

Name: \_\_\_\_\_ Index No: \_\_\_\_\_/\_\_\_\_\_

**9519/3  
BIOLOGY**

Candidate's Signature: \_\_\_\_\_

**Paper 3**

Date: \_\_\_\_\_

**D.T.E**

**March/April 2014**

**Time: 3 hours**



**THE KENYA NATIONAL EXAMINATIONS COUNCIL**

**DIPLOMA IN TEACHER EDUCATION**

**BIOLOGY**

**Paper 3**

**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.*

*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.*

*Candidates should answer the questions in English.*

#### **For Examiner's Use Only**

<b>Section</b>	<b>Question</b>	<b>Maximum Score</b>	<b>Candidate's Score</b>
<b>A</b>	1 - 9	40	
<b>B</b>	10	20	
	11	20	
	12	20	
	13	20	
<b>Total Score</b>			

**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 after question 13.

1. State the use of each of the following in a Biology laboratory:  

(a) cobalt chloride;	(1 mark)
(b) methylene blue;	(1 mark)
(c) eosin;	(1 mark)
(d) sodium hydroxide.	(1 mark)
2. State **three** possible causes of fire hazards during Biology experiments. (3 marks)
3. Describe **three** first aid measures that can be administered to a nose bleeding individual. (3 marks)
4. Explain **eight** factors a teacher should consider when constructing a Biology test. (8 marks)
5. State the role of the teacher in ensuring that learners take lesson notes appropriately. (4 marks)
6. State **three** types of stores used in the Biology laboratory. (3 marks)
7. How can raw scores marked out of 100 for each subject be standardized to facilitate ranking of candidates? (3 marks)
8. Outline **six** ways in which a teacher can use a computer in the teaching of Biology. (6 marks)
9. State any **six** general objectives of secondary school Biology education in Kenya. (6 marks)

## SECTION B (60 marks)

Answer any **THREE** questions from this section in the spaces provided after question 13.

10. (a) Why is over reliance on lecture method discouraged in the teaching of Biology? (10 marks)  
(b) Give **ten** guidelines that should be observed when drawing line graphs in Biology. (10 marks)
11. (a) Why are audio-visual teaching aids important during lesson presentation? (10 marks)  
(b) Describe the considerations a teacher of Biology should make when trying out a demonstration in the preparation room. (10 marks)

- TOPIC:** CELL PHYSIOLOGY
- Objectives:** By the end of the topic, the learner should be able to:
- (a) define osmosis;
  - (b) explain the role of osmosis in living organisms;
  - (c) explain the factors affecting the rate of osmosis;
  - (d) carry out experiments on osmosis.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.