental protocols
    4. Consulting proper authorities
20. Reporting of environmental incidents to concerned authorities primarily ensures:
    1. Resource depletion
    2. Environmental sustainability
    3. Increased pollution levels
    4. Community dissatisfaction

**SECTION B: Short Answer Questions (40 marks)**

1. Explain three storage methods for environmentally hazardous materials. (3 marks)
2. Discuss the purposes and key provisions of the Environmental Management and Coordination Act 1999. (5 marks)
3. Describe two types of pollution and their environmental impacts. (4 marks)
4. Outline the procedures for solid waste management according to environmental standards. (6 marks)
5. List and explain three types of resources and their importance in sustainable development. (6 marks)
6. What are the Occupational Safety and Health Standards (OSHS) and their relevance to environmental management. (6 marks)
7. Explain the principles of the 3Rs (Reduce, Reuse, Recycle) and provide examples of their application. (6 marks)
8. Discuss methods for minimizing noise pollution in industrial settings. (5 marks)
9. Describe the types and uses of PPE in compliance with environmental regulations.

(5 marks)

1. Explain waste management procedures and their significance in environmental sustainability. (5 marks)

**SECTION C: (40 marks)**

*Answer two questions in this section*

1. Discuss the purposes, key provisions, and significance of the Environmental Management and Coordination Act 1999 in Kenya's environmental governance. (20 marks)
2. Analyze the purposes and key content of the Solid Waste Act, focusing on its role in regulating waste management practices. (20 marks)
3. Evaluate different pollution control measures employed to mitigate the following highlighting their effectiveness and challenges; (20 marks)
4. Mitigation measures for air,
5. Mitigation measures for water,
6. Mitigation measures for soil pollution,.
7. Discuss strategies and methods for effective resource management in the following emphasizing sustainability and environmental conservation. (20 marks)
8. Industrial settings
9. community settings, Top of Form

**ANSWERS**

**SECTION A**

1. B) Promoting sustainable development

The primary objective of the Environmental Management and Coordination Act 1999 is to promote sustainable development through effective environmental management.

1. C) Solid Waste Act

The legislation that focuses on regulating solid waste management in Kenya is the Solid Waste Act.

1. B) Incineration and landfilling

Examples of storage methods for environmentally hazardous materials include incineration (for destruction) and landfilling (for disposal).

1. C) Incineration

Incineration is a common disposal method for hazardous wastes, especially those that cannot be recycled or reused.

1. B) Enhance worker safety

PPE used in line with environmental regulations primarily aims to enhance worker safety by protecting them from environmental hazards.

1. B) Employee health and safety

Occupational Safety and Health Standards (OSHS) primarily focus on ensuring employee health and safety in the workplace.

1. C) Solid waste

Solid waste is not a type of pollution but refers to discarded materials that are not liquid or gas.

1. C) Incineration without emission controls

Environmental pollution control measures include all options except incineration without emission controls, which can contribute to air pollution.

1. D) Liquid waste

Liquid waste is not a type of solid waste; it falls under a different category of waste management.

1. B) Collection, segregation, and disposal

Procedures for solid waste management typically involve collection, segregation (if applicable), and safe disposal methods.

1. B) Using soundproof materials

Noise pollution can be minimized by implementing soundproofing measures in industrial settings.

1. A.Estimating waste generated

Methods for calculating current usage of resources include estimating the amount of waste generated as part of resource consumption analysis.

1. C) Minimize resource wastage

The 3Rs (Reduce, Reuse, Recycle) aim to minimize resource wastage and promote sustainable resource management practices.

1. B) Community needs and expectations

Environmental strategies should primarily address community needs and expectations to ensure effective environmental management.

1. B) Climate change and ozone depletion

The Montreal and Kyoto Protocols focus on addressing global environmental issues such as climate change and ozone depletion through international agreements.

1. B) Resolving problems encountered

Good housekeeping practices include resolving problems encountered to maintain environmental standards and efficiency.

1. B) Setting roles and responsibilities

Identification of programs and activities involves setting clear roles and responsibilities for effective implementation.

1. B) Gather feedback from stakeholders

Periodic monitoring and evaluation of environmental activities aim to gather feedback from stakeholders to improve environmental management practices.

1. B) Sustaining and enhancing programs

Documentation of recommendations and submission involves sustaining and enhancing environmental programs based on analyzed data and recommendations.

1. B) Environmental sustainability

Reporting of environmental incidents to concerned authorities primarily ensures environmental sustainability and compliance with regulations.

**Section B: Short Answer Questions**

1. **Storage methods for environmentally hazardous materials:**

**1. Segregation:** Keeping hazardous materials separate from other materials to prevent contamination.

**2. Containment:** Using sealed containers or tanks to store hazardous liquids or gases safely.

**3. Secure facilities:** Storing hazardous materials in specially designed warehouses or storage areas with controlled access and environmental safeguards.

1. **Purposes and key provisions of the Environmental Management and Coordination Act 1999:**

**Purposes:** To provide a legal framework for sustainable management of the environment in Kenya, including conservation of natural resources and promotion of public participation.

