

## 231/3 BIOLOGY PAPER 3 - MARKING SCHEME

1.	(a)	Test	Procedure	Observation	Conclusion
		Iodine solution	Add iodine solution to solution L	Colour changes to blue-black	Starch is present
		Benedicts solution	To the test solution, add Benedicts solution. Heat	Yellow/orange/brown Acc – Right sequence Rej – Reddish - Red	Reducing sugar present Rej. 1 traces Rej. Specific sugar given or simple sugar

(b)	Test	Procedure	Observation	Conclusion
	Iodine solution	Add iodine solution to solution L	No change in colour or Brown colour of iodine retained.	Starch absent
	Benedicts solution	To the liquid from the beaker add Benedicts. Heat.	Yellow/orange/Brown colour	Reducing sugar present

- (c) The visking tubing is semi-permeable;/selectively permeable allowing small molecules of reducing sugar to pass through but not large molecules of starch.
- (d) Diffusion
- (e) - Ileum wall  
- Proximal convoluted tubule  
- Lungs
- (f) - Ultra filtration.  
- Absorption

2. (a) Omnivorous
- (b) (i) Molar  
(ii) Pre-molar  
(iii) Canine
- (c) H – Enamel  
J – Neck

(d)	II	III
	Tooth II has flat top/ridged	Chisel shaped top

- (d) Biting/cutting

$$(f) \left[ i \frac{2}{2} c \frac{3}{3} pm \frac{2}{2} m \frac{3}{3} \right] \times 2 = 32$$

- (g) Used more for chewing/has greater contact with food particles // is flat broad ridged/cusped hold food remains.

3. (a) Any three mark clockwise.
- (b) (i) Epigeal germination  
(ii) Cotyledons above the ground/soil level.
- (c) K – In the dark/absence of light/Dark cupboard.  
L – Normal condition/in light/place open with light OWTTE.  
M – Unilateral/unidirectional light/receive light from one direction.

(d)		K	L
	1.	(Pale) yellow plant/leaves/stem	Green plant/leaves/stem
	2.	Small/tiny/rudimentary leaves.	Large/big leaves.
	3.	Long stem/hypocotyl/tall plant/ long internodes.	Short stem/hypocotyl/plant internode
	4.	Thin/slender stem	Thick stem/stout stem
	5.	Weak/feeble/limp stem	Firm/steady/strong stem.

- (e) Etiolation.

- (f) +ve phototropism [For more FREE KCSE Mocks, Notes, Exams, and Past Papers Visit https://Teacher.co.ke/notes/](https://Teacher.co.ke/notes/)