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UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

CANDIDATE NAME

CENTRE NUMBER | | | | | |

CANDIDATE NUMBER | | | | |

2277380084

ENVIRONMENTAL MANAGEMENT **0680/01**

Paper 1 **October/November 2009**

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	
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Total	

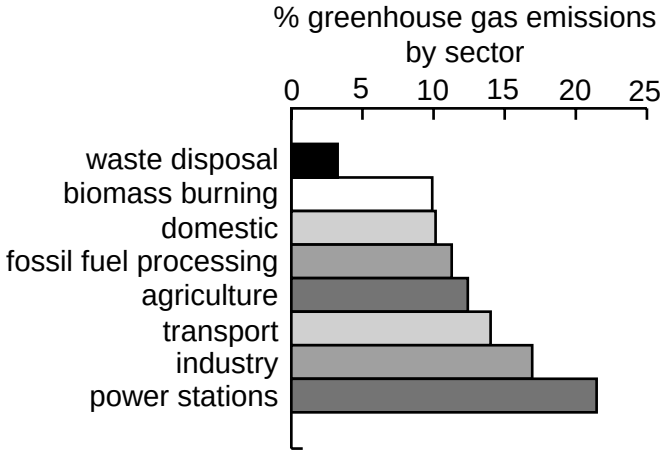
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1 Look at the diagram below which shows the sources of greenhouse gases in 2002.

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(a) (i) What is meant by the terms?

'greenhouse gas' .....

.....

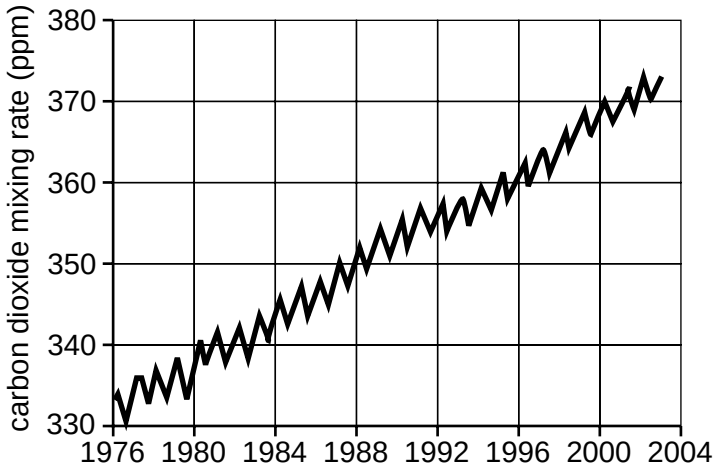
'greenhouse effect' .....

.....[2]

(ii) Name a greenhouse gas produced by transport.

.....[1]

The graph shows changes in the quantity of carbon dioxide in the atmosphere.



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(b) Describe and explain the changes shown in the graph.

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.....

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.....

.....

.....[3]

(c) **(i)** Give a source of CFC.

.....[1]

(ii) Give a source of methane.

.....[1]

(iii) Suggest how pollution from each of these gases might be reduced.

.....

.....

.....

.....[2]

[Total: 10]

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2 Read the following passage about the Island of Montserrat, where a major volcanic eruption began in July 1995 and is still going on.

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The Caribbean island of Montserrat is situated on a destructive plate boundary. Underneath Montserrat the Atlantic plate is slowly being forced under the Caribbean plate. This happens because the Atlantic plate is more dense than the Caribbean plate.

Most land suitable for farming was in the south of the island, close to the volcano and before the eruption Montserrat was self sufficient.

(a) (i) Draw a labelled, diagram in the box below to show a destructive plate boundary **and** the volcano caused by it.

[4]

(ii) Suggest why the good farmland was close to the volcano.

.....

.....

..... [2]

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(b) (i) Choose **one** of the following and suggest how the eruption in Montserrat could have affected it.

environment, houses, farmland, transport

Choice .....

.....

.....

.....

.....[2]

(ii) How might governments reduce the impact of volcanic eruptions?

.....

.....

.....

