

Name: _____ Index No: _____
 2528/202
 2922/202
 ENVIRONMENTAL POLLUTION
 CONTROL, HEALTH AND SAFETY
 Oct/Nov 2014
 Time: 3 hours

Candidate's Signature: _____ Date: _____



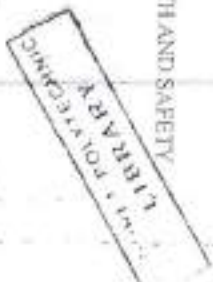
THE KENYA NATIONAL EXAMINATIONS COUNCIL
DIPLOMA IN ENVIRONMENTAL SCIENCE AND TECHNOLOGY
MODULE II

ENVIRONMENTAL POLLUTION CONTROL, HEALTH AND SAFETY

3 hours

INSTRUCTIONS TO CANDIDATES

Write your name and index number in the spaces provided above.
 Sign and write the date of the examination in the spaces provided above.
 You should have a non-programmable scientific calculator for this examination.
 This paper consists of **TWO** sections: A and B.
 Answer **ALL** the questions in section A and only **THREE** questions from section B in the spaces provided in this question paper.
 Each question in section A carries 4 marks while each question in section B carries 20 marks.
 Candidates should answer the questions in English.



SECTION A

For Examiner's Use Only

Question	1	2	3	4	5	6	7	8	9	10	Total
Candidate's score											

SECTION B

Question	11	12	13	14	15	Total
Candidate's score						
Grand Total						

This paper consists of 16 printed pages.

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

SECTION A (40 marks)

Answer ALL questions in this section in the spaces provided

1. (a) Explain the term 'secondary pollutants' (2 marks)

(b) State two examples of secondary pollutants. (2 marks)

2. Describe using chemical equations how oxides of nitrogen deplete the ozone layer. (4 marks)

3. Draw chemical structures to distinguish among the following organic air pollutants: aromatic, alcohols, aldehydes and ketones. (4 marks)

25/28/202
29/23/202

2

4. Describe the physical pollution of water. (4 marks)

5. Workers at a cement factory are reportedly experiencing chest complications.

(a) Explain possible causes. (2 marks)

(b) State two remedies. (2 marks)

6. (a) Define 'First Aid'. (1 mark)

(b) Describe three stages of First Aid. (3 marks)

25/28/202
29/23/202

3

TURN OVER

7. State four negative effects of industrial revolution in Europe (18th and 19th century) on worker's health. (4 marks)

8. Outline the steps involved in a photochemical reaction. (4 marks)

9. A worker in a tyre manufacturing company had his forefinger chopped off. State four human contributory factors that may have led to the accident. (4 marks)

10. State four duties of a self-employed person under Occupational Safety and Health Act of 2007. (4 marks)

2528/202
2022/202

4

SECTION 2 (40 marks)

Answer any THREE questions from this section in the spaces provided after question 15.

11. (a) Define acid rain. (4 marks)

(ii) Describe using chemical equations the natural formation of acid rains. (6 marks)

(iii) State four measures that can be used to minimize acid rain. (4 marks)

(b) With the aid of diagrams explain how:

(i) a greenhouse is beneficial to man. (4 marks)

(ii) global warming may have negative impact on man. (5 marks)

12. (a) Explain five effects of eutrophication of water bodies. (10 marks)

(b) Describe the various methods of self-purification phenomena that occurs in polluted waters. (10 marks)

13. (a) Explain how the following contribute to accidents at a workplace:

(i) working conditions. (6 marks)

(ii) personal factors. (4 marks)

(c) State six measures that can be taken to prevent electrical accidents. (6 marks)

(c) At a site, workers used a conveyor with rollers which are later converted into ballast. Describe four measures management can put in place for health and safety of the workers. (4 marks)

14. (a) Explain the four dimensions of public health. (8 marks)

(b) State four functions of public health department. (4 marks)

(b) A county government plans to build pit latrines for her population. State eight factors that should be considered for conservation of environmental health and safety. (8 marks)

15. (a) Explain six major factors that affect the toxicity of chemicals. (12 marks)

(b) Distinguish between a hazard and a risk. (4 marks)

(c) State four effects of occupational hazards on human reproductive system. (4 marks)

2528/202
2022/202

5

Turn over