NAME: …… INDEX NO: ……

CANDIDATE'S SIGN……. DATE: ……..…

SCHOOL……..

231/3
BIOLOGY
PAPER 3
JULY/AUGUST 2014
TIME: 1 ½ HOURS

MUHORONI DISTRICT JOINT EVALUATION EXAM

Kenya Certificate of Secondary Education (K.C.S.E)

Biology
Paper 3

INSTRUCTIONS TO CANDIDATES:

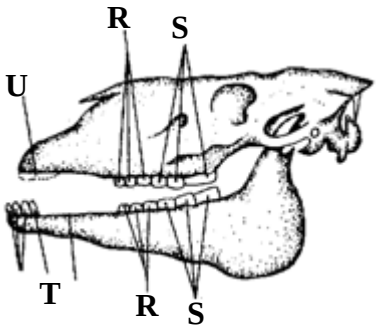
- *Write your **name** and **index number** in the spaces provided at the top of this page.*
- *Sign and write **date** of examination in the spaces provided above*
- *Answer **all** the questions*
- *You are required to spend the first 15 minutes of the 1 ½ hours allowed for this paper reading the whole paper carefully before commencing your work.*
- *Answers **must be** written in the spaces provided in the question paper only.*
- *Additional pages **must not** be inserted.*

For Examiner's Use Only:

QUESTIONS	MAXIMUM SCORE	CANDIDATES SCORE
1	14	
2	14	
3	12	
TOTAL	**40**	

This paper consists of 4printed pages. Candidates should check to ascertain that all pages are printed as indicated and that no questions are missing.

1. The photograph below represents the skull of a certain animal



(a) By citing **two** features from the photograph, suggest the mode of feeding of the animal. (3mks)

Mode of feeding: ……

Features: -

i)……

ii)……

(b) Identify the types of tooth labelled **T** and structure labelled **U**. (2mks)

T……...

U……...

(c) Apart from the **two** features you have mentioned in (a) above, state any other **one** adaptation of dentition of the animal to its mode of feeding. (1mk)

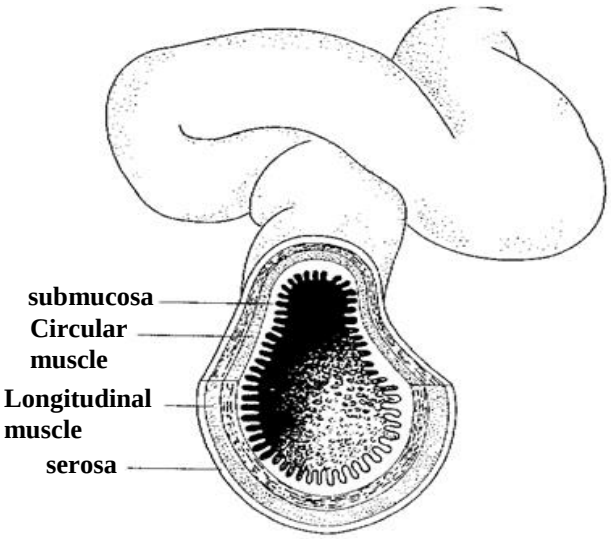
……..

(d) Explain how carnasial teeth in carnivorous mammals are adapted to their function (2mks)

……

……

(e) The diagram below is an artist's impression of a cross-section of certain region of the alimentary canal of a certain animal.



By citing **one main** feature, identify part of the alimentary canal which is represented by the diagram above. (2mks)

Identity:

……

Feature:

……

(f) A part from the feature you have stated in (e) above, explain how the above part of alimentary canal is adapted to its functions. (4mks)

(i)

……

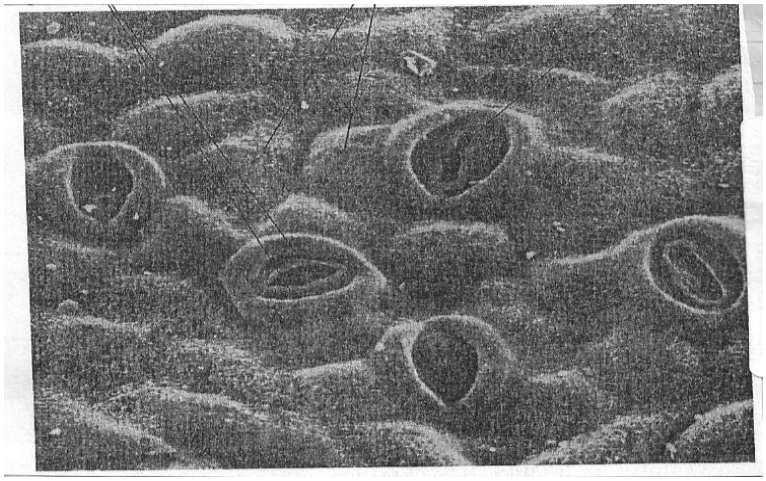
……

(ii)

……

……

2. The micrograph below represents the lower surface of leaf of a certain plant.



(a) What are main features shown in the photo-micrograph? (1mk)

……

(b) Name the cells which surround the features you have named in 2(a) above. (1mk)

……....

……

(c) State the **main** function of the features you have named in 2(a) above. (1mk)

……..

……

(d) State **two** adaptations of the cells you have named in 2(a) above to their functions. (2mks)

……..

……..

(e) With reference to photosynthetic theory, briefly describe the mechanism leading to the behaviour of structures named in 2(a) above during daytime. (5mks)

……

……

……

……

……

(f) Leaves of some xerophytic plants have hairs on their surfaces. Explain how this adaptation minimizes the rate of transpiration. (2mks)

……

……..

g. Define each of the following phrases:-

i. Physiological drought. (1mk)

……

ii. Compensation point. (1mk)

……

3. You are provided with a liquid labelled **D** and a range of reagents and materials. Select the appropriate requirements and carry out iodine, Benedict's, Biuret's and **DCPIP** tests and fill in the table below: (12mks)

Test	**Procedure**	**Observation**	**conclusion**
Iodine			
Benedict's			
Biuret's			
Ascorbic acid			

ANSWERS:
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