

23.4.3 Biology Paper 3 (231/3)

Name Index No.

231/3
BIOLOGY
Paper 3
(PRACTICAL)
Oct/Nov.2006
1³/₄ hours

THE KENYA NATIONAL EXAMINATIONS COUNCIL
Kenya Certificate of Secondary Education
BIOLOGY
Paper 3
(PRACTICAL)
1³/₄ hours

INSTRUCTIONS TO CANDIDATES

Write your name and index number in the spaces provided at the top of this page.
Answer all the questions.
You are required to spend the first 15 minutes of the 1³/₄ hours allowed for this paper reading the whole paper carefully before commencing your work.
Answers must be written in the spaces provided in the question paper.
Additional pages must not be inserted.

For Examiner's Use Only

Question	Maximum Score	Candidate's Score
1	15	
2	12	
3	13	
Total Score	40	

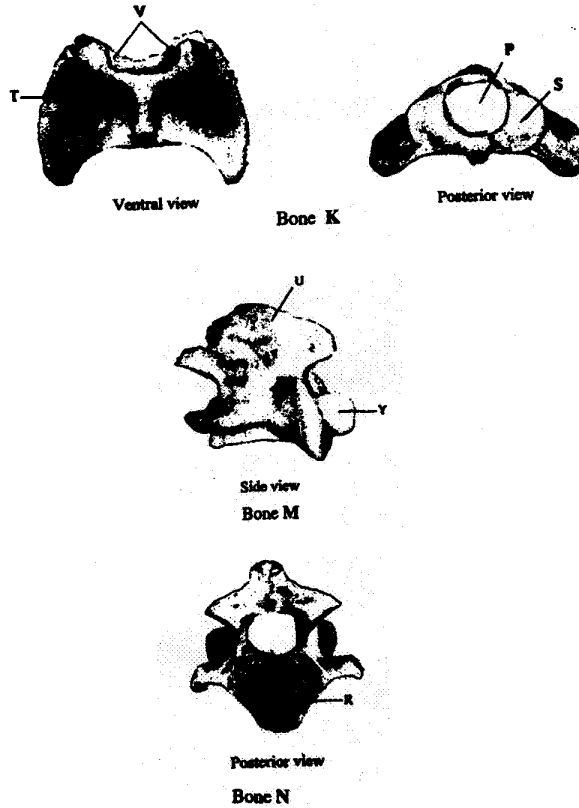
Candidates should check the question paper to ensure that all the pages are printed as indicated and no questions are missing.

6023

©2006 The Kenya National Examinations Council

Turn over

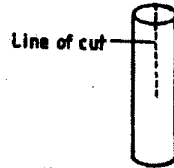
1. The photographs below are of bones obtained from the same region of a mammalian body. Photographs labelled K are different views of the same bone while M and N are views of different bones.



- (a) Name the region from which the bones were obtained. (1 mark)
- (b) Identify the bones. (3 marks)
- K**
- M**
- N**
- (c) State three characteristic features of the bone in photographs labelled K. (3 marks)
- (d) Name the structures that fit in the opening labelled P in the photographs of bone K. (2 marks)
- (e) State the functions of the parts labelled S and T in photographs of bone K. (2 marks)
- (f) Name the structures that articulate with the parts labelled V in the photographs of bone K. (1 mark)

- (g) Name the parts labelled U and X in the photograph of bone M and R in the photograph of bone N. (3 marks)

2. You are provided with two pieces of plant material labelled specimen D. Using a scalpel cut a slit halfway through the middle of each piece as shown in the diagram below.



Place one piece in the solution labelled L₁ and the other in solution labelled L₂. Allow the set up to stand for 30 minutes.

- (a) After 30 minutes remove the pieces and press each gently between the fingers.

- (i) Record your observations.

L₁ (1 mark)

L₂ (1 mark)

- (b) Examining the pieces.

- (i) Record other observations beside those made in (a) (i) above. (3 marks)

- (ii) Account for the observations in (a) (i) above. (5 marks)

- (ii) Account for the observations in (b) (i) above. (2 marks)

3. You are provided with three sets of seedlings labelled A, B and C. Examine them.

- (a) State the conditions under which each set was grown. (3 marks)

- (b) State four differences between the seedlings in set A and B. (4 marks)

- (c) (i) Name the phenomenon exhibited by seedlings in set B. (1 mark)

- (ii) Give a reason why plants exhibit the phenomenon named in (c)(i) above. (1 mark)

- (d) Name the response exhibited by the seedlings in set C. (1 mark)

- (e) Explain how the response named in (d) above occurred. (3 marks)