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

CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER

ENVIRONMENTAL MANAGEMENT **8291/12**

Paper 1 Lithosphere and Atmosphere **October/November 2013**

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.

Electronic calculators may be used.
You may lose marks if you do not show your working or if you do not use appropriate units.

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 **12** printed pages.

UNIVERSITY of CAMBRIDGE International Examinations

Section A

Answer **all** questions in this section.

Write your answers in the spaces provided.

1 **(a)** Fig. 1.1 shows world energy consumption in terms of different resources between 1985 and 2010.

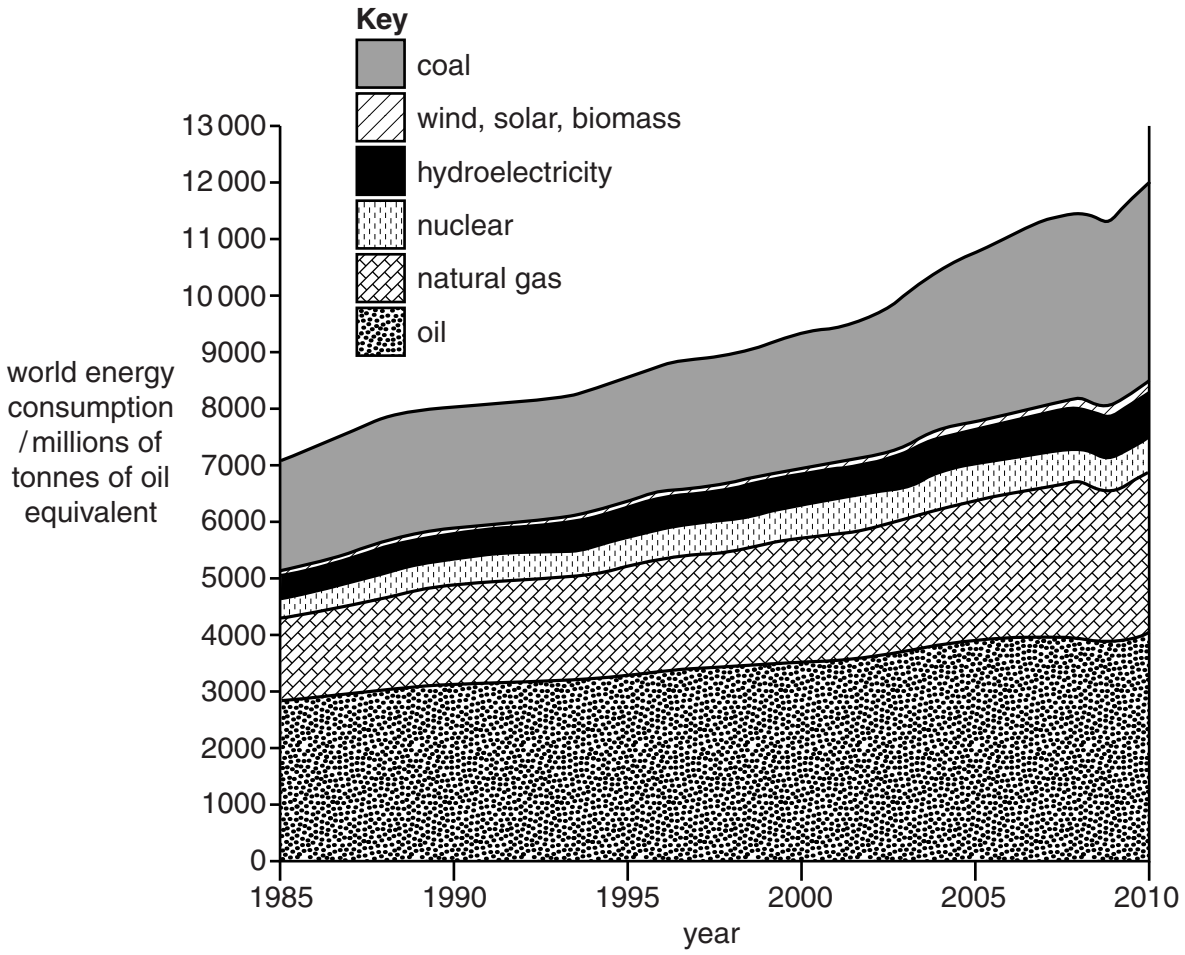

Fig. 1.1

(i) From Fig. 1.1 name **three** non-renewable resources.

