

CANDIDATE
NAME

CENTRE
NUMBER

--	--	--	--	--

CANDIDATE
NUMBER

--	--	--	--



ENVIRONMENTAL MANAGEMENT

8291/11

Paper 1 Lithosphere and Atmosphere

October/November 2015

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 an HB pencil for any diagrams or graphs.
Do not use staples, paper clips, 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 **10** printed pages and **2** blank pages.

Section A

Answer **all** questions in this section.

Write your answers in the spaces provided.

1 (a) Fig. 1.1 shows a pattern of global air circulation in the troposphere.

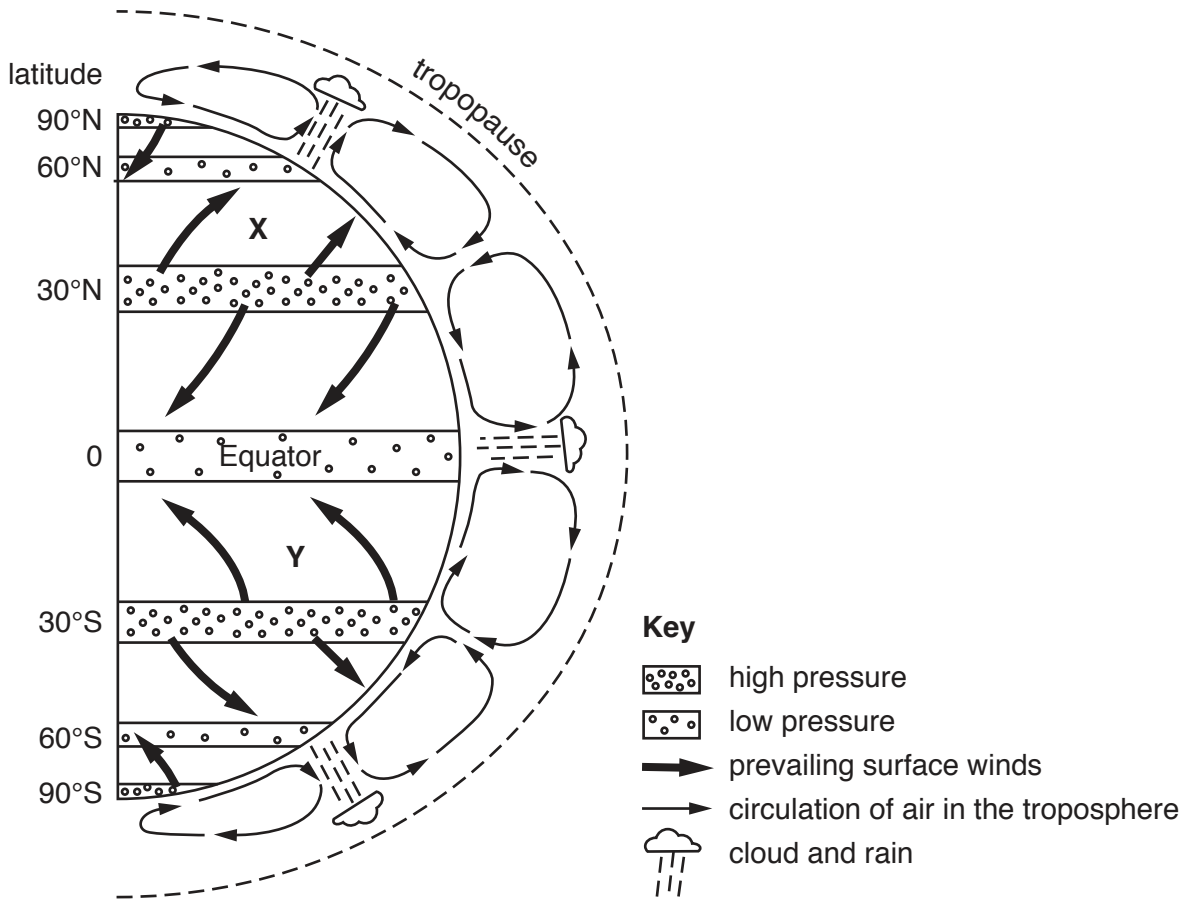


Fig. 1.1

(i) State the name of the prevailing surface winds found at **X** and **Y**, as shown on Fig. 1.1.

