

Name.....class.....Adm. No.....

231/3

BIOLOGY

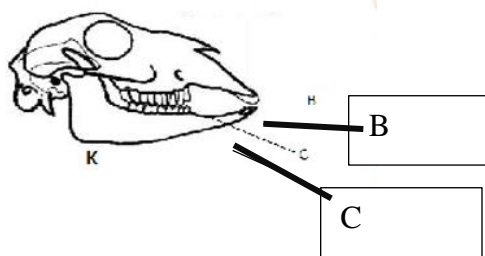
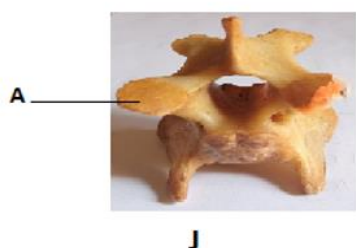
FORM 4

(Practical)

Paper 3

Time: 1 ¾ hours

1. The diagrams below are bones obtained from different mammals



- a) Identify bone J. (1 mrk)
- b) Name the part labelled A. (1 mrk)
- c) Give the name of the cartilage that separates specimen J from another vertebrae (1 mrk)
- d) State two functions of the cartilage named in c above. (2 mrk)
- e) State two structural differences between atlas vertebra and specimen J (2 mrk)

Atlas	Specimen J

- f) i) State the diet of the mammal whose skull is illustrated in drawing K. Explain your answer. (1 mrk)
Diet
- Explanation (2 mrk)
- ii) Name the parts labeled B and C. (2 mrk)
- iii) State the function of the part labeled B. (1 mrk)

2. You are provided with solution labeled L and K.

- a) Use the reagents provided to determine their identity. Record your procedure, observation and conclusion in the table below. (6 marks)

Food substance	procedure	observation	conclusion
starch			
Reducing sugars			

- b. Tie one end of the visking tubing provided tightly. Put solution K in the visking tubing and tie the open end. Immerse the visking tubing in the beaker containing solution L. Let the set up stand for about 20 minutes.
- i) Rinse the visking tubing with distilled water then test the contents in the **visking tubing** with iodine and Benedict's solution. Record your observation and conclusion in the table below.

(2marks)

Test with	observation	Conclusion
Iodine solution		
Benedict's solution		

- ii) Test the contents in the **beaker** with iodine and Benedict's solution. Record your procedure, observation and conclusion in the table below.

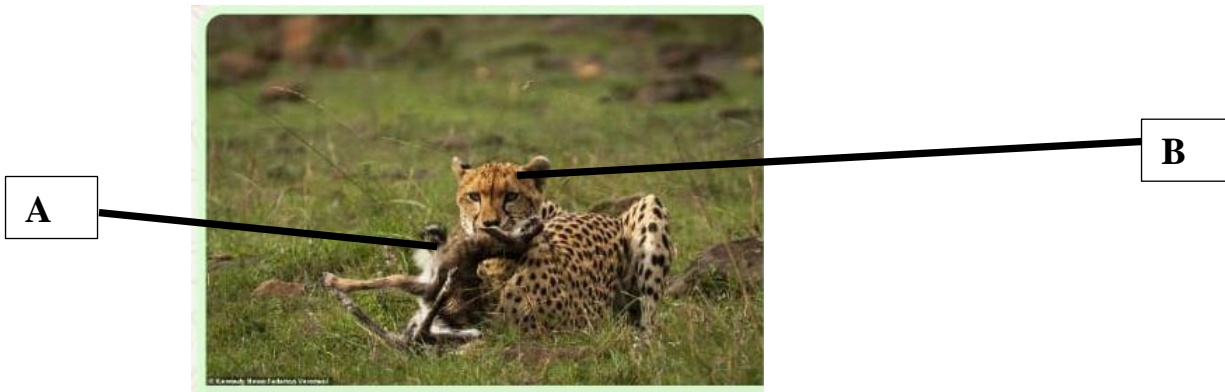
(2marks)

Test with	observation	Conclusion
Iodine solution		
Benedict's solution		

- c. Account for your observation in b(i) and (ii) above.

(4mks)

3. Study the photograph of some animals in a certain ecosystem and answer the questions that follow.



- a) State the type of biotic relationship exhibited by the animals shown in the photograph . (1mk)
- b.i) Identify which of the two animals , A and B will have the least biomass and give a reason for your answer (1mk)
- ii) Draw a pyramid of biomass for the organisms in the ecosystem (3mks)
- c) Explain two survival adaptive features for the organisms illustrated in the photograph (3mks)

- C i) Name the trophic level occupied by the antelope (1mk)
- ii) Give a reason for your answer in c (i) above (1mk)
- f) Suggest three ways in which the above ecosystem would be affected if there is a prolonged drought (3mks)