Cambridge International AS Level

Cambridge International Examinations
Cambridge International Advanced Subsidiary Level

CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER

ENVIRONMENTAL MANAGEMENT **8291/23**

Paper 2 Hydrosphere and Biosphere **May/June 2014**

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 **11** printed pages and **1** blank page.

CAMBRIDGE International Examinations

Section A

Answer **all** questions in this section.

Write your answers in the spaces provided.

1 Fig. 1.1 shows the main features of the global water cycle.

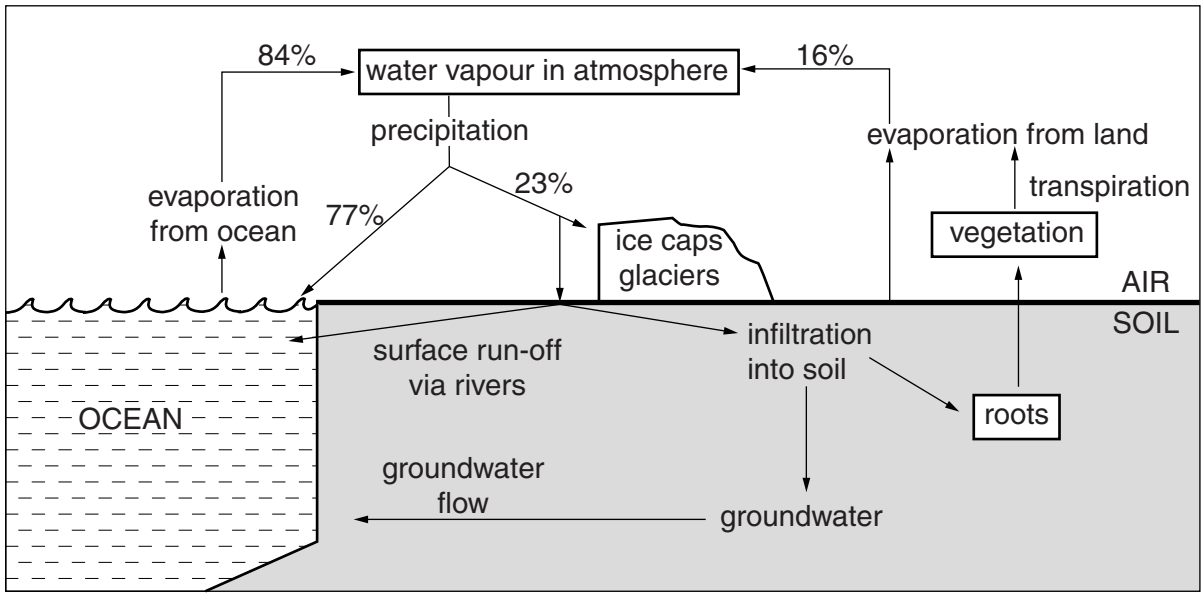

Fig. 1.1

(a) What is meant by the terms *run-off, groundwater and infiltration*?

run-off .....

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groundwater .....

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infiltration .....

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[3]

(b) Describe and explain the role of vegetation in the global water cycle shown in Fig

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(c) Describe and explain the changes in the state of water (solid, liquid and gas) in the global water cycle shown in Fig. 1.1.

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(d) (i) With reference to Fig. 1.1, suggest how global warming may affect the global

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(ii) Outline **one** other way human activity could affect the global water cycle shown in Fig. 1.1.

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.....[2]

[Total: 20]

2 **(a)** Tropical rainforests are among the most productive ecosystems in the world. The[illegible] occur on nutrient poor soils.

Explain why these ecosystems are so productive, despite rainforest soils being nutrient p[illegible]

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Fig. 2.1 shows a slash and burn cycle of land use in a tropical rainforest.

