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 : 17 Marks **Time : 17 Minutes**

Q1.

A student investigated the effect of pond organisms on the amount of carbon dioxide in their surroundings.

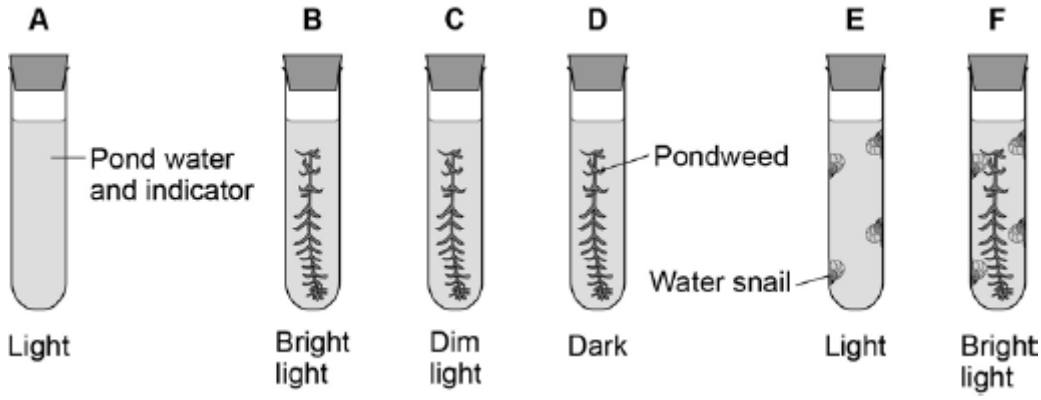
The student set up six boiling tubes as shown in the figure below.

They were left for 2 days.

Each boiling tube contained pond water with an indicator.

The indicator was pink at the start of the investigation.

- If the amount of carbon dioxide in the water increased the indicator turned yellow.
- If the amount of carbon dioxide in the water decreased the indicator turned purple.



(a) What is the purpose of boiling tube **A**?

_____

_____

_____

_____

(2)

(b) In which boiling tube would the indicator be the **most yellow** after 2 days?

Explain your answer.

Boiling tube _____

Explanation _____

Downloaded from www.merit-minds.com

_____

_____

(3)

(c) The colour of the indicator in boiling tube **C** had not changed after 2 days.

Suggest why.

_____

_____

(1)

(Total 6 marks)

Downloaded from www.merit-minds.com

Q2.

Plants need nitrate ions in order to make proteins.

A plant is growing in soil flooded with water.

Explain why the plant cannot absorb enough nitrate ions.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

(Total 5 marks)

Downloaded from www.merit-minds.com

Q3.

The UK contains large areas of peat bogs that have been present for thousands of years.

(a) Peat is removed from peat bogs.

The peat can be mixed with air and added to garden compost.

The release of carbon dioxide from peat is a problem.

Give **two other** reasons why gardeners should use less peat-based compost in the future.

1. _____

_____

2. _____

_____

(2)

(b) Explain why mixing peat with air leads to the release of carbon dioxide.

_____

_____

_____

_____

_____

_____

_____

_____

(4)

(Total 6 marks)

Downloaded from www.merit-minds.com