

Candidate Name	Centre Number	Candidate Number

WELSH JOINT EDUCATION COMMITTEE
ENTRY LEVEL CERTIFICATE



CYD-BWYLLGOR ADDYSG CYMRU
TYSTYSGRIF LEFEL MYNEDIAD

715/01

Entry Level Certificate

LAND STUDIES

P.M. MONDAY, 19 March 2007

(1 Hour)

Examiner only

TOTAL MARK	
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INSTRUCTIONS TO CANDIDATES

Write your name, centre number and candidate number in the spaces at the top of this page.

Answer **all** questions.

Write your answers in the spaces provided in this booklet.

If you have difficulty in reading a question, put up your hand and the teacher-in-charge will read it to you.

INFORMATION FOR CANDIDATES

The number of marks is given in brackets at the end of each question or part-question.

No certificate will be awarded to a candidate detected in any unfair practice during the examination.

Answer all questions.

1. Read the following and then answer the questions below using the information given.



The grey squirrel was first introduced to Britain from North America during the nineteenth century. By 1915 their numbers had increased and they were found in many areas of the country.

Grey squirrels are larger than the native red squirrels and their tails are less bushy. It is speckled grey with white under parts. The head and body measure 300 mm and the tail is 240 mm long.

An excellent climber, the grey squirrels live in trees in forests, parks and open woodlands. They prefer to live in deciduous trees and do not like to live in areas where all the trees are conifers.

Grey squirrels are omnivores, and feed on the buds and shoots of trees, fruit, toadstools, seeds, nuts and bird's eggs. They also strip the bark from trees and the trees then die.

Squirrels build nests in the trees. The nest is called a drey. The babies are born in the drey. There are two litters, with four young in each, every year. The young are born naked and blind. They leave the nest after 8-10 weeks and are fully grown at 8 months.

In Autumn, the squirrels spend much time burying food to last them through the winter.

- (a) During which century was the grey squirrel introduced into Britain? [1]

.....

- (b) Which country were the squirrels from originally? [1]

.....

(c) Write down **two** (2) differences between grey squirrels and red squirrels. [2]

Grey squirrel	Red squirrel
(i)	(i)
(ii)	(ii)

(d) How long is the grey squirrel from its head to the end of its tail? [1]

.....

(e) In which type of trees do grey squirrels like to live? [1]

.....

(f) Write down **two** (2) foods that the grey squirrels like to eat. [1]

(i) (ii)

(g) How does the grey squirrel harm trees? [1]

.....

(h) What is a squirrel's nest called? [1]

.....

(i) How many babies may a grey squirrel have in **one** (1) year? [1]

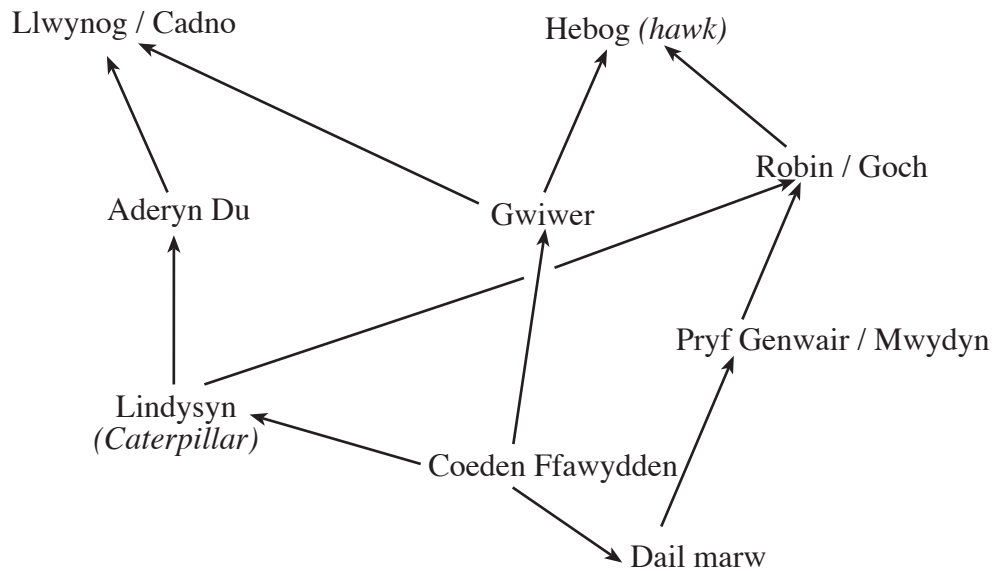
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[Total: 10]

Turn over.

