

Name: _____

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2404/306

2407/306

2411/306

LABORATORY PRACTICE
AND MANAGEMENT

Oct./Nov. 2014

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 non-programmable scientific calculator for this examination.

This paper consists of **TWO** sections, **A** and **B**.

Answer **ALL** the 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.

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

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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* the questions in this section in the spaces provided.

1. Outline the safety precautions taken while boring corks to insert glass tubing. (4 marks)

2. (a) Define the following terms: (2 marks)

(i) percentage solution;

(ii) normal solution.

- (b) Calculate the volume of 0.1M NaOH required to neutralize 20 cm³ of 0.5M HCl. (2 marks)

3. Describe first aid treatment of a victim exposed to high dose of harmful radiation. (4 marks)

4. (a) State the use of each of the following in a glass blowing laboratory:

(i) oven; (1 mark)

(ii) flaming tool. (1 mark)

(b) Explain why aquaregia should never be used to clean platinum ware. (2 marks)

5. Outline the steps followed in management by objectives. (4 marks)

6. Differentiate between incised and lacerated wounds. (4 marks)

7. List any **four** uses of cryogenic fluids. (4 marks)

8. Outline how stained platinum crucibles are washed. (4 marks)

9. State any **four** precautions to be taken while preparing a developer. (4 marks)

10. Outline any **four** factors considered when selecting materials for a laboratory bench. (4 marks)

SECTION B (60 marks)

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

- 11. (a) State any **three** functions of central store. (3 marks)
- (b) Explain **three** methods of cleaning glassware in the laboratory. (5 marks)
- (c) Describe a fume cupboard. (8 marks)
- (d) Describe the first aid treatment of acid splash in the eye. (4 marks)
- 12. (a) Explain the major causes of industrial disputes. (15 marks)
- (b) Outline any **five** benefits of motivation in an organisation. (5 marks)
- 13. (a) Describe the method of making a teat pipette. (10 marks)
- (b) Describe the conditions for use and maintenance of liquid air plant in a glass blowing laboratory. (10 marks)