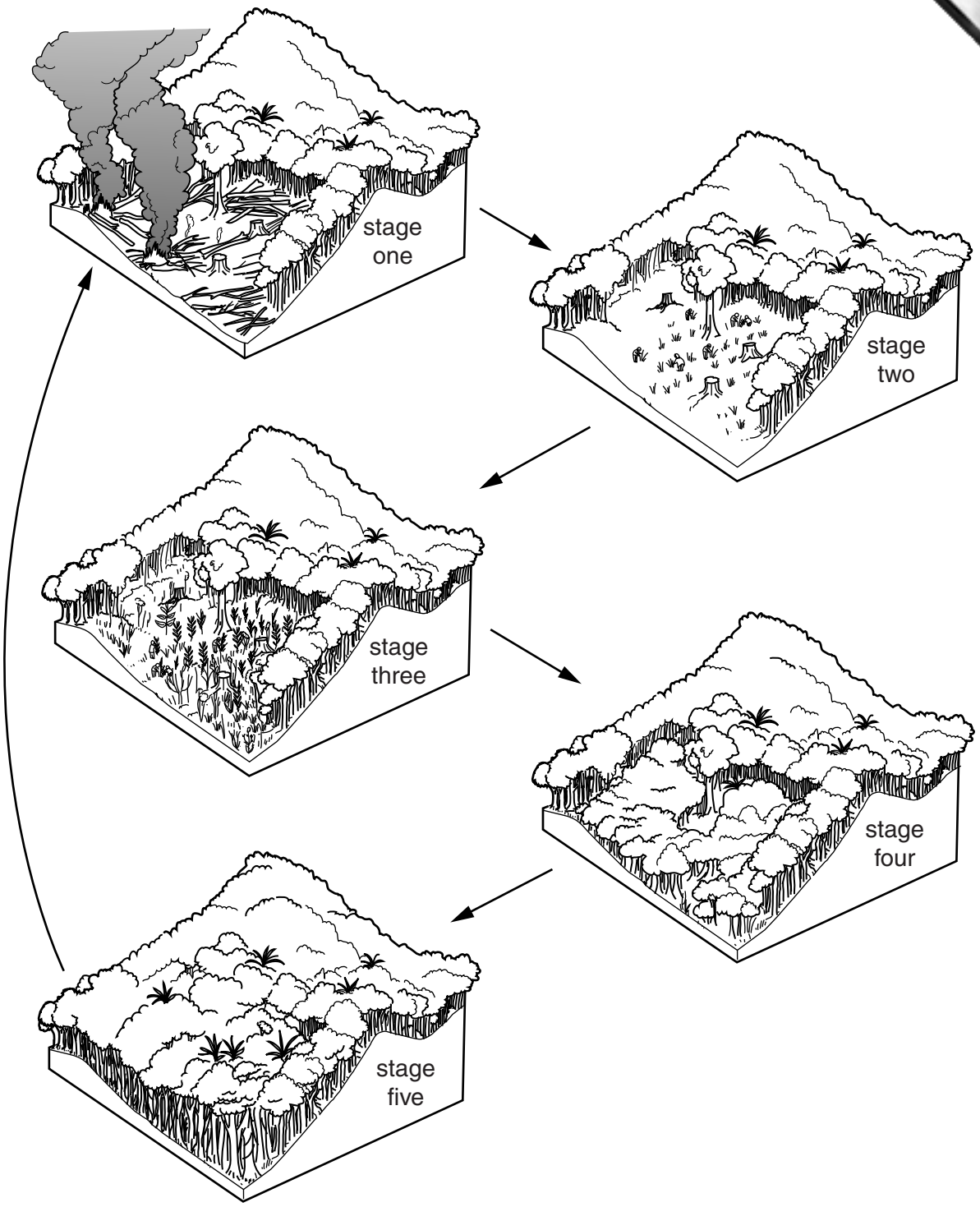

Fig. 2.1

(b) Briefly describe the slash and burn cycle of land use shown in Fig. 2.1.

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(c) Explain why this type of land use becomes less sustainable if human population increases in size and density.

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.....[10]

[Total: 20]

Section B

Answer **one** question from this section.

