

NAME:.....ADM NO:.....CLASS.....

**BIOLOGY**  
**231/3**  
**PAPER 3**

**INSTRUCTIONS:-**

- Answer all the questions in this paper
- You are supposed to spend the first 15 minutes of the  $1\frac{3}{4}$  hours allowed for this paper reading the whole paper carefully before commencing your work.
- Answers must be written in the spaces provided on the question paper.
- Answers **MUST** be written in English only.

***FOR EXAMINER'S USE ONLY.***

<b>Question</b>	<b>Max Score</b>	<b>Candidate' s Score</b>
1	14	
2	12	
3	14	
Total	40	

**Q1.** (a) You are provided with specimen **F** using a scapel, make a transverse section of **F**.  
Draw one half of **F** and label four parts.

(4mks)

(b) Name the type of fruits represented by specimen **F**.

(1mk)

(c) State the type of placentation in Specimen **F**.

(1mk)

(d) (i) By what means specimen **F** dispersed.

(1mk)

(ii) Give a reason for your answer in d (i) above.

(1mk)

(e)(i) Squeeze the juice from Specimen **F** using the reagents provided, carry out the required food  
Tests and complete the table below.

<i><b>FOOD SUBSTRATE</b></i>	<i><b>PROCEDURE</b></i>	<i><b>OBSERVATION</b></i>	<i><b>CONCLUSION</b></i>

(4mks)

(ii) Name the deficiency disease in humans that would result from lack of fruits such as Specimen **F** is the diet. (1mk)

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(iii) State **one** symptom of the disease named e(ii) above. (1mk)

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**Q2.** You are provided with iodine solution, starch suspension and visking tubing. wet the visking tubing in running water to soften it and make it easy to open. Tie one end of the tubing tightly using a Dropper, put starch suspension in to the tubing until about three-quarters full.

- Tie the open end of the tubing tightly.
- Ensure that there is no leakage at both ends of the tubing.
- Clean outer surface of the visking tubing over running water to remove all traces of starch Suspension.
- Place the visking tubing containing starch suspension into the beaker with iodine solution and leave the set up undisturbed for about 30minutes.
- Remove the tubing from the beaker and observe.

(a) Record your observation in a table by indicating the colour of the solution at the beginning on at the end of the experiment.

	<b>Starch solution inside tubing</b>	<b>Iodine solution in the beaker</b>
<b>Start experiment</b>		
<b>End of experiment</b>		

(4mks)

(b) Account for the observations. (7mks)

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(c) State the process being investigated. (1mk)

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Q3. You are provided with specimen **PQR** and **S** obtained from the same animal.

a.(i) Name each of the specimens **PQR** and **S** (4mks)

**P** \_\_\_\_\_

**Q** \_\_\_\_\_

**R** \_\_\_\_\_

**S** \_\_\_\_\_

(ii) State the part of the body from where each of the specimens were obtained, (3mks)

**P** \_\_\_\_\_

**Q** \_\_\_\_\_

**R** and **S** \_\_\_\_\_

b, Examine specimen **P** with reasons name the type of joints formed at the proximal/ anterior and distal/

Posterior end proximal. \_\_\_\_\_ (4mks)

**Reason:** \_\_\_\_\_

Distal end: \_\_\_\_\_

Reason: \_\_\_\_\_

c. Name the bone which articulates **P** and **Q**. (1mk)

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d. State **two** ways by which specimen **Q** is adapted to its functions. (2mks)

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