.....[1]

(ii) By how much, in millions of tonnes of oil equivalent, has:

- total energy consumption increased between 1985 and 2010,

  .....

- consumption of coal increased between 1985 and 2010?

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  .....[3]

(iii) With reference to Fig. 1.1, give reasons for the change in consumption of **one** renewable energy resource and **one** non-renewable energy resource.

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(b) Fig. 1.2 shows percentage energy consumption by resource for France and I... 2006.

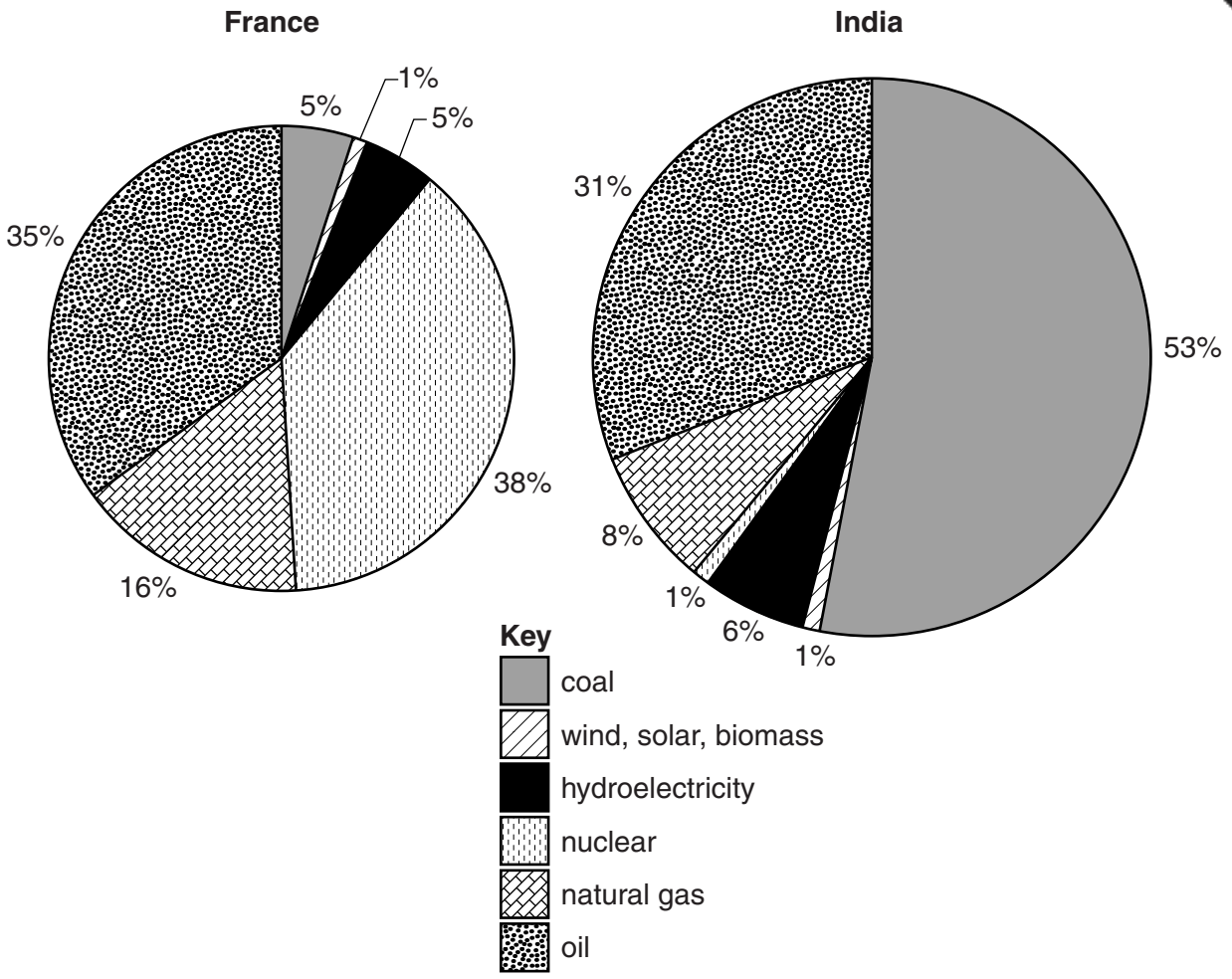

Fig. 1.2

(i) State **two** ways in which the energy consumption of France and India are different.

