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2404/306

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LABORATORY PRACTICE
AND MANAGEMENT

Oct./Nov. 2013

Time: 3 hours



Candidate's Signature: _____

Date: _____

THE KENYA NATIONAL EXAMINATIONS COUNCIL

DIPLOMA IN APPLIED BIOLOGY
DIPLOMA IN MEDICAL LABORATORY TECHNOLOGY
DIPLOMA IN ANALYTICAL CHEMISTRY
LABORATORY PRACTICE AND MANAGEMENT

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 scientific calculator for this examination.
This paper consists of **TWO** sections, **A** and **B**.
Answer **ALL** questions in section **A** and any **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.
Maximum marks for each part of a question are indicated.
Do **NOT** remove any pages from this booklet.
Candidates should answer the questions in **English**.

For Examiner's Use Only

SECTION A

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

SECTION B

Question	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.

SECTION A (40 marks)

Answer ALL questions in this section in the spaces provided.

1. State two advantages and disadvantages of Terrazzo floor finish in a laboratory. (4 marks)

2. Explain:

- (a) How to dispose half a litre of concentrated sulphuric acid; (3 marks)

- (b) The storage of sodium in laboratory. (1 mark)

3. (a) Name the universal colour code for the following services:

(i) vacuum; _____

(ii) fire extinguishers. _____

(1 mark)



(b) For each of the following fire extinguishers, state the fire class they are suited for and how they operate. (3 marks)

(i) soda-acid _____

(ii) foam _____

4. Explain mounting of an analytical balance and how vibrations are eliminated. (4 marks)

5. Explain:

(a) how strain develops in glass in glass blowing; (2 marks)



(b) how strain is removed from a glass apparatus. (2 marks)

6. Draw a labelled diagram of a vessel suited for storage of liquid helium. (4 marks)

7. (a) Describe intravenous injection in a rabbit. (3 marks)

(b) Name two methods of permanent identification of rats in an animal house. (1 mark)



8. State the criteria for assessing goals in planning. (4 marks)

9. Distinguish between extrinsic and intrinsic rewards for motivation giving suitable examples. (4 marks)

10. Differentiate between recruitment and selection in staffing. (4 marks)



SECTION B (60 marks)

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

11. (a) Draw a labelled diagram to illustrate a sink trap. (6 marks)
- (b) Outline the various methods of unblocking a blocked sink. (14 marks)
12. (a) Explain how the following are prepared in a laboratory:
- (i) demineralized water; (8 marks)
- (ii) buffered water. (7 marks)
- (b) Describe the chemical quality control for distilled water in a laboratory. (5 marks)
13. (a) Describe first aid treatment for a minor burn. (5 marks)
- (b) A student on a mouth pipetting experiment accidentally swallow an alkali. Describe the first aid treatment that should be given. (5 marks)
- (c) Outline the cleaning of slides soiled with dried immersion oil. (10 marks)
14. (a) Explain why workers join trade unions. (6 marks)
- (b) Explain conditions when collective bargaining is **not** in good faith. (14 marks)
15. Differentiate between:
- (a) mechanistic and organic organizational structure designs; (10 marks)
- (b) Authority and power. (10 marks)

