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UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

ENVIRONMENTAL MANAGEMENT

Paper 1

0680/01

October/November 2004

1 hour 30 minutes

Candidates answer on the Question Paper.
Additional Materials: Ruler (cm/mm)

Candidate Name

Centre Number

Candidate Number

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 in the spaces provided on the Question Paper.
You may use a soft pencil for any diagrams, graphs or rough working.
Do not use staples, paper clips, highlighters, glue or correction fluid.

Answer **all** questions.
The number of marks is given in brackets [ ] at the end of each question or part question.

DO NOT WRITE IN THE BARCODE.

DO NOT WRITE IN THE GREY AREAS BETWEEN THE PAGES.

FOR EXAMINER'S USE	
1	
2	
3	
4	
5	
6	
TOTAL	

If you have been given a label, look at the details. If any details are incorrect or missing, please fill in your correct details in the space given on this page.

Stick your personal label here, if provided.

This document consists of **12** printed pages.

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1 The diagram shows volcanic activity at a plate boundary.

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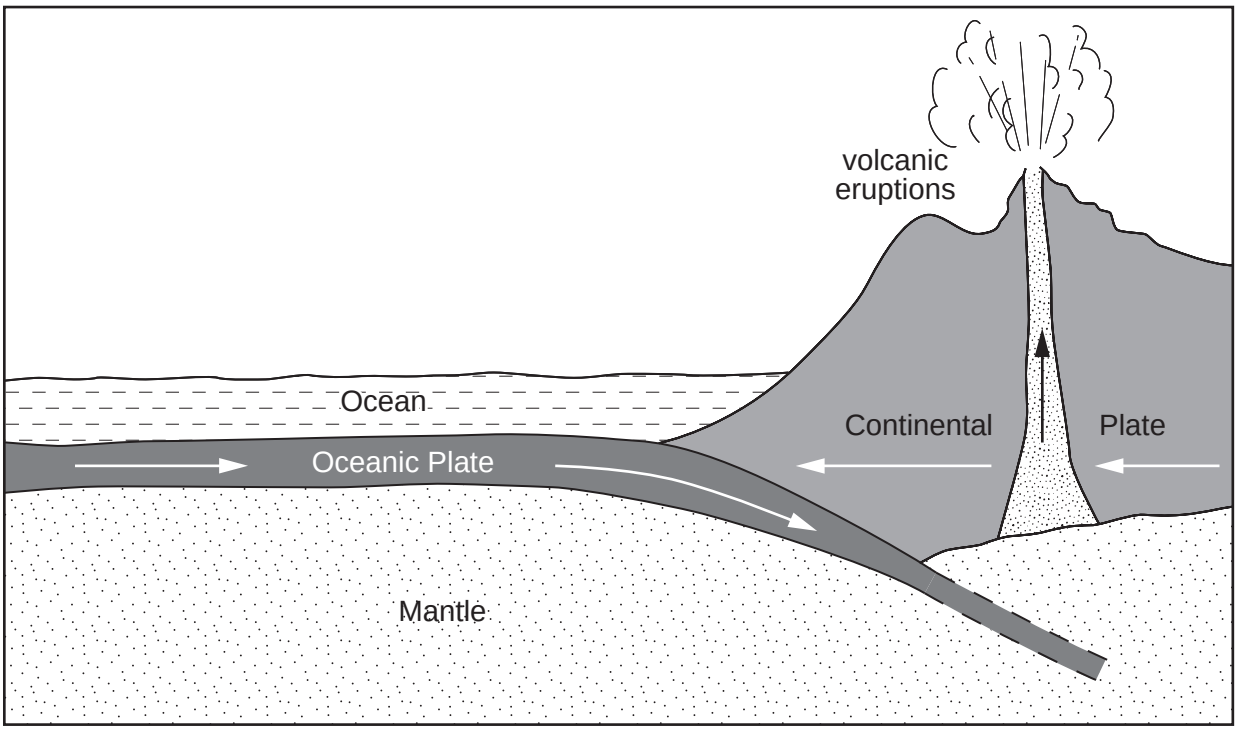

(a) (i) What type of plate boundary is shown?

.....[1]

(ii) Mark with a letter **X** on the diagram an area where friction is likely to occur. [1]

(iii) Use the diagram to describe how a volcanic eruption may occur near to a plate boundary.

.....

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.....[2]

(b) (i) Scientists often set up stations on volcanoes to take readings. Why is it important that they do this?