Briefly explain the differences you have identified.

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(ii) State **two** ways in which the energy consumption of France and India are si

Briefly explain the similarities you have identified.

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[Total: 20]

2 **(a)** Fig. 2.1 shows the direction of horizontal and vertical air movement across the E

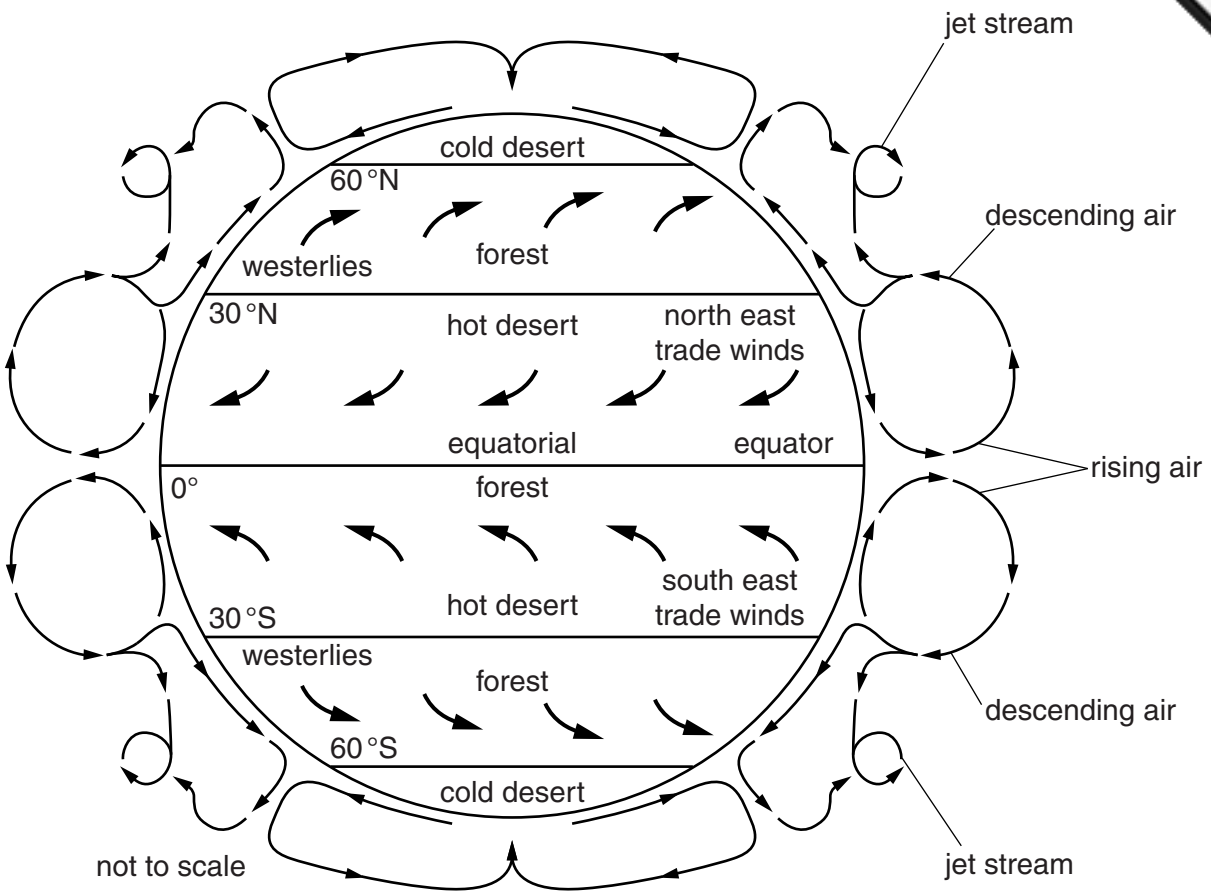

Fig. 2.1

(i) Describe the pattern of horizontal air movement for **either** the northern hemisphere **or** the southern hemisphere between 0° and 60° as shown in Fig. 2.1.

