Practice Question Set For GCSE
Subject : Biology
Paper-1 Topic: B4 Bioenergetics

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Name of the Student:_____
Max. Marks : 18 Marks **Time : 18 Minutes**

Mark Schemes

Q1.

(i) any **two** from

* (heart) more muscular
accept bigger

* (heart) more powerful
accept more efficient
accept stronger

2

(ii) * pauses longer between (heart) beats
accepts beats more slowly
accept heart rate decreases

* less fast around the heart
recovers more quickly not just 'heart healthier'
do not credit pulse rate slower

2

[4]

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Q2.

(a) (i) photosynthesis

1

(ii) respiration

do not credit combustion

do not credit decay

1

(iii) dry

*accept hot **or** windy **or** drought*

1

(b) any **three** from

* evaporation (of water)

***or** loss of water vapour*

* (mostly) from the leaf / leaves

do not credit incorrect reference to leaves

* through the stomata

accept through each stoma

accept through the stomas(sic)

* causing a pull

***or** causing an increase in osmotic potential (at the top of the plant)*
***or** causing an increase in water potential (at the top of the plant) **or** causing a decrease in osmotic pressure (at the top of the plant)*

* (so that) water moves up (through the plant)

do not credit water vapour moves up through the plant

* as the transpiration stream

* water enters through roots (and goes up plants)

3

[6]

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Q3.

(a) line increasing in daylight 6 – 18 (± 2 hr)
line decreasing 0 – 6 (± 2 hr)
line decreasing 18 – 24 (± 2 hr)
for 1 mark each

but
mirror image (i.e. opposite gradients)
gains 3 marks

3

(b) *idea:*
slower growth (credit even if refers only to leaves)
less photosynthesis/glucose (than if leaves fully green)
each for 1 mark

2

[5]

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Q4.

idea

provide (more) light
provide (more) CO_2
provide (plenty of) water
if any one of these is low it will limit the reaction
[Do not allow answers referring to temperature, as optimum is specified in question 3)

any three for 1 mark each

[3]

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