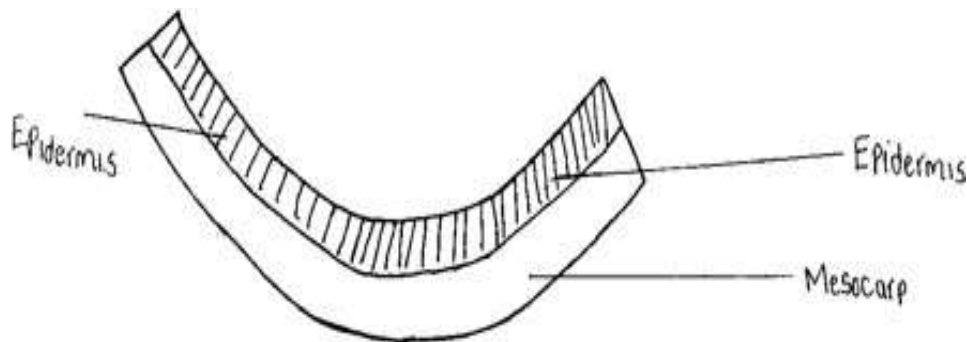


FORM FOUR CLUSTER KCSE MODEL 7

BIOLOGY PAPER 3 ANSWERS

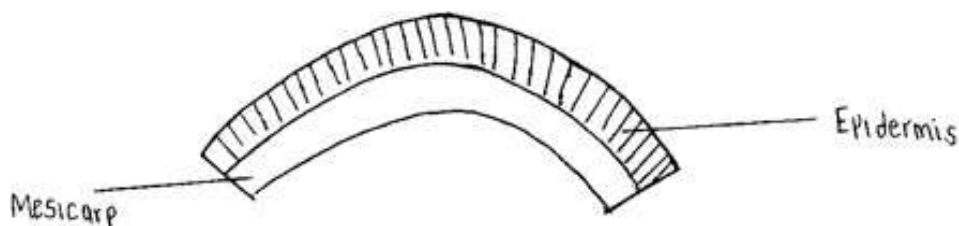
1. (a) (i). True/simple/berry fruit (1 mark)
2. (ii). Succulent pericarp (1 mark)
 - (b). (i). Parietal: Rej wrong spelling but accept correct reason (1 mark)
 - (c). (ii). Seeds are attached on ridges/sides of inner walls; (1 mark)
 - (d). Shape: Straight /rectangular;
Texture: Firm /tough hard; (2 marks)
 - (d)
 - (e). (i). Strips in solution S1
Shape: The strips bend outwards towards the epidermis /mesocarp/inner tissues bend outwards; (1 mark)
Account labeled diagram for shape description



Texture: Very firm/hard/tough/stiff; (1 mark)

(ii). Strips in solution S2

Shape: Strips bend inwards/ become more curved inwards the inner tissue/ mesocarp;



1

Account labeled diagram for description of the shape

Texture: Soft /flabby/ flaccid; (1 mark)

(e). Solution S1

-Is hypotonic to cell sap of the cells (of the strips)/ cell sap is more concentrated;

-Water molecules enter the cells by osmosis; (through semi permeable membrane) making the strips longer/stiffer;

-The inner tissues/mesocarp cells take in more water than epidermal cells hence the bending outwards;

Solution S2;

-Is hypertonic to cells; the cells lose water by osmosis; and become flaccid thus the strips become soft/flexible and short;
 -The strips bend inwards because the inner tissues /mesocarp cells lose more water than the epidermal cells;

$$\text{Max } \frac{8}{2} = 4 \text{ mks}$$

Total 14 marks

3. (a). Identity of A: Trachea
 Identify of B: Left lung /lung; Re lungs (2 marks)
 (b). Location:
 Structure A: Throat /neck /cervical region; (2 marks)
 Structure B: Chest/thoracic region; (2marks)
 (c). Both are involved in gaseous exchange/both are part of the respiratory system;
 Rej breathing system. (2 marks)
 A (trachea) is an air passage into B (lungs);

Structure	Feature	How the feature adapts the structure to its function.
A	<ul style="list-style-type: none"> Hollow /tubular; Rings of cartilage; Rej; mucus lining hard. 	Allow passage of air; Prevent from collapsing/make it rigid/strengthen;
B	<ul style="list-style-type: none"> Bronchii; (Branched) bronchioles; (Mny) air sacs/alveoli; 	Distribution of air to either lung; Distribution and collecting gases to and from lung tissues; Increase surface area for gaseous exchange

4. (a). (i). Yellow /orange /yellowish brown /brown; (1 mark)
 (ii). Blue; (1 mark)
 (iii).An (acid –base) indicator; (1 mark)
- (b). (i). Yellow /orange / brown; (1 mark)
 (ii). Is acidic; (1 mark)
- (c). White precipitate is formed /solution x turns (i). White; (1 mk)
 (ii). Lime water /calcium hydroxide; (1mk)
 (iii). Carbon (iv) oxide (CO₂; (1 mark)
- (iv). In the body tissue food substances/ glucose is oxidized/ /respired to release energy; and carbon (iv). Oxide is produced as a by product; (2 marks)
- (d). (i). Blue; (1 mark)
 (ii). In presence of light L carries out photosynthesis; using up the carbon (iv) oxide which had been blown into BTB; (2 marks)
 (iii). The colour will remain green /yellow /orange /brown /yellow brown (1 mark) 14 max. 10 marks