

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

Name of the Student: _____

Max. Marks : 18 Marks

Time : 18 Minutes

Mark Schemes

Q1.

- (a) plant hedgerows around his fields 1
- plant many different crops in his fields 1
- (b) any **one** from:
- repeat in each area
 - do more quadrats (to take more readings)
 - count the number of individuals of each species
 - remove leaf litter and search in tray
 - do a timed search of the leaf litter
 - do on the same day or time of day
- 1
- (c) the trees provide habitat(s) or shelter
- allow described*
- 1
- so (more) food / camouflage / shade available
- allow places to hide or cooler or wetter environment*
- 1
- (d) ring drawn around 20 1
- (e) (removing trees) decreases the number of invertebrate species 1
- (f) (less trees means) more light 1
- (and) more water / minerals in soil 1
- (so) reduced competition 1

OR

- (less trees means) more light (1)
- (so) (more) photosynthesis (1)
- (so) (more) glucose (for growth) (1)

[10]

Q2.

(a) oxygen

name takes precedence

allow O₂

ignore O² / O / O2

1

(b) (use) a lamp / light (source)

1

(and) move away and / or towards pondweed

*allow use different power ratings **or** use a dimmer switch*

*allow change the opacity of the beaker for **2** marks*

1

(c) count the number of bubbles

allow measure the volume of gas collected

1

in a given time

*allow for **2** marks measure time taken to collect a specific number of bubbles*

1

(d) 34 (arbitrary units)

allow a value in the range 33.5 – 34.5 (arbitrary units)

1

(e) 200 lumens

1

(f) any **one** from:

- temperature
- carbon dioxide (concentration)
- amount of chlorophyll

ignore light (intensity)

ignore heat

ignore oxygen

allow light colour / wavelength

allow water

ignore pH

1

[8]