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(ii) Using the information in Fig. 2.1, explain how atmospheric pressure influences the direction of horizontal movement of air across the Earth's surface.

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.....[3]

(iii) State one other factor that influences the direction of horizontal air movement shown in Fig. 2.1.

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.....[1]

(b) Fig. 2.2 shows a more localised process in which prevailing winds cross a me… range.

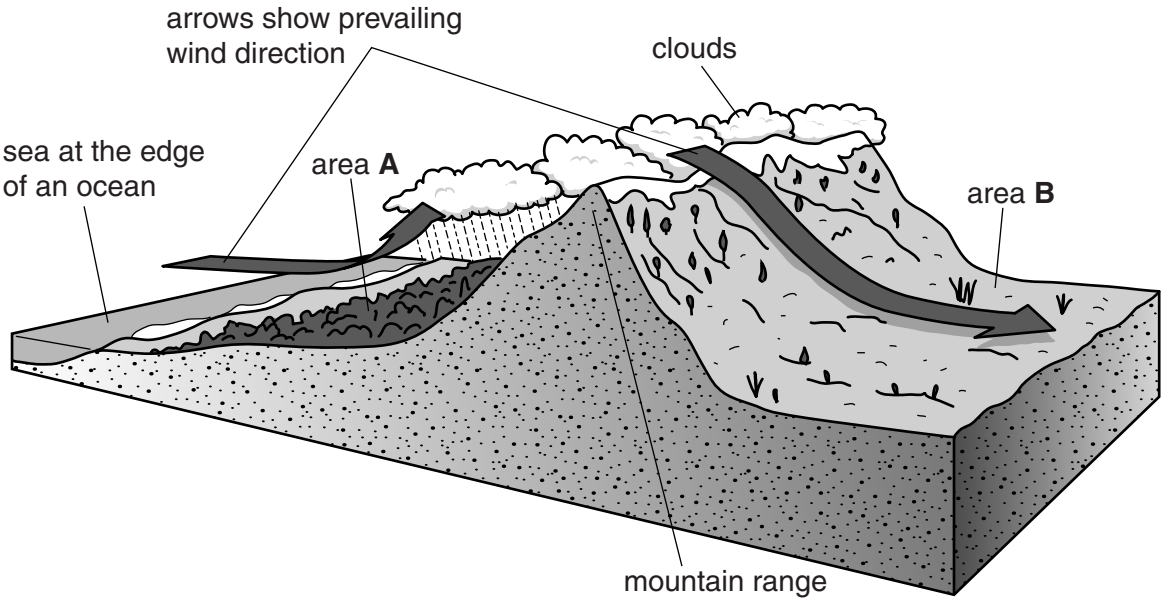

Fig. 2.2

(i) Describe and explain the different weather conditions likely to be experienced in areas **A** and **B** in Fig. 2.2.

A.....

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B.....

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.....[8]

(ii) Describe environmental hazards that could occur at each of **A** and **B** as a result of the processes shown in Fig. 2.2.

A.....

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B.....

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.....[5]

[Total: 20]

Section B

Answer **one** question from this section.

3 **(a)** Fig. 3.1 shows the profile of a podzol soil developed beneath temperate coniferous forest.

