UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER				

6116285867

ENVIRONMENTAL MANAGEMENT **0680/12**

Paper 1 **May/June 2011**

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.

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1	
2	
3	
4	
5	
6	
Total	

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1 All food on the Earth is made by plants.

(a) (i) What is the name of the process by which plants make food?

.....[1]

(ii) Complete this paragraph about the manufacture of food in plants.

In order to make food, plants need water from the ..... and ..... from the atmosphere. The energy for the process is provided by ..... from the sun. This is absorbed by the green pigment, ...

[4]

(b) In many parts of the world, water for crop plants is in short supply. This problem can be reduced by irrigation.

The photographs show two methods used for the irrigation of crops.

Method A



Method B

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(i) Name method **A**.

.....[1]

(ii) One of these methods is a strategy for water use in sustainable agriculture. What is meant by sustainable agriculture?

.....

.....

.....[1]

(iii) Which method, **A** or **B**, is more sustainable? Explain your answer by referring to both methods.

.....

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.....

.....

.....[3]

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[Turn over

2 Land is used in different ways by nomadic pastoralists, hunter-gatherers and crop farmers.

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(a) (i) Which of these has been in existence for longest?

..... [1]

(ii) What is a nomadic pastoralist?

.....

.....

.....

..... [2]

(b) Land is also used for tourism. This can damage the land so strategies are needed to reduce this problem.

(i) Ecotourism is one way to manage this. What is ecotourism?

.....

.....

.....

..... [2]

(ii) Another way to manage tourism is to set up National Parks for the big game animals. In Kenya, however, this leads to conflict between nomadic pastoralists and conservationists. Explain the conflict.

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.....[3]

(iii) A third use of land is mining which also causes damage. After mining has finished explain how this damage might be reversed.

.....

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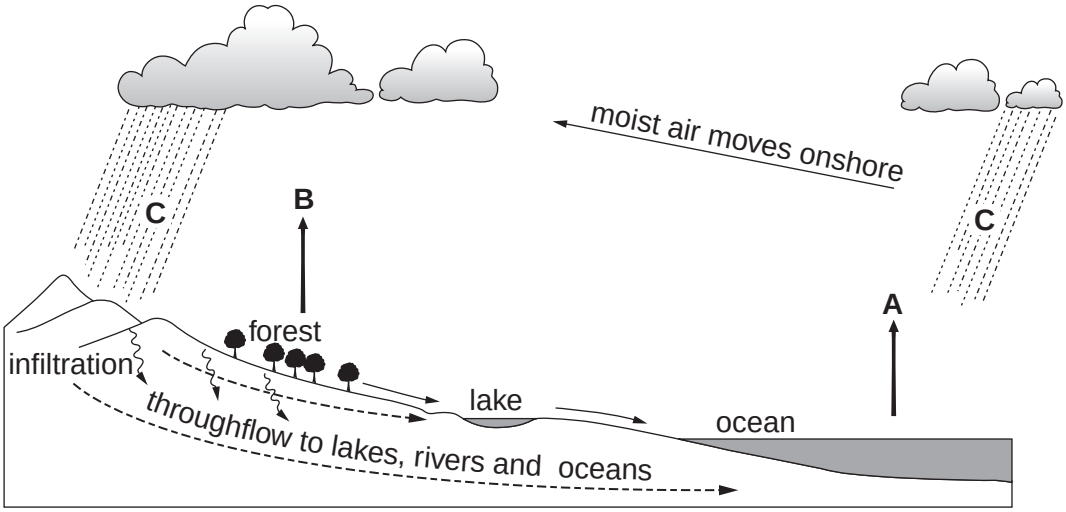
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..... [2]

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3 The diagram shows the water cycle.

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(a) (i) Name the processes shown by

arrow **A** .....

arrow **B** .....

dashed lines **C** ..... [2]

(ii) How is infiltration different from run-off?

.....

.....

..... [2]

(iii) Coastal countries with a water shortage can make fresh water from sea water. Name the process.