**Key provisions:** Establishment of the National Environment Management Authority (NEMA), regulation of environmental impact assessments, enforcement of environmental standards, and penalties for environmental violations.

1. **Types of pollution and their environmental impacts:**

**1. Air pollution:** Causes respiratory diseases, contributes to climate change through greenhouse gas emissions.

**2. Water pollution:** Contaminates drinking water sources, harms aquatic life, and affects biodiversity.

**Environmental impacts:** Both types degrade ecosystems, reduce air and water quality, and pose health risks to humans and wildlife.

1. **Procedures for solid waste management according to environmental standards:**

**1. Collection:** Gathering waste from households, industries, and commercial areas.

**2. Segregation:** Sorting waste into categories like recyclables, organic waste, and hazardous waste.

**3. Treatment and disposal:** Processing waste through methods such as recycling, composting, incineration, and landfilling while adhering to environmental regulations.

1. **Types of resources and their importance in sustainable development:**

**1. Renewable resources:** Such as solar and wind energy, which are replenished naturally and can be used indefinitely without depleting them.

**2. Non-renewable resources:** Like fossil fuels and minerals, which are finite and can be exhausted if not managed sustainably.

**3. Natural resources:** Including forests, water bodies, and biodiversity, which support ecosystems and provide essential services for human well-being.

1. **Occupational Safety and Health Standards (OSHS) and their relevance to environmental management:**

OSHS are regulations that ensure workplaces are safe and healthy for employees.

Relevance to environmental management includes protecting workers from hazards related to handling hazardous materials, exposure to pollutants, and ensuring compliance with safety protocols during environmental remediation activities.

1. **Principles of the 3Rs (Reduce, Reuse, Recycle) and examples of their application:**

**Reduce:** Minimizing waste generation by using less material, energy, and resources. Example: Using digital documents instead of printing.

**Reuse:** Extending the life of products or materials by using them multiple times. Example: Using refillable water bottles instead of single-use plastic bottles.

**Recycle:** Processing used materials into new products to prevent waste of potentially useful materials. Example: Recycling paper, glass, and plastics.

1. **Methods for minimizing noise pollution in industrial settings:**

**Engineering controls:** Using sound barriers, enclosures, and acoustic insulation to reduce noise at the source.

**Administrative controls:** Scheduling noisy activities during off-peak hours and rotating workers to reduce prolonged exposure.

**Personal protective equipment (PPE):** Providing earplugs or earmuffs to workers exposed to high noise levels.

1. **Types and uses of PPE in compliance with environmental regulations:**

**Types:** Include gloves, masks, goggles, and protective clothing designed to minimize exposure to hazardous substances.

**Uses:** PPE is used to protect workers from physical, chemical, biological, and radiological hazards encountered during environmental remediation, waste management, and pollution control activities.

1. **Waste management procedures and their significance in environmental sustainability:**

**Significance:** Effective waste management reduces pollution, conserves resources, and minimizes environmental impact.

**Procedures:** Include waste reduction at the source, recycling and reuse of materials, proper treatment and disposal of hazardous waste, and compliance with waste regulations to promote sustainability.

**Section C: Essay Questions**

1. **Purposes, key provisions, and significance of the Environmental Management and Coordination Act 1999 in Kenya's environmental governance:**

**Purposes:** Promotes sustainable development, conservation of natural resources, and integration of environmental considerations into socio-economic activities.

**Key provisions:** Establishment of NEMA, environmental impact assessment requirements, pollution control measures, and penalties for environmental offenses.

**Significance:** Provides a legal framework for environmental protection, ensures compliance with international agreements, and fosters public participation in environmental decision-making.

1. **Analysis of the purposes and key content of the Solid Waste Act, focusing on its role in regulating waste management practices:**

**Purposes:** To regulate the generation, collection, transportation, treatment, and disposal of solid waste in Kenya.

**Key content:** Defines responsibilities for waste management, establishes standards for waste treatment facilities, promotes waste reduction and recycling, and addresses penalties for non-compliance.

**Role:** Ensures proper solid waste handling to protect public health, minimize environmental impact, and promote sustainable waste management practices.

1. **Evaluation of pollution control measures to mitigate air, water, and soil pollution, highlighting their effectiveness and challenges:**

**Air pollution:** Measures include emission standards, cleaner technologies, and promoting public transportation. Challenges include enforcement issues and transboundary pollution.

**Water pollution:** Measures include wastewater treatment, watershed management, and regulation of industrial discharges. Challenges include agricultural runoff and inadequate infrastructure.

**Soil pollution:** Measures include remediation technologies, soil conservation practices, and regulating contaminated sites. Challenges include persistent pollutants and long-term monitoring.

1. **Discussion of strategies and methods for effective resource management in industrial and community settings, emphasizing sustainability and environmental conservation:**

**Strategies:** Include resource efficiency, adoption of renewable energy, waste minimization, and sustainable procurement practices.

**Methods:** Involve conducting resource audits, implementing green technologies, promoting circular economy principles, and engaging stakeholders.

**Emphasis:** On balancing economic development with environmental protection, ensuring resource availability for future generations, and achieving sustainable development goals.

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