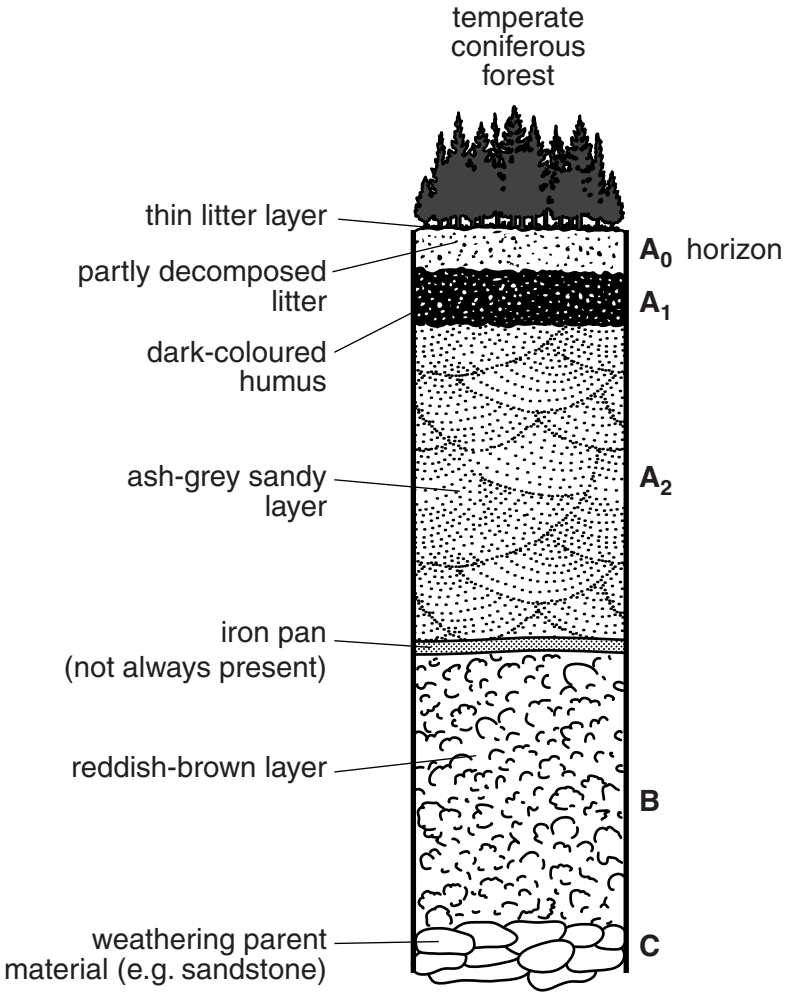

Fig. 3.1

Briefly explain the role of water and climate in the development of the soil profile shown in Fig. 3.1. [10]

(b) With reference to both LEDCs and MEDCs, describe how human activity has caused soil degradation. For such circumstances, assess the methods that may be used to ensure that soils are used sustainably. [30]

[Total: 40]

4 **(a)** Fig. 4.1 shows an area of Moscow that suffers from atmospheric pollution.

Fig. 4.1

Identify **two** different types of atmospheric pollution that occur in the area shown in Fig. 4.1 and describe the effects they would have upon the nearby urban environment. [10]

(b) With reference to **one** urban area with which you are familiar, assess the methods that have been used to reduce its atmospheric pollution. [30]

[Total: 40]

5 **(a)** Fig. 5.1 shows **two** different types of mass movement.

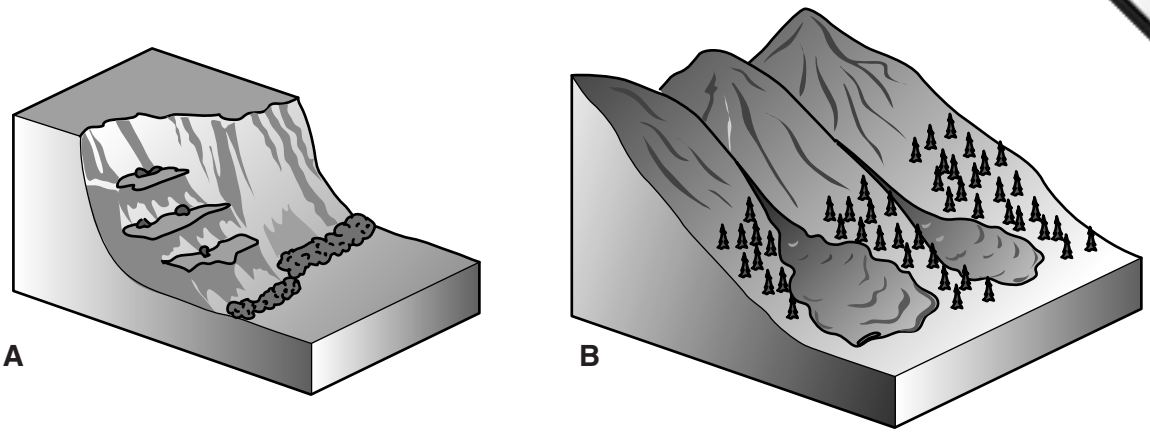

Fig. 5.1

Describe and explain the characteristics of the **two** types of mass movement (**A** and **B**) shown in Fig. 5.1. [10]

(b) With reference to examples with which you are familiar, describe and explain the factors that contribute to slope instability. For the examples you have chosen, assess the methods that can be used to maintain slope stability. [30]

[Total: 40]