

FORM 4

231/3

BIOLOGY PAPER3 (PRACTICAL)

MARKING SCHEME.

1.	(a)	Test	procedure	Observation	Conclusion
		starch	Add iodine solution to solution L	Colour changes to blue-black	Starch is present
		Reducing sugars	To the test solution, add Benedict's solution. Heat to boil.	Yellow/orange/brown Acc –Right sequence Rej- Reddish -Red	Reducing sugars present. Rej. Traces Rej. Specific sugars given or simple sugar.

1.	(b)	Test	procedure	Observation	Conclusion
		starch	Add iodine solution to the liquid from the beaker	No change in colour or Brown colour of iodine retained.	Starch absent.
		Reducing sugars	To the liquid from the beaker, add Benedict's solution. Heat to boil.	Yellow/orange/Brown Acc –Right sequence Rej- Reddish -Red	Reducing sugar present. Rej. Traces Rej. Specific sugar given or simple sugar.

© The visking tubing is semipermeable:/ selectively permeable allowing small molecules of reducing sugar to pass through but not large molecules of starch.

(d) Diffusion

(e) any one of below;

-ileum wall

-proximal convoluted tubule

-lungs

(f)-Ultrafiltration

-Absorption

2. (a) Any three each 1 mark

(b) (i) Epigeal germination

(ii) Cotyledons above the ground/ soil level.

© K- In the dark/absence of light/Dark cupboard.

L- Normal condition/ in light/place open with light.

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/hypocotyls/tall plant/long internodes.	Short stem/hypocotyl/plant internodes.
	4.	Thin/slender stem	Thick stem/stout stem
	5.	Weak/feeble/limp stem	Firm/steady/strong stem.

(e) Etiolation

(f) Phototropism

3. (a) Omnivorous

(b)(i) Premolar

(iii) canine

© H-Enamel/ Cusps

J-Root

(d)	ii	iii
	Toothii has flat top/ ridged	Chisel shaped top
	Has two roots	Has one root

(e) biting/ cutting

(f) Show with an arrow on the gums (ii) Dentition

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