.....[2]

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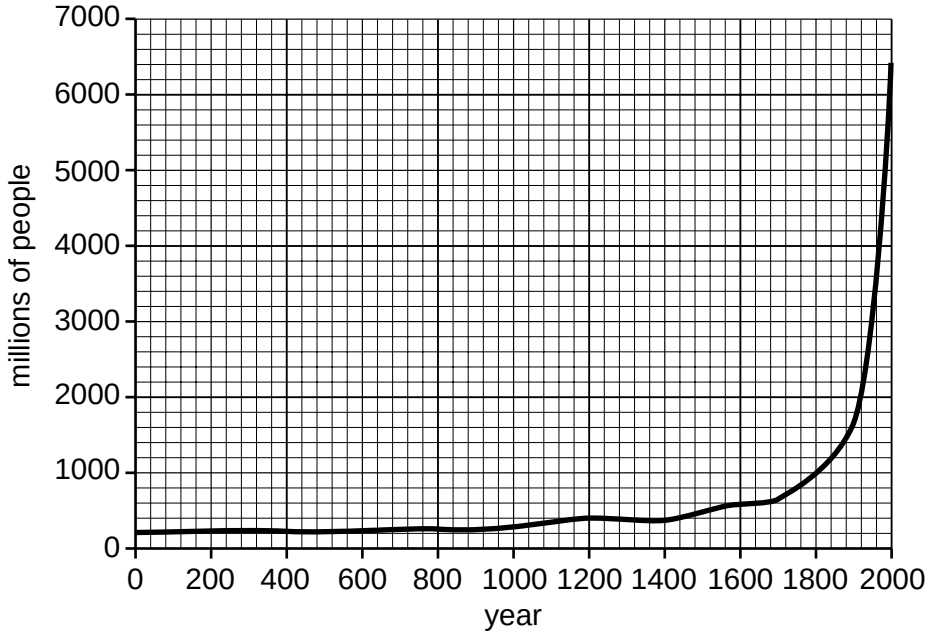
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3 Study the graph below of world population growth over the last 2000 years:

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(a) State the population in

(i) 1400 .....

(ii) 2000 .....

[2]

(iii) State and explain **two** reasons for the change in world population from 1800 until 2000.

.....

.....

.....

.....

.....[4]

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(b) When the population grows in an area it may lead to migration out of the area. This would be a **push** factor. The following are some push factors:

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unemployment
lack of services/amenities
poor safety/security
concerns about high crime rates
crop failure
drought
flooding
poverty
war

(i) Give **four** factors from the list above which could result directly from an increase in population.

.....

.....

.....

..... [2]

(ii) State **two** possible pull factors for people migrating from a rural area to an urban area.

.....

..... [2]

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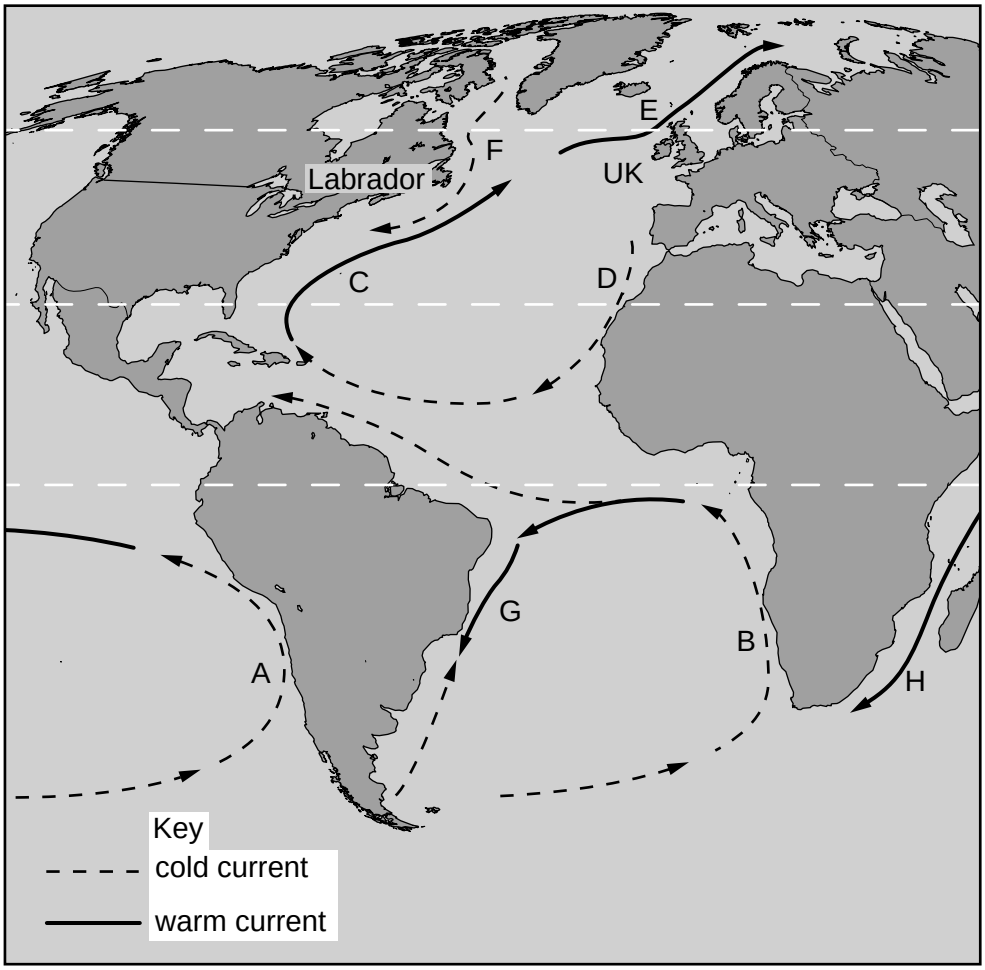
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4 Study the map below, showing eight currents labelled A to H.