2. The grey squirrel is an **omnivore**. This means that it eats both plants and animals. A **carnivore** eats meat and a **herbivore** eats plants. The **producer** is the plant which makes the food.

Study the food web below and answer the questions **using the food web given**.



- (a) Name the producer in the web. [1]

.....

- (b) Name **two** (2) carnivores. [2]

(i) (ii)

- (c) Name a predator and its prey. [1]

Predator

Prey

- (d) Name **two** (2) animals which are not eaten by anything else. [1]

(i) (ii)

- (e) Name an animal which eats a dead part of the tree. [1]

.....

(f) Name a herbivore in the web.

[1]

.....
(g) Write out a food chain with **three** (3) animals in it.

[1]

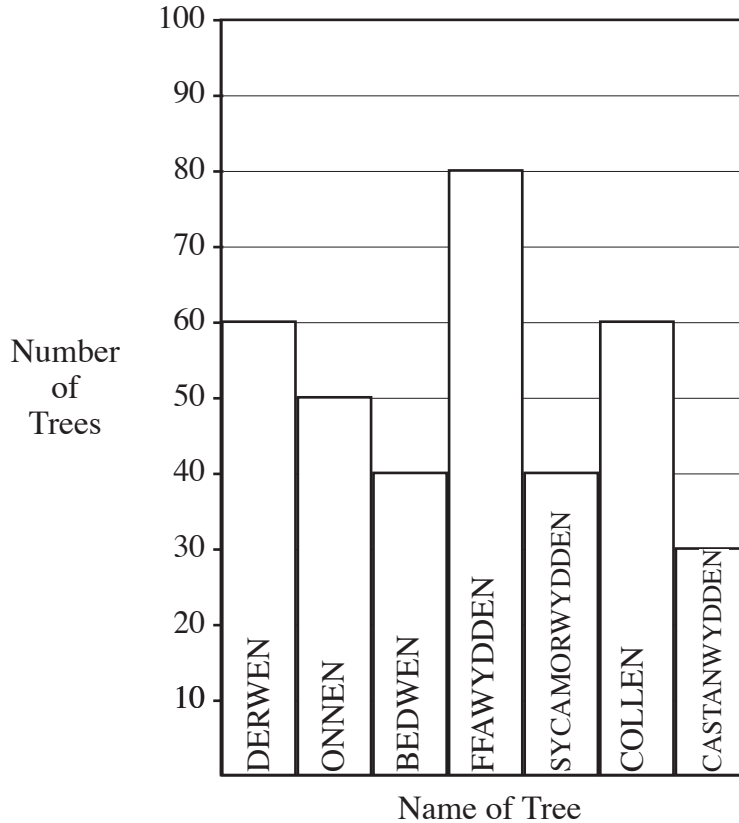
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[Total: 8]

Turn over.

3. Squirrels like to live in deciduous woods. Deciduous trees lose their leaves in Autumn. Here is a bar chart showing the number of trees in a small deciduous wood.

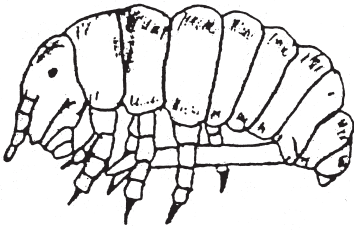
Answer the questions which follow.



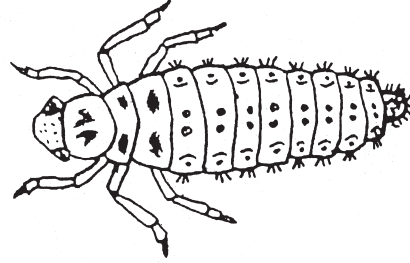
- (a) Which was the **most common** tree? [1]
- (b) Which was the **least common** tree? [1]
- (c) How many trees were there **altogether**? [1]
- (d) Give the total number of **Beech** and **Oak** trees. [1]
- (e) How many more **Beech** trees than **Sycamore** trees were there? [1]
.....
- (f) What is meant by a **deciduous** tree? [1]
.....