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.....[2]

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(ii) About 500 million people live in areas at risk from volcanic eruptions. Suggest **two** reasons why people live near to active volcanoes.

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1 .....

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(c) Describe **one** form of disaster relief that would be necessary after a volcanic eruption.

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Total [10]

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2 **(a)** **(i)** With the help of the diagram, explain how hydro-electric power (H.E.P.] is generated.

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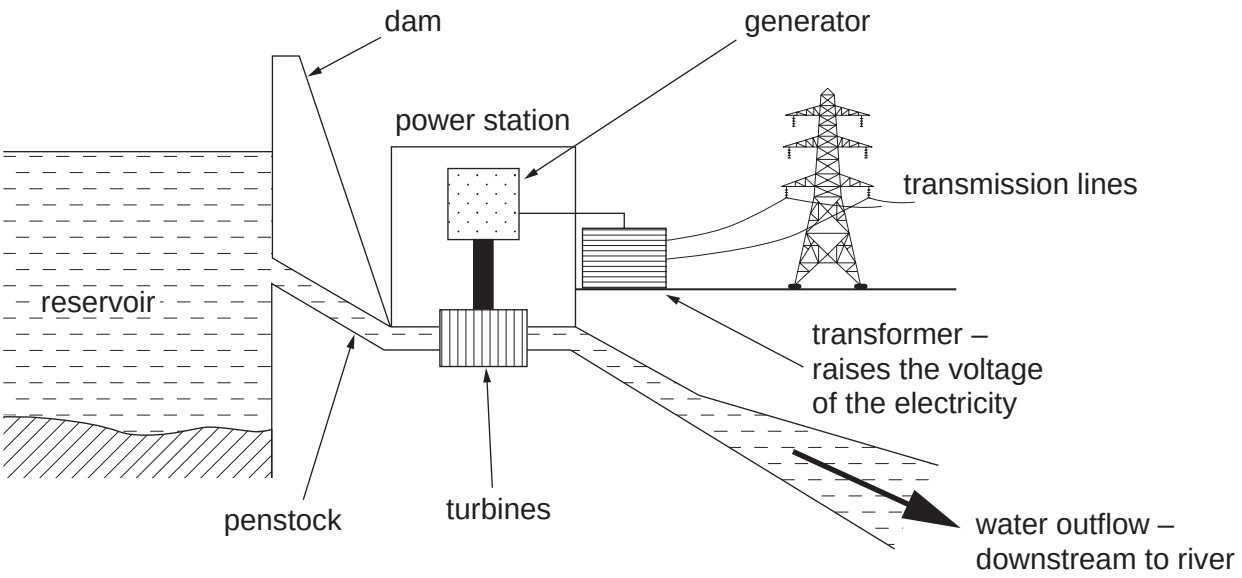

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.....[3]

(ii) Give **two** reasons why setting up large H.E.P. stations is often expensive.

1 .....

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2 .....

.....[2]

(b) State **two** advantages of using H.E.P. instead of using fossil fuels.

1.....

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2.....

.....[2]

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(c) Describe some of the environmental problems that can be caused by large H.E.P. stations.

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3 **(a)** Use the diagram below to describe how farming activities can lead to pollutants entering a river.