X

Y[2]

(ii) Describe **two** factors that influence the direction of prevailing surface winds as shown in Fig. 1.1.

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....[4]

(iii) With reference to Fig. 1.1, explain why cloud and rain often occur at the Equator.

.....
.....
.....
.....
.....
.....
.....
.....[3]

(iv) With reference to Fig. 1.1, explain why the areas around 30°N and 30°S are prone to drought.

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....[4]

- 2 (a) Fig. 2.1 shows a simplified cross-section of the boundary between the Indo-Australian and Pacific plates.

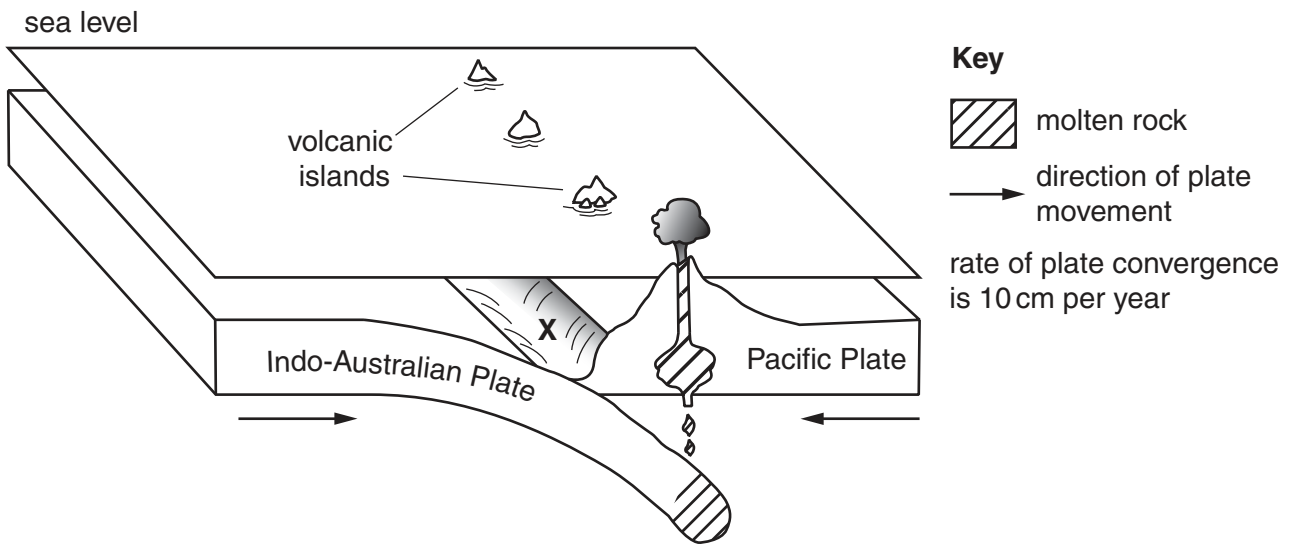


Fig. 2.1

- (i) State the name of the feature labelled with an X on Fig. 2.1.

.....[1]

- (ii) State the name of the plate that is being subducted in Fig. 2.1.

.....[1]

- (iii) With reference to Fig. 2.1, describe how the process of subduction leads to frequent volcanic activity.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....[4]

(b) Fig. 2.2 is a website report of a tsunami which occurred on 2 April 2007.

Dozens feared dead in Solomon Islands tsunami

Dozens of people are feared dead in the Solomon Islands, after an under-sea earthquake caused a powerful tsunami to sweep across the South Pacific.

The earthquake, and a series of aftershocks, prompted a tsunami alert across much of the Pacific region. The earthquake, measuring 8.0 on the Richter scale, sent a wall of water five metres high crashing over coastal villages in the west of the low-lying islands.

