

Demonstrate Environmental Literacy Level 5

3 Hours

March/April 2023



THE KENYA NATIONAL EXAMINATIONS COUNCIL

WRITTEN ASSESSMENT

Time: 3 hours

INSTRUCTIONS TO CANDIDATE

*This paper consists of **THREE** sections **A**, **B** and **C**.*

*Answer **ALL** questions in sections **A** and **B** and any **TWO** in section **C** in the answer booklet provided.*

Marks for each question are indicated in brackets.

Do not write on this question paper.

*Answer the questions in **English**.*

This paper consists of SIX (6) printed pages.

Candidate should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

SECTION A (20 MARKS)

Answer **all** questions, each question carries one mark.

1. _____ is responsible for safe disposal of the generated hazardous waste.
 - A. Generator
 - B. Receiver
 - C. Waste facility
 - D. Treatment, storage & disposal facility
2. Which one of the following is responsible for the greatest exposure to Nitrous Oxide in living organisms?
 - A. Hurricanes
 - B. Soil erosion
 - C. Vehicle's emissions
 - D. Cigarette smoking
3. Amongst the following **four** fundamental ways of controlling noise pollution, which one is the best?
 - A. Reduce noise at the source
 - B. Block the path of noise
 - C. Increase the path length
 - D. Protect the recipient
4. Which one of the following materials can be recycled many times?
 - A. Plastic
 - B. Wood
 - C. Clay bricks
 - D. Aluminum
5. Which one of the following activities is the best way to reduce deforestation?
 - A. Using more paper
 - B. Clear more area of trees to grow plants
 - C. Burning forest in order to create cultivated land
 - D. Clear more area of plants to grow trees

6. Which one of the following is a form of fossil fuel?
- A. Coal
 - B. Solar
 - C. Wind
 - D. Hydro power
7. _____ is common form of shipment for transportation of hazardous waste.
- A. Rail
 - B. Road
 - C. Air
 - D. Inland water
8. _____ is the main aim of Basel Convention.
- A. Controlling movement of hazardous waste
 - B. Restricting movement of waste
 - C. Analysis of waste
 - D. Characterization of waste
9. Which one of the following pollutant has almost been phased out globally?
- A. Carbon dioxide
 - B. Carbon monoxide
 - C. Chlorofluorocarbons
 - D. Nitrogen dioxide
10. Which one of the following is the greatest contributor of waste discharge to water?
- A. Spillage from oil pipelines
 - B. Sewage
 - C. Nuclear waste
 - D. Spillage from tankers
11. Which one of the following is a necessary personal protective equipment (PPE) worn when handling acid spills?
- A. Plastic gloves
 - B. Helmet
 - C. Dust coat
 - D. Ear muff

12. What is the impact of food processing on the environment?
- A. Unemployment
 - B. Create disposal problems
 - C. Competition for products
 - D. Enhances infrastructure
13. _____ is the meaning of the term Environmental Compliance.
- A. Conforming to government laws
 - B. Conforming to constitutional laws
 - C. Conforming to environmental laws
 - D. Conforming to tribal laws
14. Which one of the following is an environmental problem caused by the computing industry?
- A. Providing jobs to humans
 - B. Availability of modern technologies
 - C. Generation of electronic waste
 - D. Making people lazy
15. Which one of the following is the most appropriate way to dispose plastics?
- A. Dump in ocean
 - B. Bury underground
 - C. Burn openly
 - D. Recycle
16. Which one of the following hazardous waste cannot be recycled?
- A. Used oils
 - B. Treatment waste
 - C. Paints
 - D. Batteries
17. Which one of the following is a source of thermal pollution?
- E. Gas leakage
 - F. Power plants
 - G. Service run-off
 - H. Oil spill

18. Which one of the following characteristics is widely regarded as being an important aspect of sustainable development?
- A. Intergenerational equity
 - B. Increasing consumption expenditure
 - C. Intra-generational inequity
 - D. Increased levels of saving
19. Which one of the following is **not** a challenge in environmental management?
- A. Understanding environmental legislations
 - B. Improve environmental performance
 - C. Implementation of solutions
 - D. Leadership and employee participation
20. Which one of the following is a type of environmental monitoring?
- A. Air monitoring
 - B. Animal monitoring
 - C. Health monitoring
 - D. Forest Monitoring

SECTION B (40 MARKS)

*Answer **all** questions in this section.*

21. a) Define Environmental Management System (EMS). (2 marks)
- b) State **four** benefits of an Environmental Management System (EMS) based on ISO 14001. (4 marks)
22. Identify **three** benefits derived from proper waste management. (3 marks)
23. List **four** methods used for the disposal of hazardous waste. (4 marks)
24. Outline **four** common causes of air pollution in the environment. (4 marks)
25. Explain **two** methods that can be used in the conservation of resources. (4 marks)
26. Identify **four** environmental principles. (4 marks)
27. State **four** ways that an organization can use to improve resource efficiency. (4 marks)
28. Highlight on the '**3 R's**' of Sustainable Development. (3 marks)
29. Explain **two** benefits of recycling waste materials in the environment. (4 marks)

30. Explain **two** ways in which the destruction of forests contributes to Global warming. (4 marks)

SECTION C (40 MARKS)

*Answer any **two** questions from this section.*

31. a) Explain **four** classes of solid wastes. (8 marks)
- b) Explain **three** effects of industrial effluents on water courses and on land. (6 marks)
- c) Explain **three** problems encountered during implementation of environmental management programs. (6 marks)
32. The harmful effects of deforestation all over the world have made authorities realize that forest resources must be conserved properly in order to protect the environment.
- a) (i) Explain **four** benefits of forests in the environment. (8 marks)
- (ii) Explain **three** methods that can be employed in the conservation of forests. (6 marks)
- b) Explain the role of **three** stakeholders involved during implementation of environmental programs. (6 marks)
33. a) Explain **six** roles played by renewable energy in climate change mitigation. (12 marks)
- b) Highlight **four** human activities that negatively affect the environment. (8 marks)

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