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

Merit Minds
www.merit-minds.com
Exam Preparation and Free Resources

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

Mark Schemes

Q1.

(a) xylem **and** phloem

either order
allow words ringed in box
allow mis-spelling if unambiguous

1

(b) (i) movement / spreading out of particles / molecules / ions / atoms

ignore names of substances / 'gases'

1

from high to low concentration

accept down concentration gradient
ignore 'along' / 'across' gradient
ignore 'with' gradient

1

(ii) oxygen / water (vapour)

allow O_2 / O2
ignore O^2 / O
allow H_2O / H2O
ignore H^2O

1

[4]

Downloaded from www.merit-minds.com

Q2.

(a) oxygen

allow O_2 / O2

*do **not** accept O^2 or O*

1

(b) (i) light

1

(ii) chlorophyll

1

(iii) decrease

1

(c) any **three** from:

- for respiration / energy

  *do **not** accept use energy for photosynthesis*
- to make cellulose / starch

  accept named carbohydrate other than glucose
- to make lipid / fat / oil

  accept fatty acid / glycerol
- to make protein

  accept named protein / amino acid / named amino acid
- to build big molecules from small molecules / metabolism

  *if no other marks awarded for making molecules allow **1** mark for growth / repair / new cells*

3

[7]

Downloaded from www.merit-minds.com

Q3.

(a) water

1

oxygen

in this order only
accept correct chemical symbols
allow H_2O / OH_2

1

(b) allow light (in / through) / need light

*do **not** accept attracts light*
ignore heat / moisture / carbon dioxide
ignore so the plants can be seen
accept the converse, ie the black plastic bag would not let light in (1)

1

for photosynthesis / make sugar / glucose

so there would be no photosynthesis (1)
*do **not** allow make food unqualified*

1

(c) Increase (in leaves / new leaves)

ignore growth unqualified

1

(then) level off **or** number of (new) leaves (then) stays the same

1

numerical statement eg max at 3 tablets / 5 (new) leaves

should refer to one of the first two marking points
*for every extra tablet get 1 extra leaf = **2** marks*
*for every extra tablet get 1 extra leaf then it levels off = **3** marks*

1

[7]

Downloaded from www.merit-minds.com