The islands are popular with international travellers for scuba diving. Most homes in the islands are constructed of timber and bamboo, with villagers relying on fishing and logging for their livelihood.

Fig. 2.2

(i) State what is meant by the term *tsunami*.

.....

.....

.....

.....[2]

(ii) With reference to Fig. 2.2, explain why the Solomon Islands experience tsunamis.

.....

.....

.....

.....[2]

Section B

Answer **one** question from this section.

- 3 Fig. 3.1 is a map showing noise levels produced by all forms of traffic in the city of Berlin in Germany.

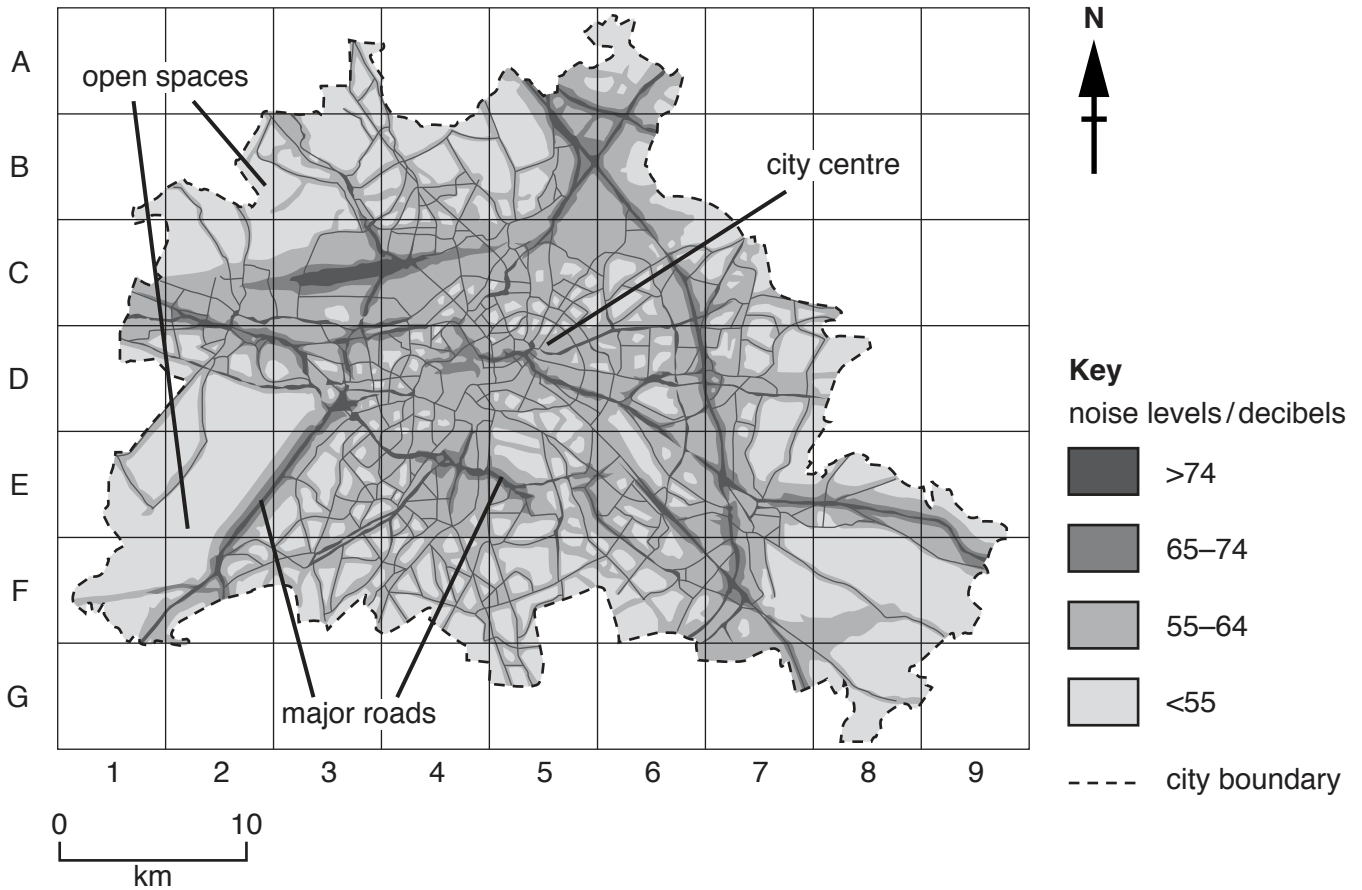
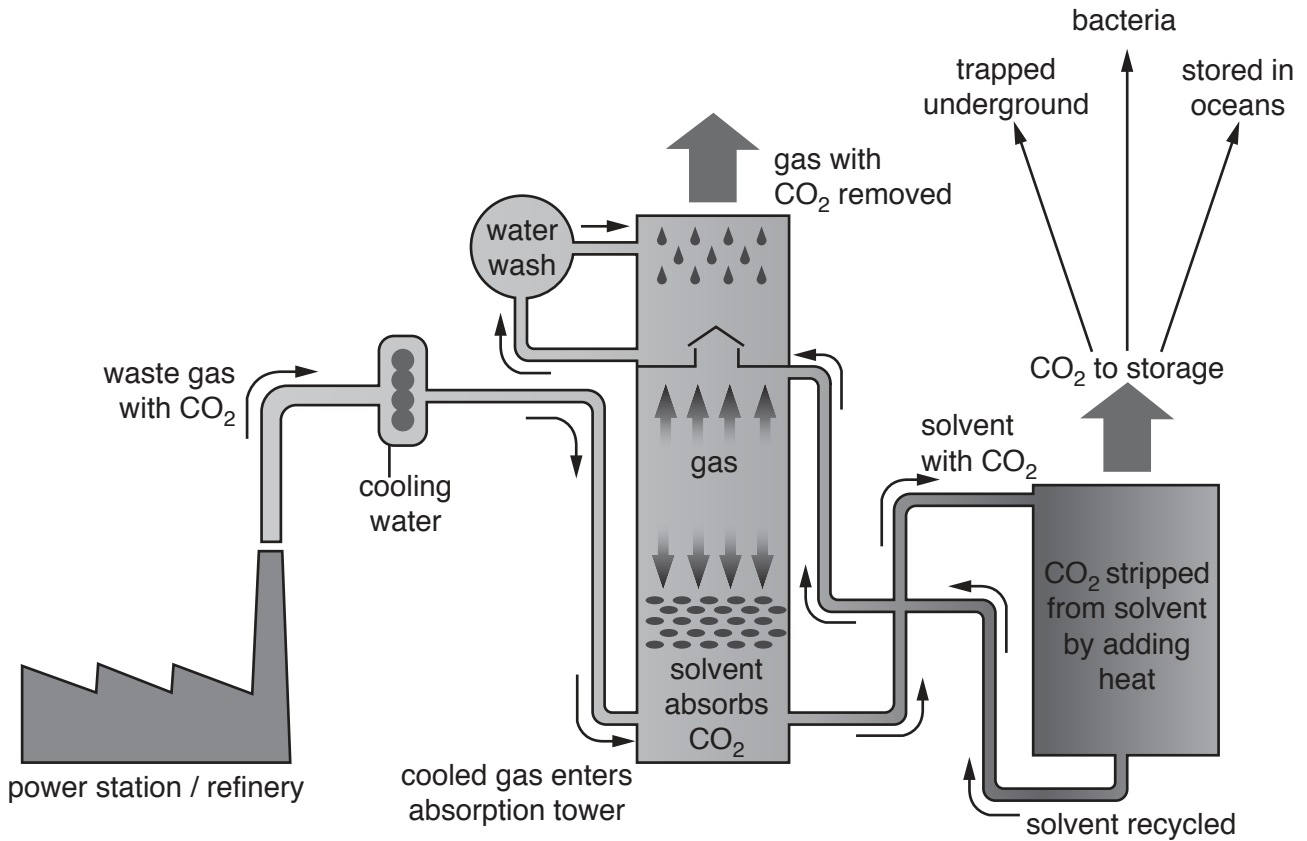


Fig. 3.1

- (a) With reference to Fig. 3.1, describe the pattern of noise shown **and** suggest possible explanations for this pattern. [10]
- (b) With reference to examples with which you are familiar, describe the effects of noise pollution in urban areas. Assess the strategies for reducing noise in these areas. [30]

[Total: 40]

- 4 Fig. 4.1 is a diagram describing the process of carbon capture and storage. Carbon capture is a method of reducing excess atmospheric carbon dioxide.



