UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

CANDIDATE NAME	
CENTRE NUMBER	
CANDIDATE NUMBER	

ENVIRONMENTAL MANAGEMENT **0680/11**

Paper 1 **May/June 2010**

1 hour 30 minutes

Candidates answer on the Question Paper.

Additional Materials: Ruler

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name on all the work you hand in.
Write in dark blue or black pen.
You may use a soft pencil for any diagrams, graphs or rough working.
Do not use staples, paper clips, highlighters, glue or correction fluid.
DO **NOT** WRITE IN ANY BARCODES.

Answer **all** questions.

At the end of the examination, fasten all your work securely together.
The number of marks is given in brackets [ ] at the end of each question or part question.

For Examiner's Use	
1	
2	
3	
4	
5	
6	
Total	

This document consists of **11** printed pages and **1** blank page.

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1 The photograph below shows a water tower by a house in a tropical country. The water that is stored in the tower is obtained from rain running off roofs of houses. The water in the rain comes from ponds, lakes and the sea.

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(a) (i) Describe how the water from a pond, a lake or the sea becomes rain.

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..... [2]

(ii) It would be easier for the people in this area to use water from ponds and lakes. Explain why this is not a good idea.

.....

.....

.....

.....[3]

(iii) Small-scale schemes such as the water tower may not be possible in some communities. Describe **one** other way of supplying safe water to people.

.....

.....

.....[2]

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(b) Most of the water on Earth is in the oceans. As well as being a store of water, the oceans are also an important source of food for humans. Describe and explain where the world's main oceanic fisheries are located.

For Examiner's Use

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..... [3]

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2 Datuk has just been awarded a grant for further education in Borneo. He is one of a large family who grow a crop called ginger, a spice used in cooking, on their plot in Sabah. The plant is grown using traditional methods and the family obtain a yield of 1600 kg/year from a plot of 0.8 hectare. The plot is 1 500m above sea level and on a steep slope. The ginger is sold at 2.5RM/kg (RM=ringitt, the Malaysian currency).

(a) (i) Calculate the annual income from ginger sales of Datuk's family.

Show your working.

..... RM

[2]

(ii) Datuk wants to use his education to learn about modern agricultural methods to improve the ginger yield in his village. Describe and explain **two** methods which he may learn about and suggest to the villagers.

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.....[4]

(iii) Ginger is a cash crop as opposed to a subsistence crop. Explain the difference between these two crop types.

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.....[2]

(b) Give **two** other uses to which crops can be put, other than providing food.

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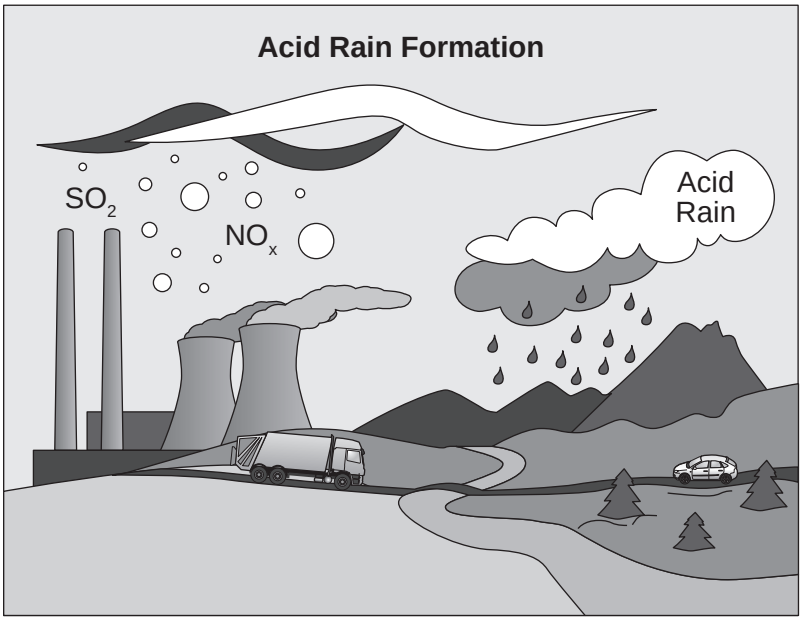
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.....[2]

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3 Look at the diagram showing stages in the formation of acid rain.

For Examiner's Use



(a) (i) Name **two** gases which form acid rain.

1 .....

2 ..... [2]

(ii) Name **two** human sources of these gases.

.....

.....[2]

(iii) Name **one** natural source of a gas which causes acid rain.

.....[1]

(b) (i) How could using alternative sources of energy to generate electricity reduce the problem of acid rain?

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..... [2]

(ii) Using alternative sources of energy often relies on government support. What can people in developed countries do to reduce acid rain problems?

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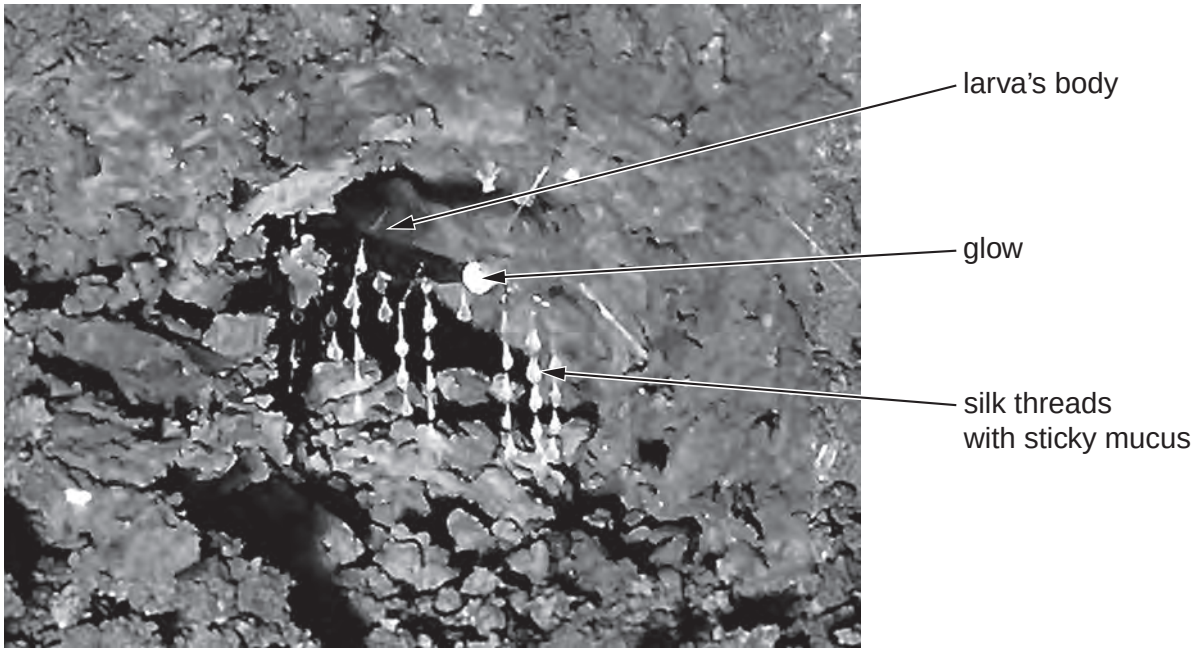
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4 Glow worms, the larvae of a fungus fly, prey on other small flies which they attract by having a glowing, sticky trap at night.

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Fungus flies breed mainly in moist leaf litter or in water with leaves.

(a) (i) Draw a food chain to include leaves, glow worms and flies.

[3]

(ii) Glow worm larvae are eaten by creatures called harvestmen. Are harvestmen predators, producers or competitors?

..... [1]

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(b) The glow of thousands of larvae makes a very exciting sight and tourists come to see this glow. A scientist in Australia is working on ways of making sure that these tourists do so sustainably.

Here are some of her findings:

- Shining a torch caused glow worm lights to go out in about 2 minutes. The glow worm lights came on again after about 10 minutes.
- People can cause water pollution when visiting because they step into the water.
- People stray from paths and trample the forest floor.

(i) Using all the information given, describe **two** ways in which people might affect glow worm numbers.

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..... [4]

(ii) Choose **one** of these ways and suggest how the effects of people might be reduced.

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.....

..... [2]

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5 **(a)** One of the components of soil is mineral particles. Where have these particles come from and how were they formed?

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.....

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..... [2]

(b) **(i)** Read the following passage about the composition of soil. Fill each gap using the best word from the list below. The words may be used once, more than once or not at all.

clay, inorganic, little, much, organic, oxygen, plants, rocks, water

Soils, apart from mineral particles, contain dead, decaying ..... and animals (called ..... matter). Soil can be very different from one location to another, but generally consists of inorganic particles, ... matter, ... and air. The inorganic particles are the ..... that have been broken down into smaller pieces. The size of the pieces varies from pebbles, particles of sand to silt or ..... . The amount of water in the soil is linked to the climate and is one thing that can affect the amount of air. Very wet soil has ..... air. The composition of the soil affects the plants and therefore the animals that can live there. [4]

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(ii) Soil is very important in agriculture, but agricultural practice can cause it to be blown or washed away, a process called soil erosion. State **two** ways in which people can cause soil erosion and for each way suggest how the effect of erosion could be reduced.

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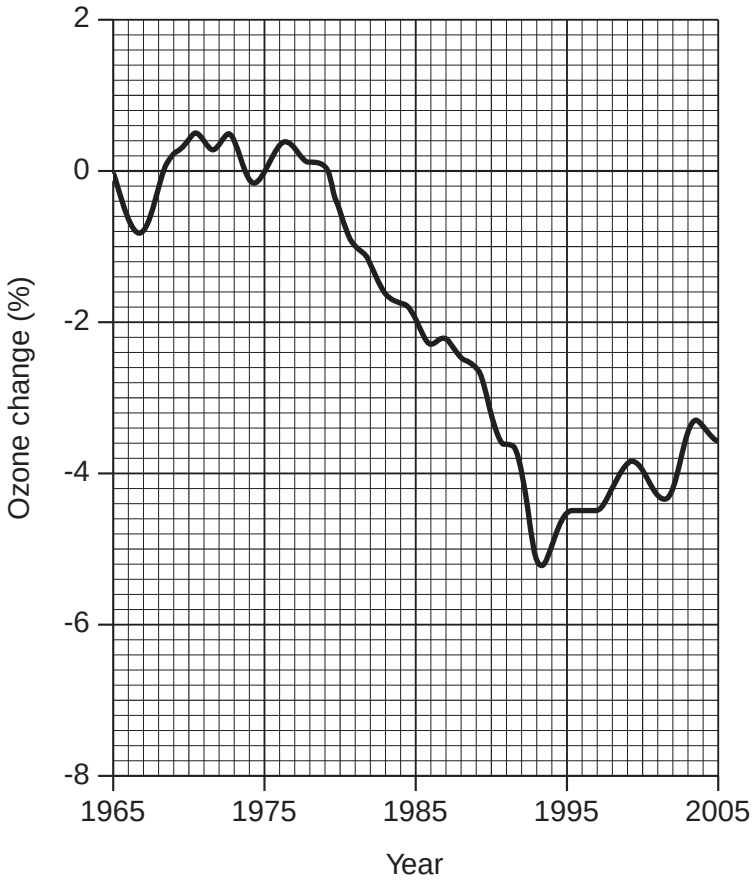
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.....[4]

6 Look at the graph below showing changes in the level of ozone in the upper atmosphere from 1965 until 2005.

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Changes in the level of ozone in the upper atmosphere from 1965 until 2005



(a) (i) In which year did ozone levels clearly begin to fall?

.....[1]

(ii) In which year was the greatest change in ozone concentration? What was the value, (in percent change) in that year?

year .....

value ..... [2]

(iii) Describe and explain the changes in ozone level shown by the graph.

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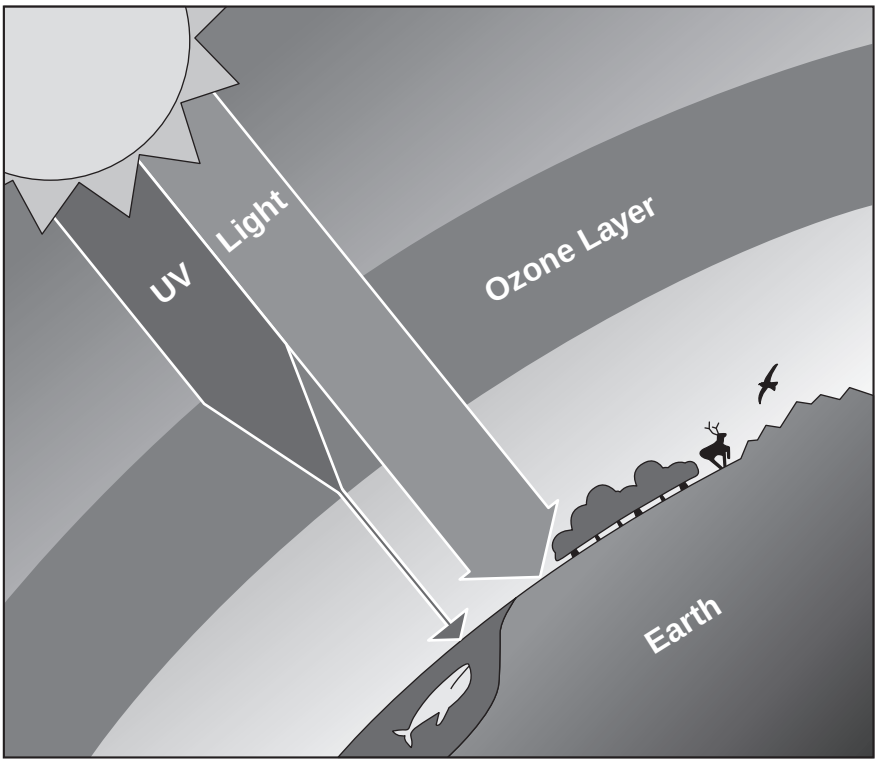
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..... [4]

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(b) Ozone in the upper atmosphere helps to absorb dangerous UV radiation, as shown in the diagram.

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List **three** ways in which exposure to UV radiation could affect humans.

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..... [3]

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