Name of the Student:_____
Max. Marks : 20 Marks **Time : 20 Minutes**

Mark Schemes

Q1.

(a) 1. 35.22 or 35.23% = 2 marks;

Award 1 mark if only fresh and dry masses correct, 1335.59 and 865.13 g;

2

(b) (After 24 hours)

1. Record mass and reheat;
Accept return to oven = reheat

2. Until constant mass recorded;

2

(c) 1. Positive correlation (between diameter and biomass);

2. Not linear / geometric / exponential / gradient gets steeper;

2

(d) 1. Calculate a mean diameter;

2. (Use this to) estimate / determine the mean fresh biomass of trees;

3. Use the percentage water content to find the dried biomass;

4. Use the dried density to calculate the mass of tree;

5. Count / estimate the number of trees in plantation and multiply by (mean) carbon content (to find total carbon);

4 max

[10]

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Q2.

(a) 1. Equilibrium reached.

Accept equilibrate

2. Allow for expansion / pressure change in apparatus;
3. Allow respiration rate of seeds to stabilise.

Ignore seeds acclimatise

3

(b) 1. Optimum temperature / temperature for normal growth of seeds;
2. (Optimum temperature) for enzymes involved in respiration.

2

(c) 1. Oxygen taken up / used by seeds;
2. CO_2 given out is absorbed by KOH (solution);
3. Volume / pressure (in **B**) decreases.

3

(d) 0.975 / 0.98.

If incorrect,

0.26 × 6 / or incorrect numbers divided by 1.6 for 1 mark

2

[10]

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