Key

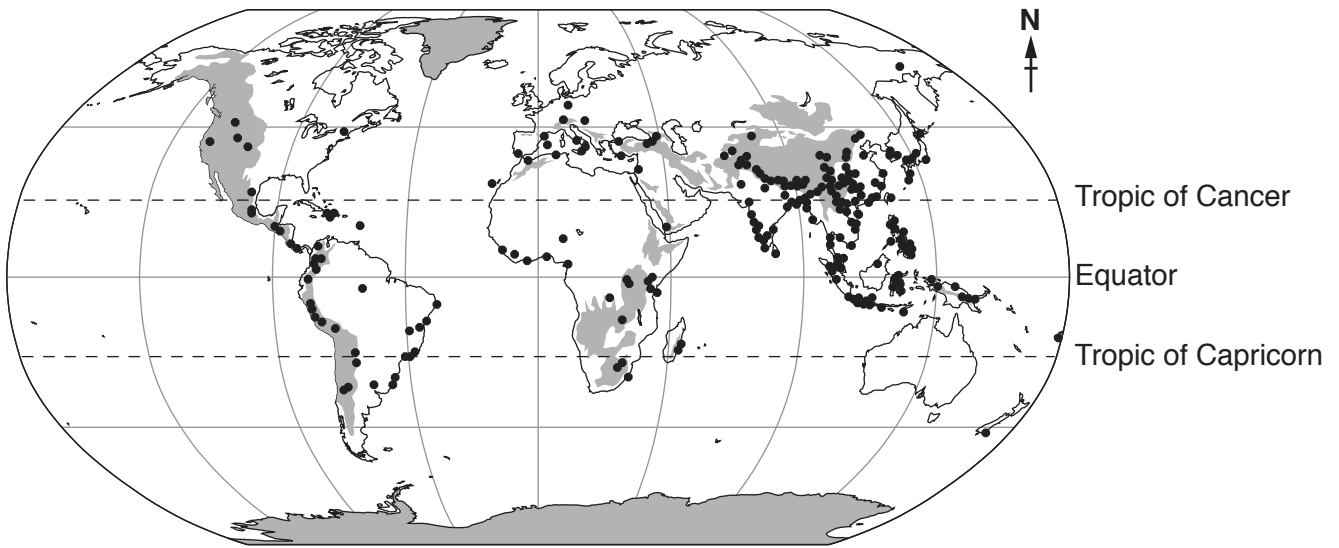
CO₂ carbon dioxide

Fig. 4.1

- (a) With reference to Fig. 4.1, describe the process of carbon capture and storage. [10]
- (b) With reference to examples from both LEDCs and MEDCs, assess the consequences of failing to reduce carbon dioxide emissions for both the natural environment and for human populations. [30]

[Total: 40]

5 Fig. 5.1 shows the global distribution of landslides over a two-year period which resulted in deaths.



Key

- landslide resulting in deaths

elevation / m

■ greater than 1000

□ 1000 or less

Fig. 5.1

- (a) Describe the distribution of landslides resulting in deaths shown in Fig. 5.1. Suggest **two** possible reasons for this distribution. [10]
- (b) Using examples with which you are familiar, describe the management of mass movements on gentle **and** steep slopes. Explain why it is often difficult to manage the prevention of mass movements. [30]

[Total: 40]

BLANK PAGE

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (UCLES) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.

To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced online in the Cambridge International Examinations Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download at www.cie.org.uk after the live examination series.

Cambridge International Examinations is part of the Cambridge Assessment Group. Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge.