



UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
 General Certificate of Education
 Advanced Subsidiary Level

CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER



ENVIRONMENTAL MANAGEMENT

8291/11

Paper 1 Lithosphere and Atmosphere

May/June 2012

1 hour 30 minutes

Additional Materials: Answer Booklet/Paper

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, tables or rough working.
 Do not use staples, paper clips, highlighters, glue or correction fluid.
 DO **NOT** WRITE IN ANY BARCODES.

Section A

Answer **all** questions.
 Write your answers in the spaces provided on the question paper.

Section B

Answer **one** question from this section.
 Answer the question on the separate answer paper provided.

At the end of the examination,

1. fasten all separate answer paper securely to the question paper;
2. enter the question number from Section B in the grid opposite.

For Examiner's Use	
Section A	/
1	
2	
Section B	/
Total	

This document consists of **10** printed pages and **2** blank pages.



Section A

Answer **all** questions in this section.

For
Examiner's
Use

Write your answers in the spaces provided.

- 1 (a) What is meant by the terms *chemical weathering* and *mechanical weathering* of rocks? For each state an example.

chemical weathering

.....

.....

.....[2]

mechanical weathering

.....

.....

.....[2]

- (b) Fig. 1.1 shows a cross profile of a slope in which rock structure, weathering, coastal erosion and mass movements are important.



Fig. 1.1

(iii) Describe and give **one** reason for the decrease in atmospheric pressure shown in Fig. 2.1.

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.....[3]

(b) The following gases make a contribution to the depletion of the ozone layer and/or global warming: CFCs, carbon dioxide, nitrogen oxides (NO_x), methane and water vapour.

Complete Table 2.1 to show the contribution made by each gas. [4]

The first row has been completed for you.

Table 2.1

gases	global warming	ozone depletion
carbon dioxide	yes	no
methane		
nitrogen oxides		
CFCs		
water vapour		

(c) Explain **two** differences between the processes that lead to ozone depletion and global warming.

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.....[4]

[Total: 20]

Section B

Answer **one** question from this section.

- 3 (a) Fig. 3.1 shows the motion of a wind driven ocean wave and a tsunami.

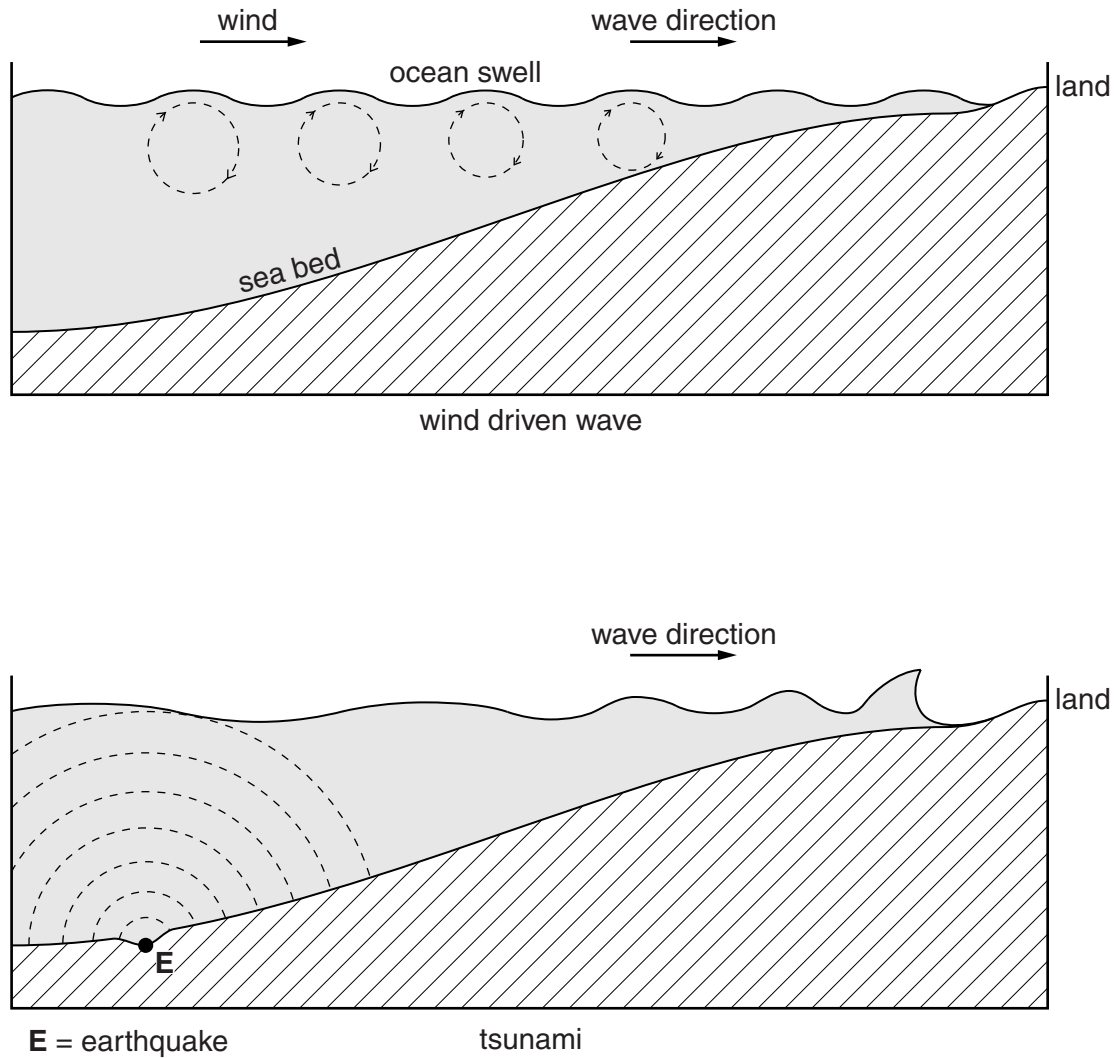


Fig. 3.1

Using the information in Fig. 3.1, briefly explain how the wave motion differs in the two cases. Explain why tsunamis are more devastating in their effects than normal wind driven waves. [10]

- (b) Using recent examples with which you are familiar, describe and explain the effects that a powerful earthquake may have upon places both near and distant from its epicentre. Assess the measures that were adopted to reduce the effects of the examples you have chosen. [30]

[Total: 40]

- 4 (a) Briefly describe the distribution of deaths from urban air pollution (UAP) shown in Fig. 4.1. Suggest **two** reasons for this distribution. [10]

deaths from urban air pollution

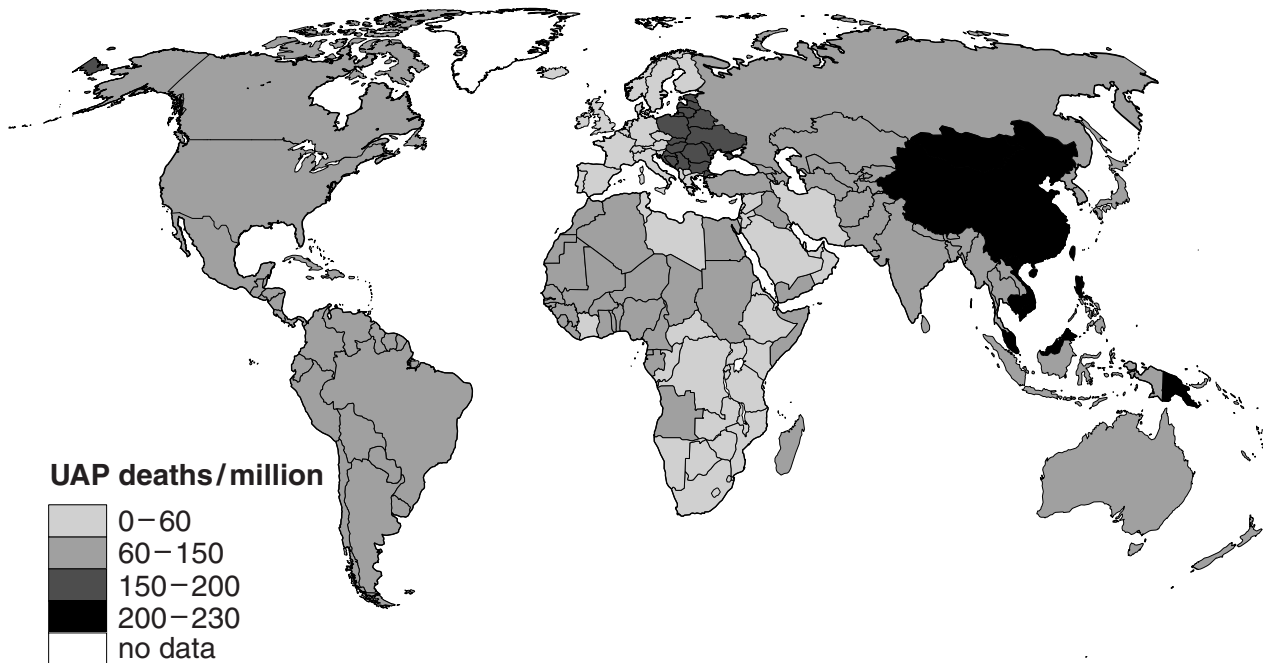


Fig. 4.1

- (b) With reference to examples of urban areas with which you are familiar, evaluate the measures that are being used to reduce the volume and effects of urban air pollution. [30]

[Total: 40]

- 5 (a) Fig. 5.1 shows an interrelationship between resources, industrial output, population and pollution for the period 1900 to 2100.

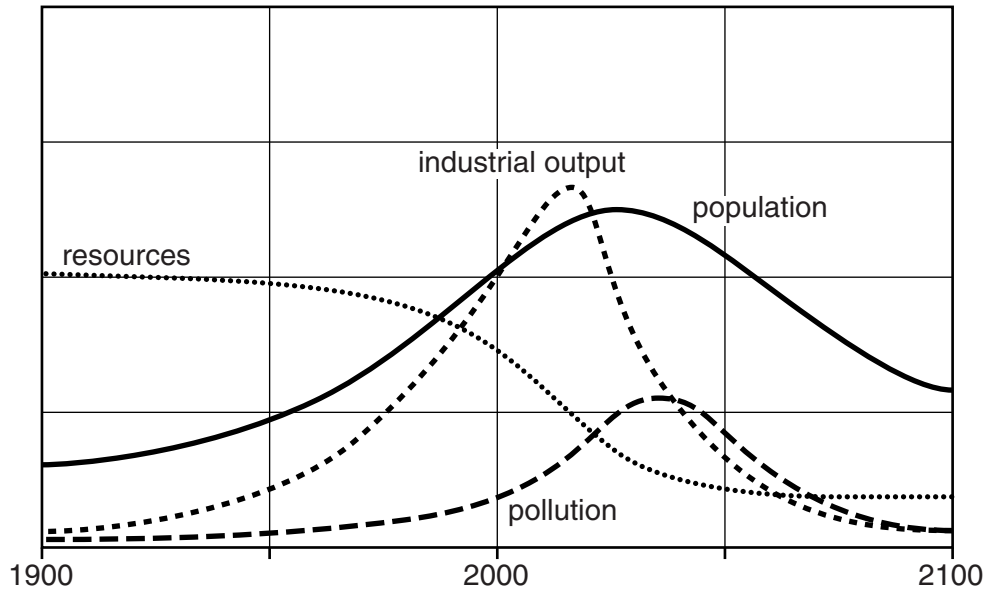


Fig. 5.1

Briefly describe how changes to the size of the world's population are related to the other components of the model. [10]

- (b) To what extent are MEDCs more likely to meet the future resource needs of their populations than LEDCs? Your answer should include examples from each group of countries. [30]

[Total: 40]

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Copyright Acknowledgements:

Question 4 Figure 4.1 © ADAPTED; <http://www.wunderground.com/health/airpollution.asp>.

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