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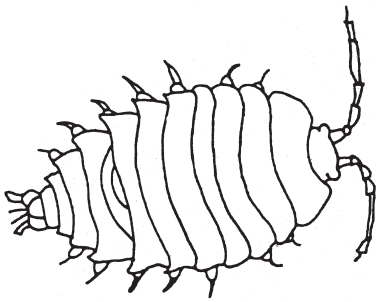
4. Use the key opposite to identify these soil animals. Write their names underneath. [6]



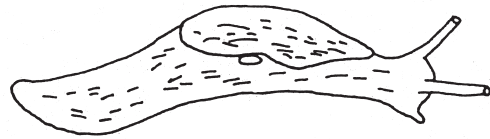
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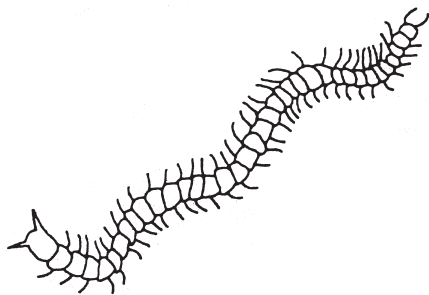
B



C



D



E



F

KEY

- | | | |
|-----------|------------------------------------|---------------------|
| 1. | With legs. | Go to 2 |
| | No legs. | Go to 4 |
| 2. | Six legs. | Go to 3 |
| | More than six legs. | Go to 5 |
| 3. | Long prong under tail. | Spring tail |
| | Long body with bristle tufts. | Beetle larva |
| 4. | Long body with no rings. | Slug |
| | Oval body with rings. | Insect pupa |
| 5. | Oval body, two antennae. | Woodlouse |
| | Long thin body. | Centipede |

5. Plants need elements in order to grow well.

Nitrogen (N) helps to grow large leaves.

Phosphorus (P) is good for strong healthy growth and roots.

Potassium (K) helps fruit and flower growth.

In a school garden, pupils are growing a variety of plants.

Which elements are needed for the healthy growth of the following plants?

Write down the best **one** (1) for **each** plant.

(a) Lettuces [1]

(b) Tomatoes [1]

(c) Marigolds (flowers) [1]

(d) Strawberries [1]

(e) Cabbages [1]

[Total: 5]

6. In the school garden, the pupils also grew **four** (4) different varieties of potato. They compared the weight of the crop from each variety. They grew **four** (4) plants of each variety and their results are shown in the table below.

Variety	Weight of crop
A	14 kg
B	19 kg
C	12 kg
D	22 kg

Study the table and answer the following questions:

(a) Which variety produced the heaviest crop? [1]

(b) Which variety produced the lightest crop? [1]

(c) What was the average weight per plant for variety C? [1]

.....

(d) Which variety should the pupils grow next year? [1]

(e) Give a reason for your answer to part (d) [1]

.....

[Total: 5]

7. In the school garden, there was a pond containing lots of different creatures. A group of children recorded how many of these creatures they found. They recorded their results in a table.

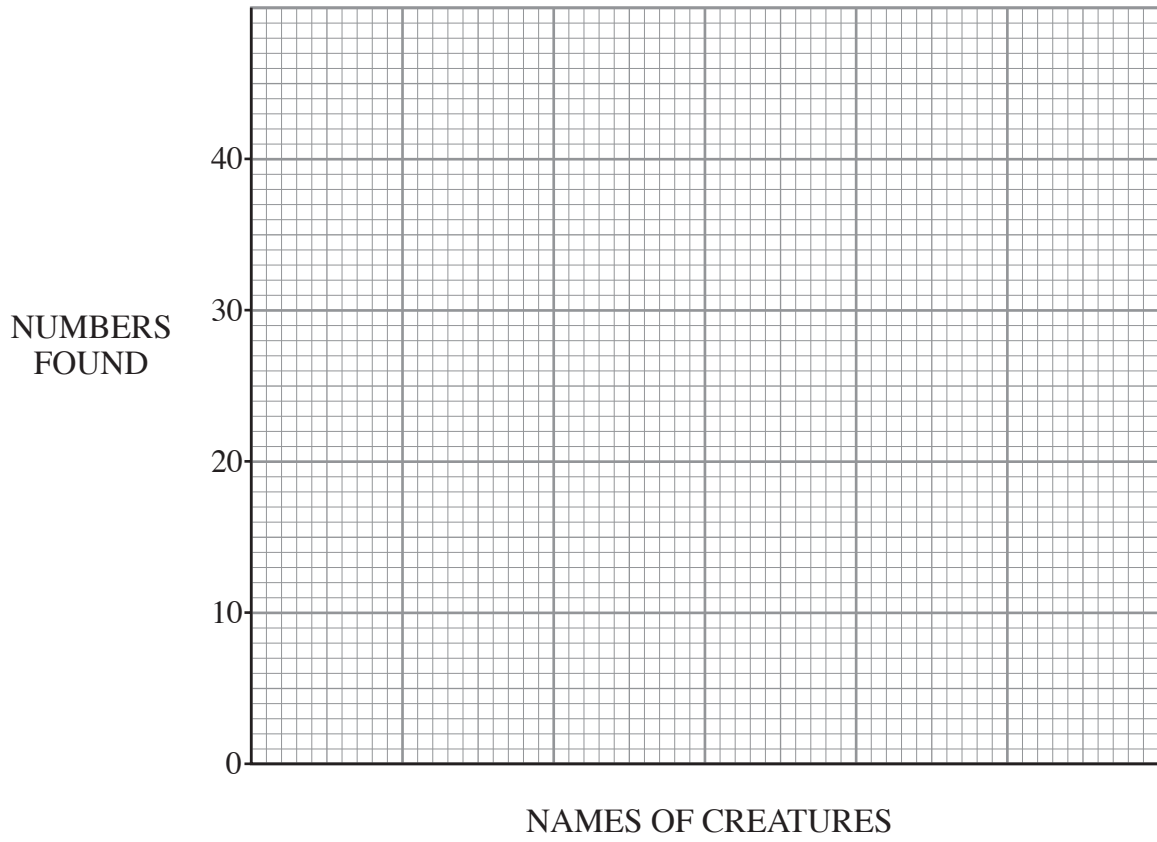
(a) Using the information in the table, make a bar graph to show their results. [12]

