

Term 2 - 2022
BIOLOGY
(MARKING SCHEME PAPER III)
FORM FOUR
TIME: 1 $\frac{3}{4}$ HOURS

Name: Adm No:
School: Class:
Signature: Date:

1. a) i) Visking tubing swells/ becomes turgid; (1X1 = 1mk)

ii) High concentration of water molecules in the beaker/ distilled water compared to the visking tubing/ solution K; Water molecules move by osmosis from beaker into visking tubing; (1X2 = 2mks)

I VISKING TUBING

TEST	PROCEDURE	OBSERVATIONS	CONCLUTION
STARCH	Put food sample in test tube add iodine solution ;	Dark blue/ Blue black/ Black;	Starch present;
REDUCING SUGAR	Put food sample in a test tube add (equal amount of Benedict's solution heat / warm / heat in a water bath	For blue, green, yellow/orange/red;	Reducing sugar present;

II BEAKER

STARCH	Put food sample in a test tube add iodine solution ;	Remain yellow brown;	Starch absent;
REDUCING SUGAR	Put food sample in a test tube add (equal amount solution heat / warm/ heat in a water bath;	Mixture turns from blue, green, yellow/ orange/red;	Reducing sugar present;

(d) Starch has large molecular sizes; which cannot pass through the semi-permeable visking tubing into the beaker; glucose has small molecular sizes which can diffuse across the semi-permeable visking tubing into the beaker;

2. (a) Circulatory system;
Respiratory system;

(b)

P Pericardium membrane;

Z Pleural membrane;

(c) by ribs; / deposits of fats to absorb shock;

(d) Rings of cartilage to keep it open

Ciliated epithelium to waft trapped solid particles back to the throat;

Has goblet cells to secrete mucus to trap dust;

(e) Left atrium;/ Left auricle

(f) L Has more oxygen less CO₂; M has less oxygen;/ more carbon IVoxide

(g) has hair and mucus to trap solid particles; / warmth to incoming air; /

3. a) Magnification – 1mk.

Each correct label-½ mk.

Correct drawing (1mk)

b) Class: Dicotyledonae;(1mk)

Reason: Has two cotyledons Accept has network veins /has at a tap root system. (1mk)

c)

Structure in S ₁	Structure in S ₂
Plumule	Stem system /shoot
Radicle	Root system;
Cotyledon	Seed leaf

3mks

d.i) S₁ – Epigeal (1mk)

ii) S₃ – Hypogeal (1mk)

d.ii) The cotyledon remain below the surface of the soil. (2mks)

the epicotyl elongates

iii) The cotyledon thrust above the surface of the soil; the hypocotyl elongates;