

Name _____

Index No. _____

2528/104
26/2/2014
ENVIRONMENTAL LABORATORY
PRACTICE
October 2013
Time: 3 hours

Candidate's Signature _____
Date _____



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

ENVIRONMENTAL LABORATORY PRACTICE
3 hours

INSTRUCTIONS TO CANDIDATES



Write your name and index number in the spaces provided above.
Sign and write the date of 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 questions from section A and any THREE questions from section B in the spaces provided in this paper.
Each question in section A carries 4 marks while each question in section B carries 20 marks.
Maximum marks for each part of a question are indicated.
Candidates should answer the questions in English.

For Examiner's Use Only
Section A

Questions	1	2	3	4	5	6	7	8	9	10	TOTAL SCORE
Candidate's Score											

Section B

Questions	11	12	13	14	15	TOTAL SCORE
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.

Turn over

SECTION A - 40 marks

Answer ALL questions from this section of the exam. You should spend about 20 minutes on this section.

Define the following terms:

(a) A hypothesis

(b) An indicator

State any four factors considered when identifying a laboratory

Identify any four features of a laboratory layout

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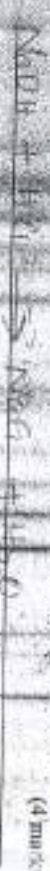
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www.nhantriviet.com

4. State any four factors considered when selecting materials for laboratory bench tops.

Acrylic
 Epoxy Resin
 Phenolic Resin
 High Mechanical Strength

5. Calculate the volume of 0.2 M NaOH solution required to neutralize 20 cm³ of 0.1 M HCl.



Volume of NaOH = 10 cm³

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6. (a) Define the term physiology

Physiology is the study of the functions and mechanisms of living organisms. It involves understanding how the body works, from the molecular level to the whole organism. Key areas include anatomy, biochemistry, and the study of various systems like the circulatory, respiratory, and digestive systems.

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Turn over

Name any two types of photographs that

(2 marks)

7. Explain the following:

(a) stock solution; (b) usually joined in woven bond;

(2 marks)

(b) slide; (c) must have a firm support

(2 marks)

8. (a) Define the term solution; (b) iron

(2 marks)

(b) Explain why silver chloride is used in the interference color test of proteins; (c) formalin solution

(3 marks)

9. Identify the instrumentation required when recording all accidents in the laboratory.

(4 marks)

10. State any four importance of water in the laboratory.

(4 marks)

working in the lab
washing the glassware
keeping the lab clean
Kilns for sterilization
If water is used for chemical reactions
keeping the lab clean
Gases

SECTION B (60 marks)

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

11. (a) State any four properties which make glass pipettes suitable for laboratory use. (8 marks)
(b) Distinguish between primary degree buret and secondary degree buret. (4 marks)

(8 marks)

(c) Describe the measures taken during the administration of First Aid to a victim.