Name of creature	Number found
Water spider	4
Water boatman	8
Pond skaters	13
Water snails	20
Frogs	3
Caddis larvae	38
Newts	2
Whirligig beetles	12
Stonefly larvae	18
Mayfly larvae	42

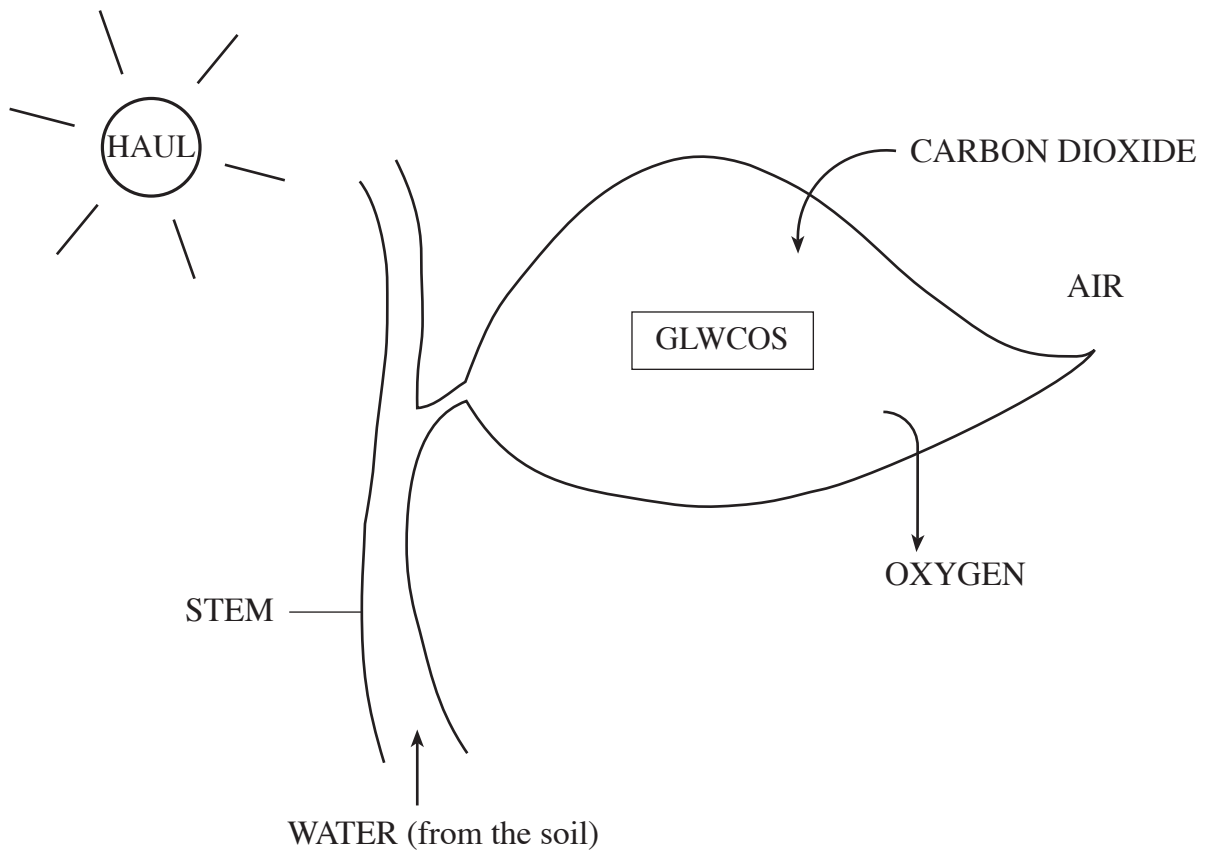
(b) How many creatures were found **altogether**? [1]

