BIOLOGY MARKING SCHEME PAPER 3

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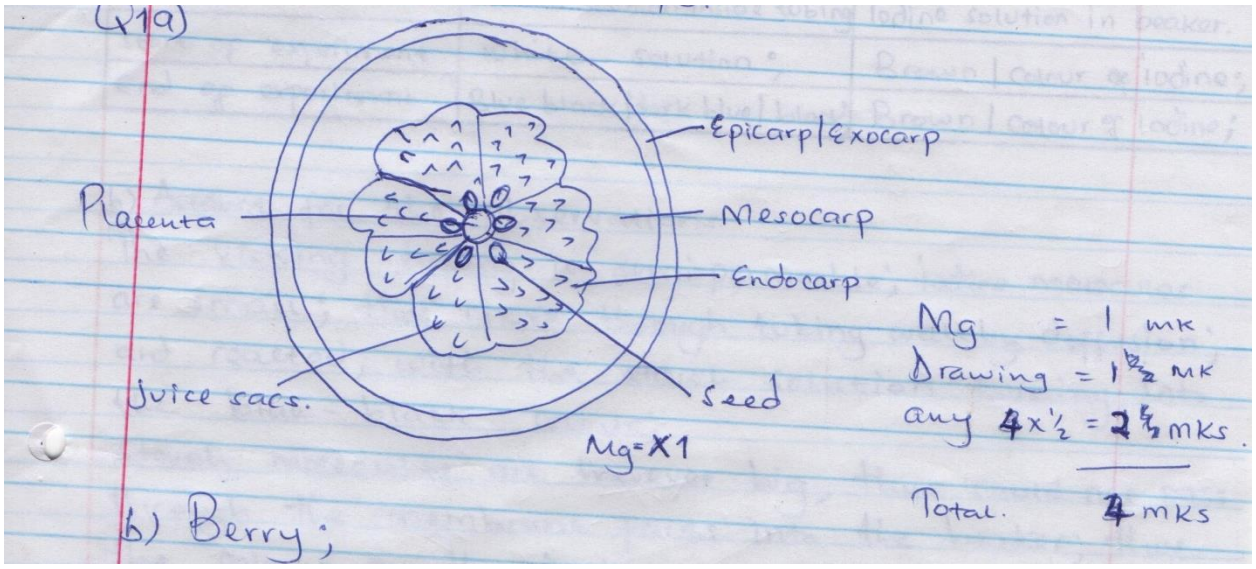
Q 1a)



Mg =1mk

Drawing =1mk

Any 4x$\frac{1}{2}$=2$\frac{1}{2}$mks 4mks

b) Berry;

c) Axile; reject axial/Axil

di) Animals;

ii) - Slimy and hard seed coat to prevent digestion

- Brightly coloured when ripe to attract animals
- Scented/good smell to attract animals
- Succulent /juicy to attract animals

(any 1x1=1mk)

e)

Food subs	Procedure	Observation	Conclusion
Vit C; $\frac{1}{2}$	To 1cm^3 of DCPIP in a test tube, add the juice dropwise $\frac{1}{2}$	DCPIP is discolouri's $\frac{1}{2}$	Vit C/Ascorbic acid present $\frac{1}{2}$
Reducing sugars$\frac{1}{2}$	To 2ml of juice, add equal amount of Benedicts solution then heat to boil $\frac{1}{2}$	Colour changes from blue, to green, yellow then orange$\frac{1}{2}$	Reducing sugars present. $\frac{1}{2}$

ii) Scurvy

iii) Bleeding gums

Q2a)

	Starch	Iondine solution in bearker
Start of experiment	White solution;	Brown/ colour of iodine
End of experiment	Blue –black /dark blue/ black;	Brown/ colour of iodine

b) Account for the observations

The visking tubing is semi-permeable; iodine molecules are small; thus move through tubing wall by diffusion, and reacted; with the starch solution turning into the blue-black colour; starch molecules are however big; thus could not pass through the membrane pores into the beaker; thus the colour of the iodine solution remained unchanged;(Total=8mks max 7mks)

c) Diffusion/selective permeability/differential permeability.

Q3ai P=Humerus rej Humerous

Q=Scapula;

R= Radius;

S=ulna;

(ii) P=Upper arm/ upper forelimb;

Q=Shoulder/ pectoral region;

R& S =Lower arm/ lower forelimb;

b) Proximal end – ball and socket;

Reason- Presence of ball shaped head/ rounded head that fits into the Cup-Shaped glenoid Cavity of the Scapula allowing movement in all plantsa/ all directions/ 360

Distal end- Hinge joint

Reason – presence of trochlea groove and condlyles that fit into the trochlea notch formed by the radius and ulna allowing movement in one plane only at 180^0

c) Clavicle

d) -Hard/ ossified to provide support

- Has spine and caracoid process for muscle attachment
- Has glenoid cavity/socket for articulation with the head of humerus.
- The glenoid cavity has smooth surface for reducing/ minimizing friction.