EXAMINATIONS COUNCIL OF ESWATINI
Eswatini General Certificate of Secondary Education

BIOLOGY **6884/03**

PAPER 3 Practical Test **October/November 2019**

Confidential

MARK SCHEME

{6884/03}

MARKS: 40

This document consists of **3** printed pages.

[Turn over

1 (a) (i) description:

inner surface of plastic bag wet/ has water droplets; [1]

explanation:

ref. to transpiration;

water absorbed by roots conducted to leaves;

lost as water vapour through stomata;

ref. to condensation; [max. 3]

(ii) to ensure enough/more water is produced/released;

to increase surface area for transpiration; [2]

(iii) increasing rate of transpiration;

ref. to provision of light for stomata to open;

so water droplets can be seen on the inside of the plastic bag; [max. 1]

(iv) to allow time for transpiration to occur/for water droplets to form; [1]

(b) (i) between 40 mm and 50 mm; [1]

(ii) sum of length of three leaves ÷ no. of leaves

[1]

(iii) clear outline + realistic/ proportional;

veins shown;

size x2 of average; [3]

(iv) broad leaves;

branching/ reticulate veins; [2]

(c) (i) more chlorophyll in spaced out spinach;

more photosynthesis can occur;

darker green;

less magnesium where seedling grew;

ref. to competition; [max. 3]

(ii) shiny/ layer of wax/ cuticle;

reduces evaporation of water; [2]

[Total: 20]

2 **(a)** increasing height;
realistic measurement (50 mm to 150 mm); [2]

(b) limewater turns cloudy/milky;
gas is carbon dioxide;
from respiration; [3]

(c) orientation;
axis with correct labels and units;
even scale + large size (at least half of the grid);
correct plotting of data points;
joining of points with straight lines; [5]

(d) distribute/mix the yeast uniformly with glucose;
to speed up reaction/ increase collisions of particles/contact/surface area; [2]

(e) less froth produced/less increase in height of mixture; [1]

(f) different concentrations of glucose;
two named control variables e. g. temperature/ volume of reactants;;
measure the volume of froth at a given time; [4]

(g) using a measuring cylinder/syringe;
ref. to displacement of water in cylinder/syringe emptied of air;
connect delivery tube from test-tube to syringe/measuring cylinder;
wait until no more bubbles are released;
record the volume of air as plunger is displaced in gas syringe/as water is displaced in measuring cylinder; [max. 3]

[Total: 20]