

KENYA NATIONAL EXAMINATION COUNCIL

KCSE 2009

BIOLOGY

PAPER3

MARKING SCHEME

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<u>BONE</u>	<u>IDENTITY OF THE BONE</u>	<u>WHERE FOUND</u>
1.(a) K	- Humerus	Fore limb/foreleg/ front leg/ups arm/ upper fore limb rej Hand/ fore arm
L	-Scapula/ shoulder blade	Shoulder/ pectoral region Rej- pectoral giral
M	- Femur	Hind limb/ hind leg/ thigh/ Upper hind leg
N	Tibia/ shin bone	Hind limb/ hind leg/ lower hind limb
P	Ulna – Radius	Forearm/ fore limb/ arm/ Lower/ fore le/ front leg

Rej only one answer

- (b)
1. Condyles Rej- Cendyle
 2. Glenoid cavity
 3. Head/ head of femar Rej. Head of humerous
 4. Patella groove Rej: groove alone due to omission
 5. Ulna/ shaft of Ulna/ shaft

(c)

(i) Scapula/ shoulder blade

(ii) Ball and socket ii tied to i

Posterior end

(i) Radius and ulna

(ii) Hinge ii tied to i

(e) Muscle attachment limit the movement of radius and ulna/ limit the movement at the joint prevents overstretching O.W. He limits movement in more than one place.

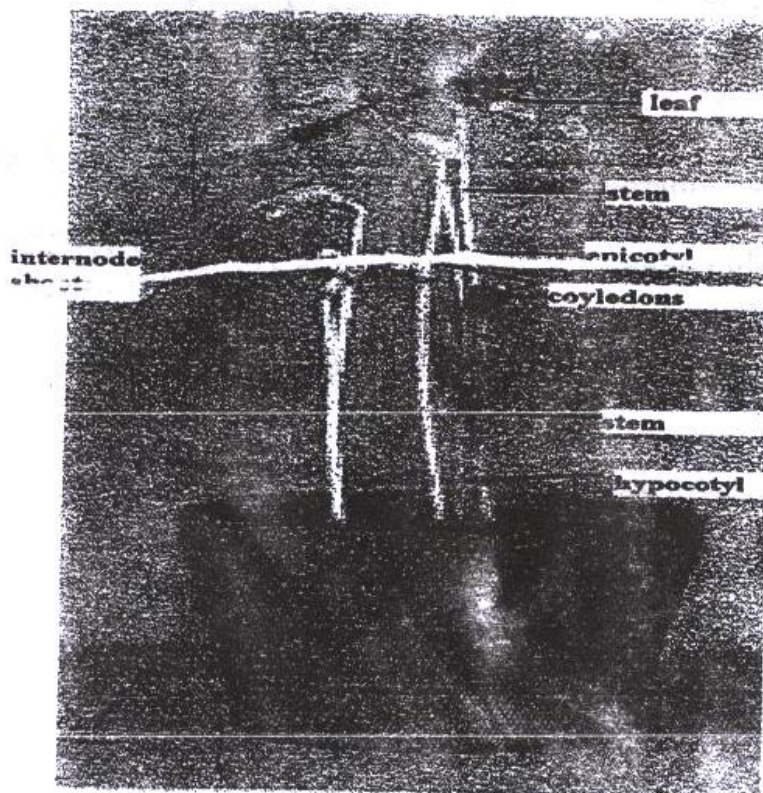
2.

Substance	Food substance being tested for	Procedure	Observation	Conclusion
P	Reducing sugar	Add Benedict's solution / boil / warm in hot water bath)	Green to yellow to orange/ brown	Reducing sugar present
Q	Reducing sugar	Add Benedict's solution. Heat/ Boil/ warm in hot water bath)	No colour change/ blue colour remains	Reducing sugar absent/ reducing sugar present after hydrolysis
	Non Reducing sugar	Add dilute hydrochloric acid, boil, cool Add sodium hydrogen carbonate until fizzing stops add benedict's heat	Green to yellow to orange/ brown	Presence of non reducing sugars/ reducing sugar present after hydrolysis Rej. Reducing sugar present Rej Reducing sugar present

Deny for wrong spelling of benedict's solution

- *In the table, mark reducing sugar, add benedict's solution, heat any once*
- *Led non- reducing sugar under play indication se*

3. (a) Mark 11st three clockwise from top



- (b) i. epigeal germination
(ii) Cotyledons above ground/ soil
- (c) W- Grow in dark/ insufficient light/ absence of light
X- Grown in light/ sufficient light/ adequate light
- (d) (i) Etiolation
(ii) To reach light/ search/ look / get/ obtain/ seek light

W

X

- | | | |
|-----|--|--|
| (e) | <ul style="list-style-type: none">- Long intermode/ stems/ tall plant- Thinner stem- Small leaves- Yellow or light green leaves <p style="text-align: center;">stem/ cotyledons</p> | <ul style="list-style-type: none">- Short intermodes/ stem/ plant- Thicker stem- Big/ large leaves- Green leaves/ stems/ cotyledons/ <p style="text-align: center;">seedlings</p> |
| (f) | <p>Seedlings subjected to unilateral/ unidirectional source of light causing auxins to migrate / diffuse to the dark side of the shoot/ high concentration of auxins on dark side; causing faster growth on that side than the lit side/ faster cell elongation/ faster cell enlargement/ faster cell growth on the side than the lit.</p> | |