.....

[Total: 13]



8. Plants make their own food by a process known as **photosynthesis**. Below is a diagram of the process.



Answer the questions below.

- (a) Which gas, from the air, is **used** in photosynthesis? [1]

.....

- (b) Which gas is **made** during photosynthesis and put back into the air? [1]

.....

- (c) Which part of the plant absorbs, from the soil, the **water** needed for photosynthesis? [1]

.....

- (d) Name the **food** made by photosynthesis. [1]

.....

(e) Where does the **energy** need for photosynthesis come from? [1]

.....

(f) In which **organ** of the plant does photosynthesis take place? [1]

.....

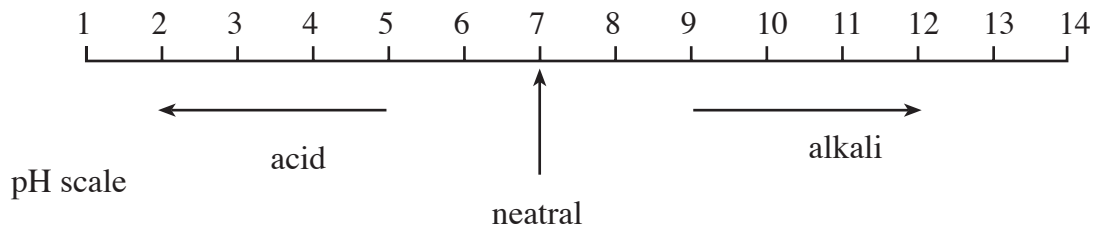
(g) What is the name of the **chemical** (which is green in colour) that is needed for photosynthesis to take place? [1]

.....

[Total: 7]

9. The pH scale is a measure of how acid or how alkaline something is. Farmers and gardeners need to know the pH of their soil because plants grow best in soil of a particular pH.

Look at the pH scale and the chart below and then answer the questions that follow.



Plant	pH of soil in which plant grows well.
Apple tree	5.0 – 6.0
Milkweed	4.0 – 5.0
Cabbage	6.0 – 7.5
Wheat	5.5 – 7.5
Dandelion	5.5 – 7.0
Potato	4.8 – 6.5

(a) Which plants grow well in neutral soil? [1]

.....

(b) What pH range does an apple tree like? [1]

.....

(c) Which plant would grow well in a soil of pH 4.0 – 5.0? [1]

.....

(d) Which pH range suits potatoes? [1]

.....

(e) A soil with a pH of 6.0 is:

[1]

- (i) slightly acidic
- (ii) neutral
- (iii) slightly alkaline

Tick (✓) the correct answer.

[Total: 5]

10. Read the following questions carefully and decide if each is **True** or **False**. Write **T (true)** or **F (false)** next to **each** sentence.

(a) Ladybirds eat greenfly. [1]

(b) Lime can be added to soil to make it less acidic. [1]

(c) Clay soil lets water through it easily. [1]

(d) Earthworms are bad for the soil. [1]

(e) Seeds contain a store of food. [1]

[Total: 5]

11. Fill in the blank spaces with the words given in the box. [10]

The flower is the part of the plant. It makes

The male cell of the flower is called and the female cells are called

The contains pollen grains and the contains ovules. In some flowers, insects are used to carry the pollen and attract the insects to the flower. Other things that attract insects are a sugary substance called and a pleasant

. In order to germinate, seeds need, warmth and air.

<i>seeds</i>	<i>anther</i>	<i>reproductive</i>	<i>pollen</i>
<i>petals</i>	<i>ovules</i>	<i>water</i>	<i>nectar</i>
	<i>Smell</i>	<i>ovary</i>	

[Total: 10]