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(a) (i) From the map, name two currents and the corresponding letter.

Letter Name of current

....

.... [2]

(ii) Why are some currents cold and some others warm?

.....

..... [1]

(iii) State and explain the likely effects of current F on Labrador and current E on UK.

.....

.....

.....

.....

..... [2]

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(b) (i) In the seas off Western South America, minerals are brought to the surface (called upwelling).
Describe how upwelling happens.

.....

.....

.....[2]

(ii) During an El Nino year, this upwelling stops and there are few fish to catch. What causes the upwelling to stop and why does this reduce fish numbers?

.....

.....

.....

.....[3]

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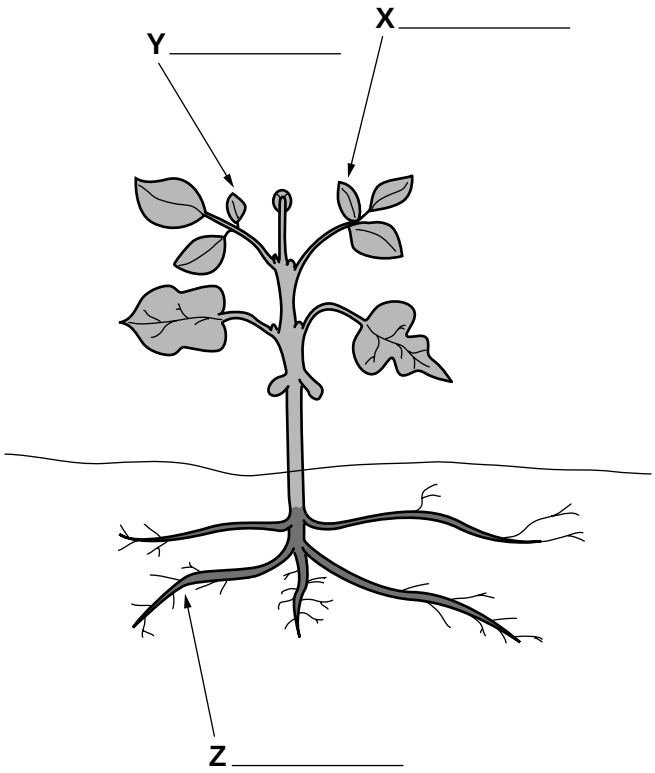
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5 Look at the diagram of a plant.

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(a) (i) Label on the diagram at **X** the source of energy and, at **Y** and **Z**, the two substances that combine in photosynthesis. [3]

(ii) In order to grow properly, the plant needs a further group of substances from the soil. Name this group of substances.

.....[1]

(iii) Other than lack of these substances, in what other ways may soils be poor for plant growth?

.....

.....

.....[2]

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(b) (i) This plant is part of a food chain, such as:

plant → caterpillars → birds

In this chain there are producers and consumers. Complete the table below stating whether each part of the food chain is a producer or a consumer.

	Producer or consumer?
plant	
caterpillars	
birds	

[2]

(ii) What is the relationship between birds and caterpillars called?

.....[1]

(iii) What is the relationship between bees and flowers called?