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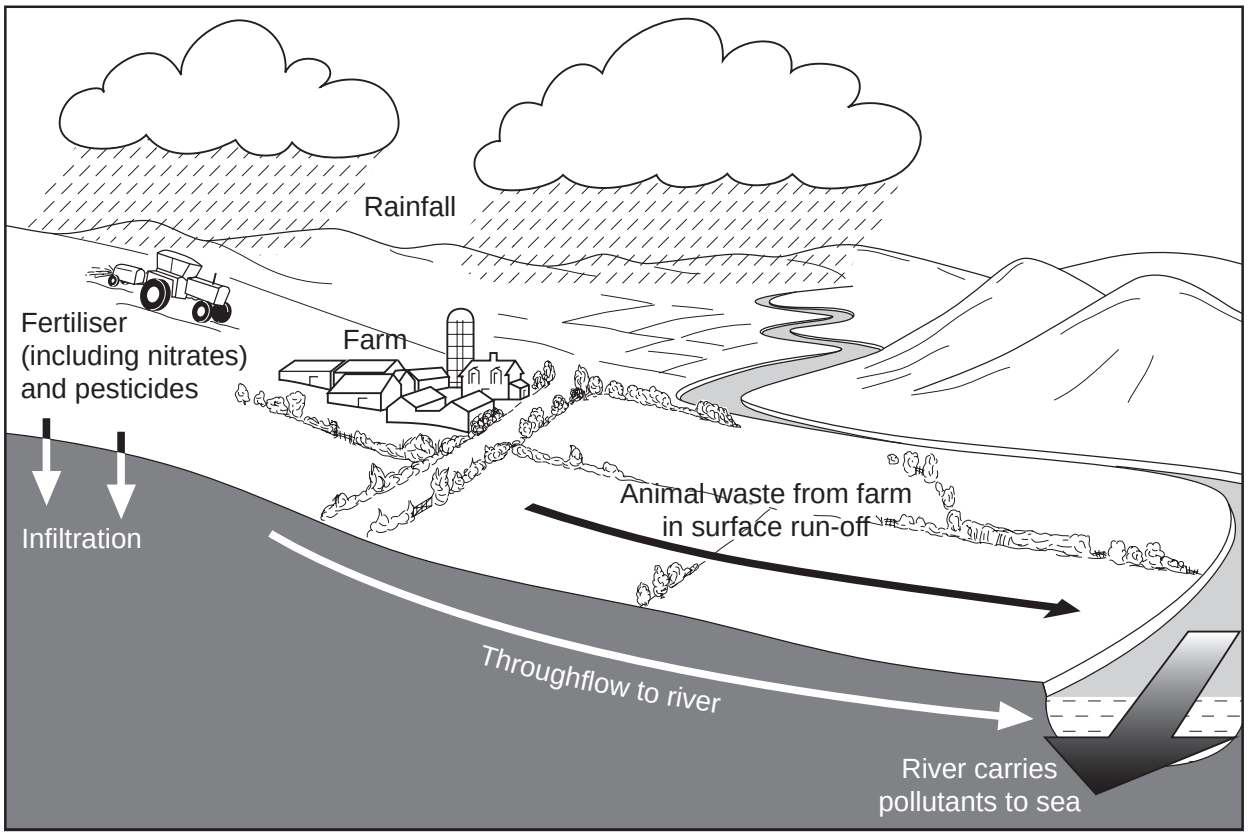

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(b) Explain the biological effects of agricultural pollution on a river.

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(c) Why is it difficult to reduce river pollution in large rivers in developing countries?

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Total [10]

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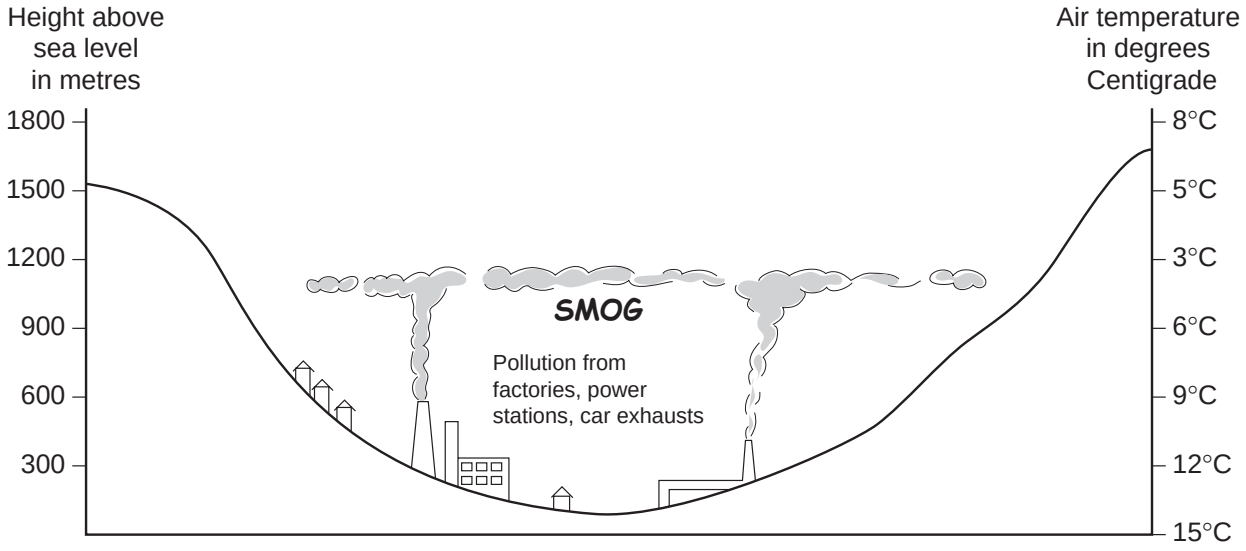
4 **(a)** The diagram below shows a valley where there are industries. Above a certain height above sea level, temperatures start to rise with increasing altitude.



