

Name of the Student: _____

Max. Marks : 23 Marks

Time : 23 Minutes

Mark Schemes

Q1.

- | | | | |
|-----|-------|---|---|
| (a) | (i) | xylem | 1 |
| | (ii) | phloem | 1 |
| | (iii) | transpiration | 1 |
| | (iv) | stomata | 1 |
| (b) | (i) | any one from: <ul style="list-style-type: none">• reduce / prevent evaporation of water from flask• holds plant shoot in place• prevent damage to the plant | 1 |
| | (ii) | same surface area or number of leaves
<i>(because if they used larger / smaller size shoots) there would be a larger / smaller surface area or a larger/ smaller number of leaves allow same number of stomata</i> | 1 |
| | | from which (the same amount of) water evaporates
<i>(and therefore) more / less water would escape allow from which water escapes</i> | 1 |
| | (iii) | 4.5
<i>look for answer written in table</i> | 1 |
| | (iv) | increasing temperature / heat increases (rate of) water loss / evaporation | 1 |
| | (v) | having moving air / a fan increases (rate of) water loss / evaporation | 1 |
| (c) | (i) | 0.3 g | 1 |
| | (ii) | plastic bag reduces air flow across leaves
or | |

air is humid around the leaves

allow plastic bag stops water (vapour) leaving

allow air (in plastic bag) becomes saturated (with water)

Q2.

(a) any **two** from:

or allow converse for outdoors

- constant speed
 - *variable speed*
- constant effort
 - *variable terrain*
- constant temperature
 - *traffic conditions*
 - *variable temperature*
 - *wind (resistance)*
 - *rain / snow*
allow weather

allow pollution only if qualified by effect on body function but ignore pollution unqualified

if no other marks obtained allow variable conditions outdoors

2

(b) Brain

1

(c) (i) 20 800

correct answer with or without working gains 2 marks

if answer incorrect, allow 1 mark for use of 1200 and 22 000 only

2

(ii) oxygen

apply list principle

1

*do **not** accept other named substances eg CO₂ water*

glucose / sugar

allow glycogen

ignore food / carbohydrate

1

(iii) respire aerobically

1

(iv) carbon dioxide

1

lactic acid

1

(d) increased heart rate

ignore adrenaline / drugs

accept heart beats more but not heart pumps more

1

[11]