..... [1]

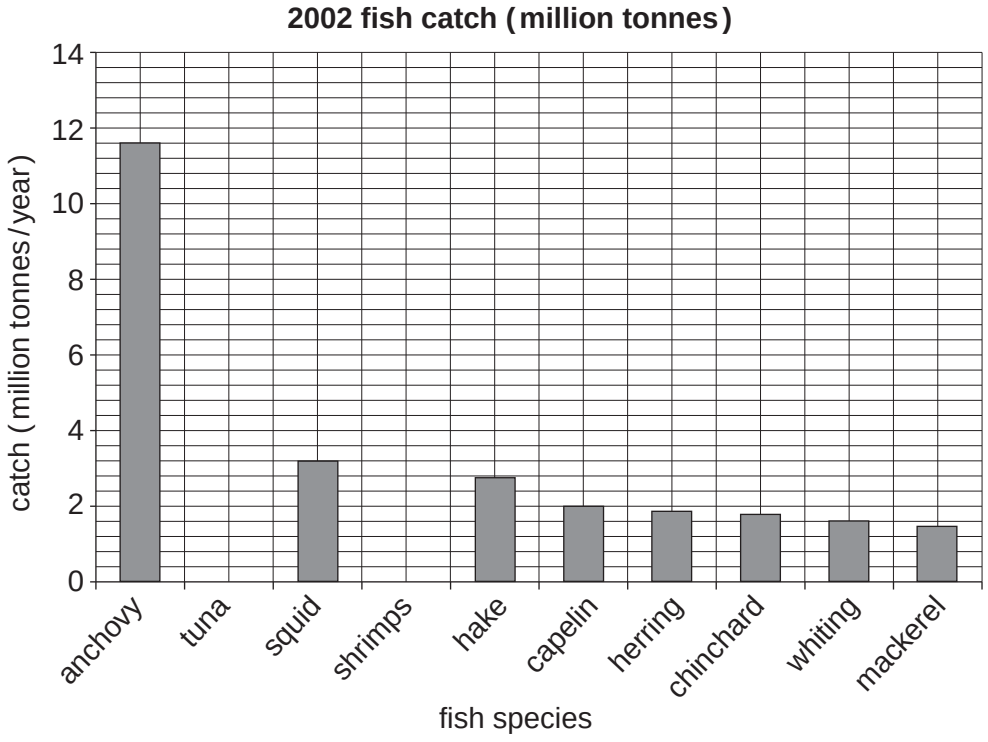
(b) As well as providing water for drinking and other uses, the oceans also provide humans with food, 82.6 million tonnes of fish were caught from the sea in 2002. The top ten species caught in 2002 are shown in the table below.

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species	**2002 catch** (million tonnes)
anchovy	11.6
tuna	3.5
squid	3.2
shrimps	3.0
hake	2.7
capelin	2.0
herring	1.9
chinchard	1.8
whiting	1.6
mackerel	1.5
total of top ten species	

(i) Complete the table by filling in the total catch for the top ten species. [1]

(ii) Complete the graph using figures from the table. [1]



(iii) Most of the anchovy catch in 2002 came from Peruvian waters (nearly 10 million tonnes). However, in 1990 the catch off Peru's coast was only about 3 million tonnes. What factors may account for this difference?

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.....[3]

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4 **(a)** Two elements of the weather measured by meteorologists are temperature and sunshine hours.

(i) Name the instrument used to measure temperature and describe where it should be placed to obtain correct readings.

.....

.....

.....

.....[2]

(ii) Explain how sunshine hours are measured.

.....