(i) What name is given to the condition where air temperature rises with increasing height above sea level?

.....[1]

(ii) At what height above sea level are air temperatures lowest?

.....metres [1]

(iii) Use the diagram to explain how pollution becomes trapped in the valley.

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.....[2]

(b) Suggest and explain strategies to reduce atmospheric pollution from cars and factories.

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(c) Explain why CFCs are known to be atmospheric pollutants.

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Total [10]

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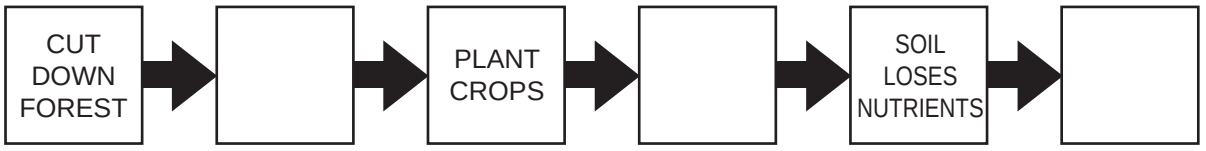
5 **(a)** 'The Kayapo are one of many tribes who live in the Amazon rainforest. They are hunter-gatherers and subsistence farmers, practising shifting cultivation. The Kayapo make 'gardens' in small forest clearings where they grow fruit trees and crops such as manioc and sweet potatoes. Having cleared the land by cutting down trees and burning the vegetation, they plant their crops. After four or five years, the heavy rains have washed away the soil nutrients. The Kayapo then move away to make a new forest garden. The forest clearings are small enough to allow the forest to re-grow within a few years.'

Use the above description of shifting cultivation to complete the flow diagram to show the sequence of events in shifting cultivation.

Shifting Cultivation



[3]

(b) What are the advantages of burning the vegetation before they plant their crops?

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.....[2]

(c) **(i)** Explain how shifting cultivation may be described as a sustainable activity.

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.....[2]

(ii) Explain why population growth might make shifting cultivation unsustainable.

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Total [10]

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6 **(a)** The graph and table below shows some information about population in a developed country (the United Kingdom).

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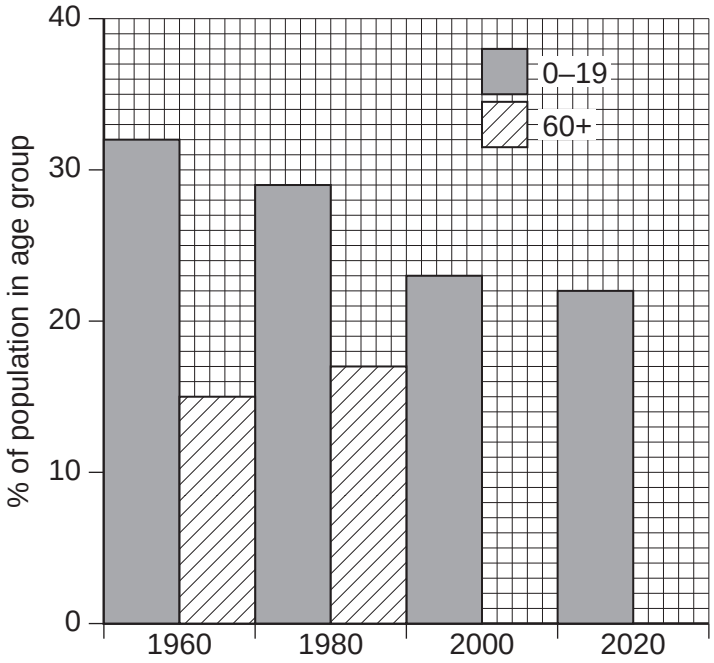

Year	% Age 0–19	% Age 60+
1960	32	15
1980	29	17
2000	23	21
2020*	22	24

*estimated

(i) Complete the graph by drawing bars for the 60+ population for 2000 and 2020. [2]

(ii) According to the figures, what is predicted to happen to the relationship between the two age groups by the year 2020?

.....

.....[1]

(b) Describe **two** problems that might arise as the percentage of elderly people in a population increases.

1.....

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2.....

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.....[4]

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(c) Describe strategies that may help reduce high levels of population increase in developing countries.

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.....[3]

Total [10]

Total for paper [60]

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