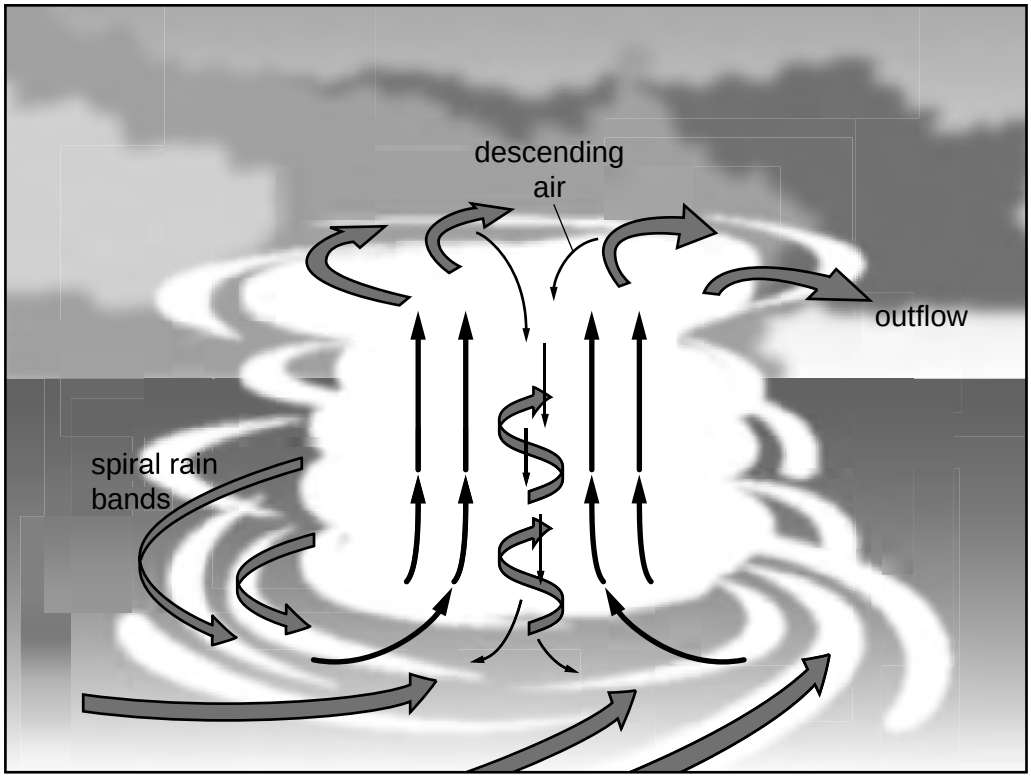
.....[1]

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6 Study the diagram below which shows what happens during a cyclone.

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(a) (i) Starting with the phrase 'high sea temperature', use your knowledge and the diagram to explain the formation of a cyclone.

.....

.....

.....

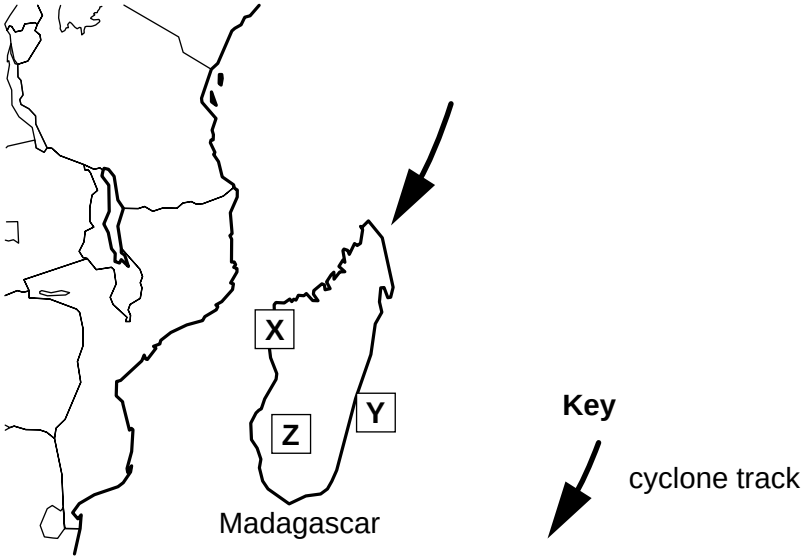
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(ii) The map below shows the location of the island of Madagascar and the main track taken by cyclones. Which area **X**, **Y** or **Z** is a cyclone likely to be most powerful?



.....[1]

(b) State **one** impact of a cyclone on:

(i) People's health

.....

.....

(ii) The environment

.....

.....[2]

(c) **(i)** Another climatic hazard is drought. What is meant by this term?

.....

.....[2]

(ii) Suggest **two** long term measures that might reduce the effects of drought in affected areas.

.....

.....

.....

.....[2]

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