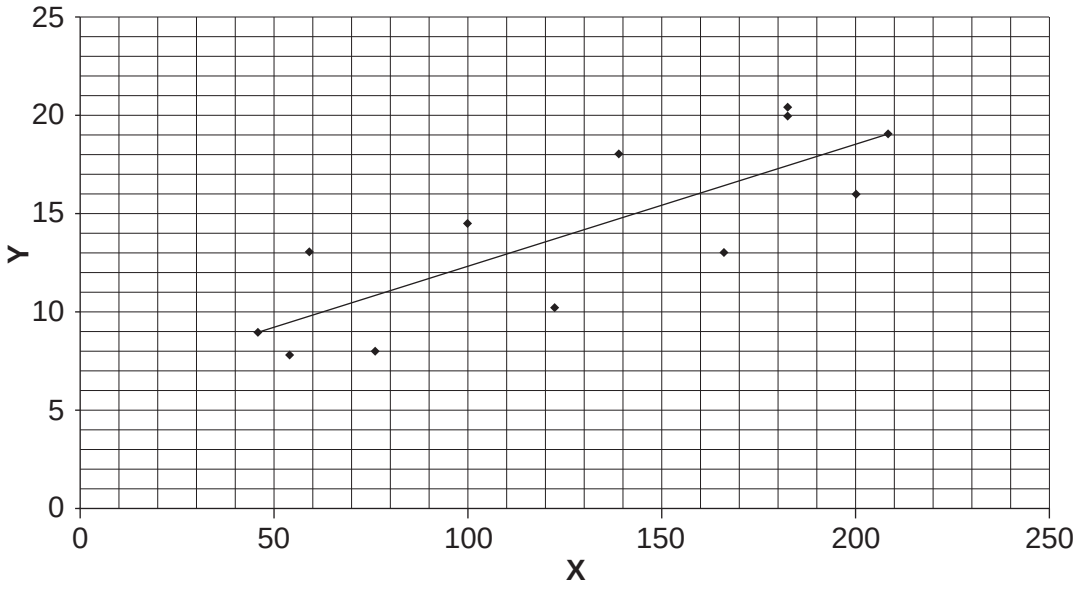
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.....[2]

(b) Look at the graph.

Relationship between hours of sunshine per month and average monthly temperature for a UK city over a year



(i) Supply a suitable title for the **X** axis and suitable units for the **Y** axis.

X axis title.....

Y axis units.....[2]

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(ii) Weather data can help to decide if an area is suitable for generating electricity from a renewable resource. Which form of renewable energy could the data in the graph provide information for?

.....[1]

(c) (i) Name the instrument that could be used to help to decide whether an area would be suitable for generating electricity from wind.

.....[1]

(ii) State **two** environmental problems that might be caused by the use of wind power.

.....

.....

.....

.....[2]

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5 The oceans cover 70 percent of the Earth's surface and contain 97 percent of its water. They have an important resource potential for humans.

(a) State **two** ways in which humans can use the ocean's resources.

.....

.....

.....

.....[2]

(b) **(i)** How might the extraction of oil from under the sea lead to pollution and what are the effects of the pollution?

.....

.....

.....

.....[3]

(ii) How might this pollution be controlled?

.....

.....[1]

(c) Sewage also causes marine pollution.

(i) How does sewage get into the sea from towns inland?

.....

.....[1]

(ii) Describe the effects of sewage in the sea.

.....

.....

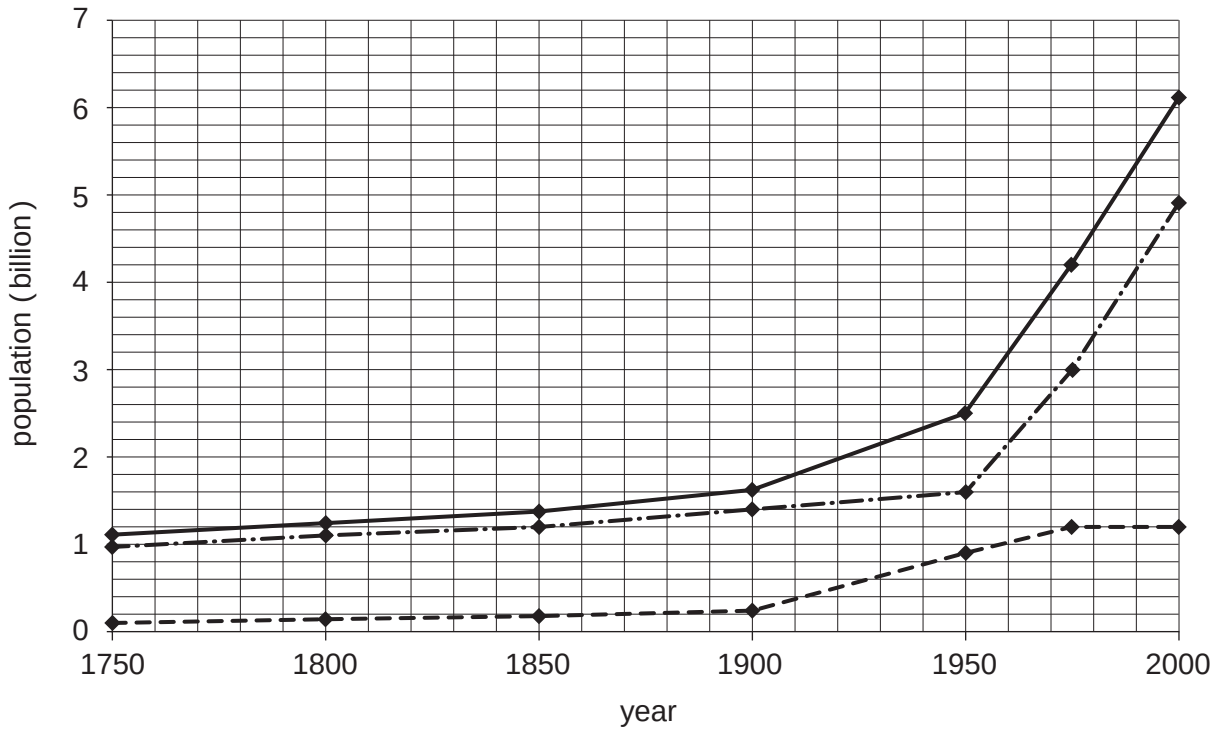
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.....[3]

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6 The graph below shows the growth of the world population since 1750.

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(a) State by how much the population grew between 1950 and 2000 in

(i) developing countries, ...[1]

(ii) developed countries. .....[1]

(iii) Explain the difference in the growth rates between developing and developed countries since 1950.

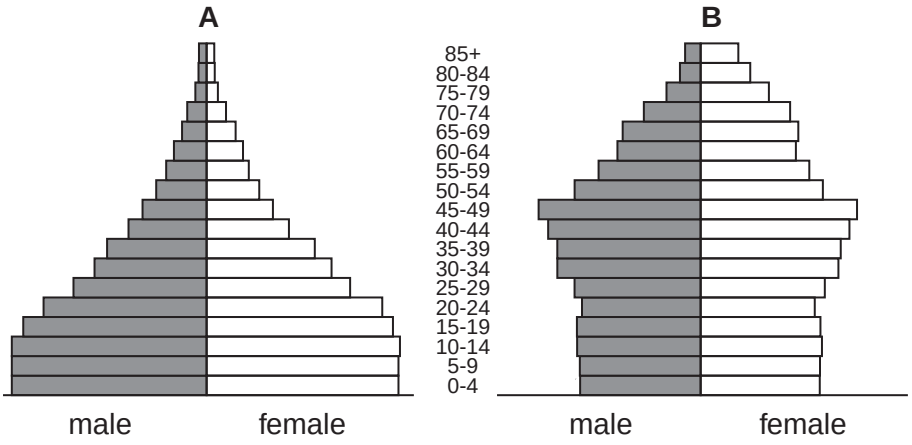
.....

.....

.....[3]

(b) (i) The age structure of populations also changes over time. Look at the population pyramids **A** and **B**. One shows a developed country and the other shows a developing country. Write on the line below each diagram **developing** OR **developed**. [1]

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(ii) Compare the age structure of the populations.

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.....[4]

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