3 Fig. 3.1 shows the the oil trade transported by ship and the number of oil tanker spills from 1970 to 2011.

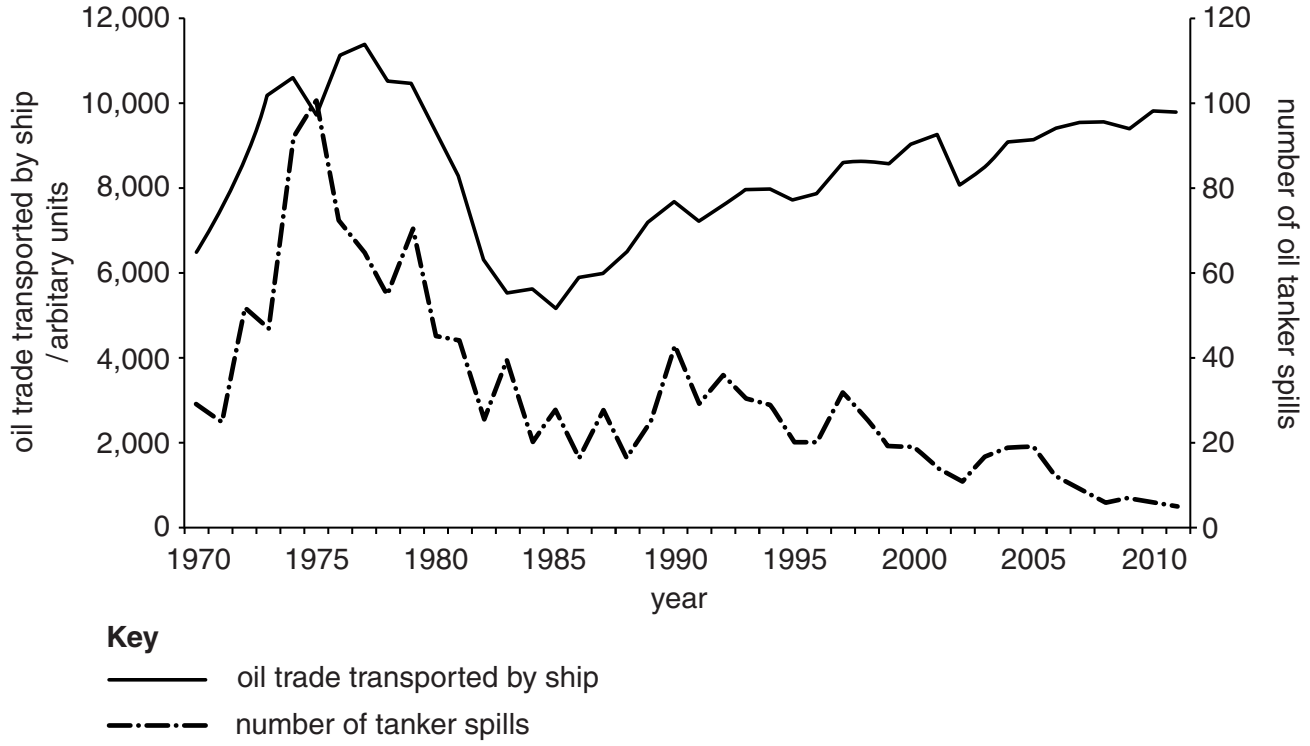

Fig. 3.1

(a) For the period 1970 to 2011, describe and explain the trends in oil trade transported by ship and the number of oil tanker spills shown in Fig. 3.1. [10]

(b) With reference to examples with which you are familiar, describe and assess the effectiveness of measures that have been used to combat effects of marine pollution hazards **and** explain why it is difficult to control marine pollution. [30]

[Total: 40]

4 Fig. 4.1 shows the routes of Libya's main pipelines, designed to bring water from the g[illegible] basins in the Sahara desert to the coastal cities.

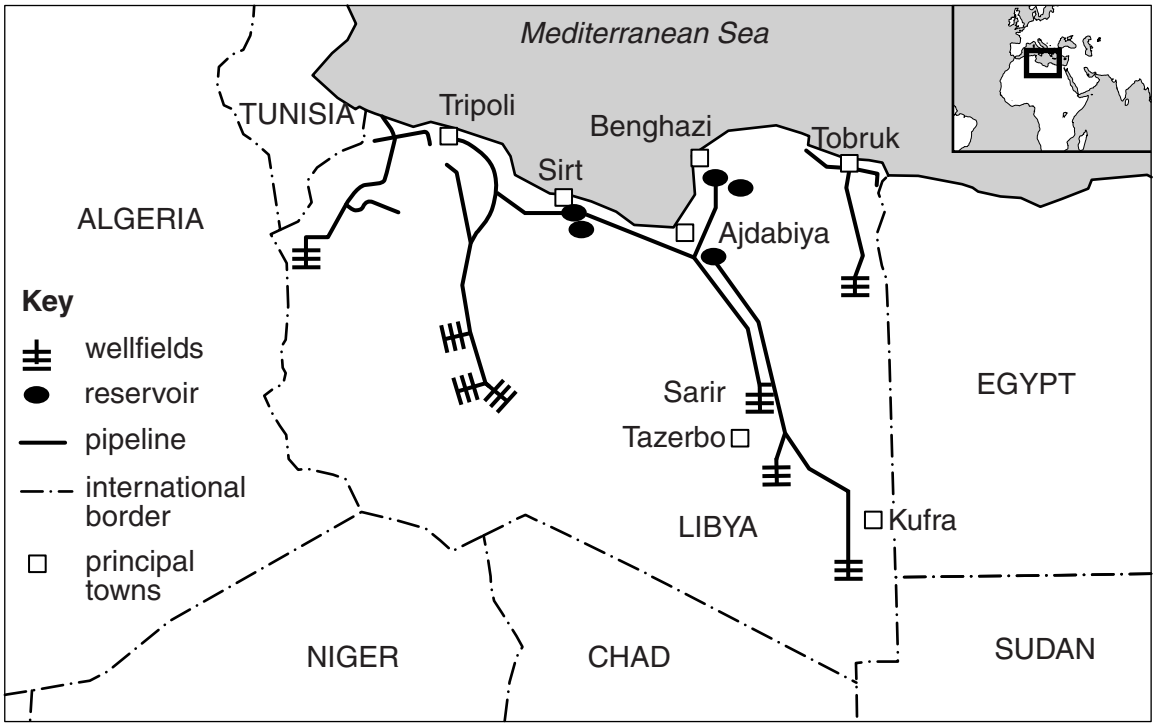

Fig. 4.1

(a) Briefly describe and explain both the advantages and disadvantages of pipeline projects, such as the one shown in Fig. 4.1. [10]

(b) Using examples with which you are familiar, assess the extent to which MEDCs find it easier to achieve a sustainable supply of water than LEDCs. [30]

[Total: 40]

5 Fig. 5.1 shows the total catch in tonnes of cod off Newfoundland (Canada).

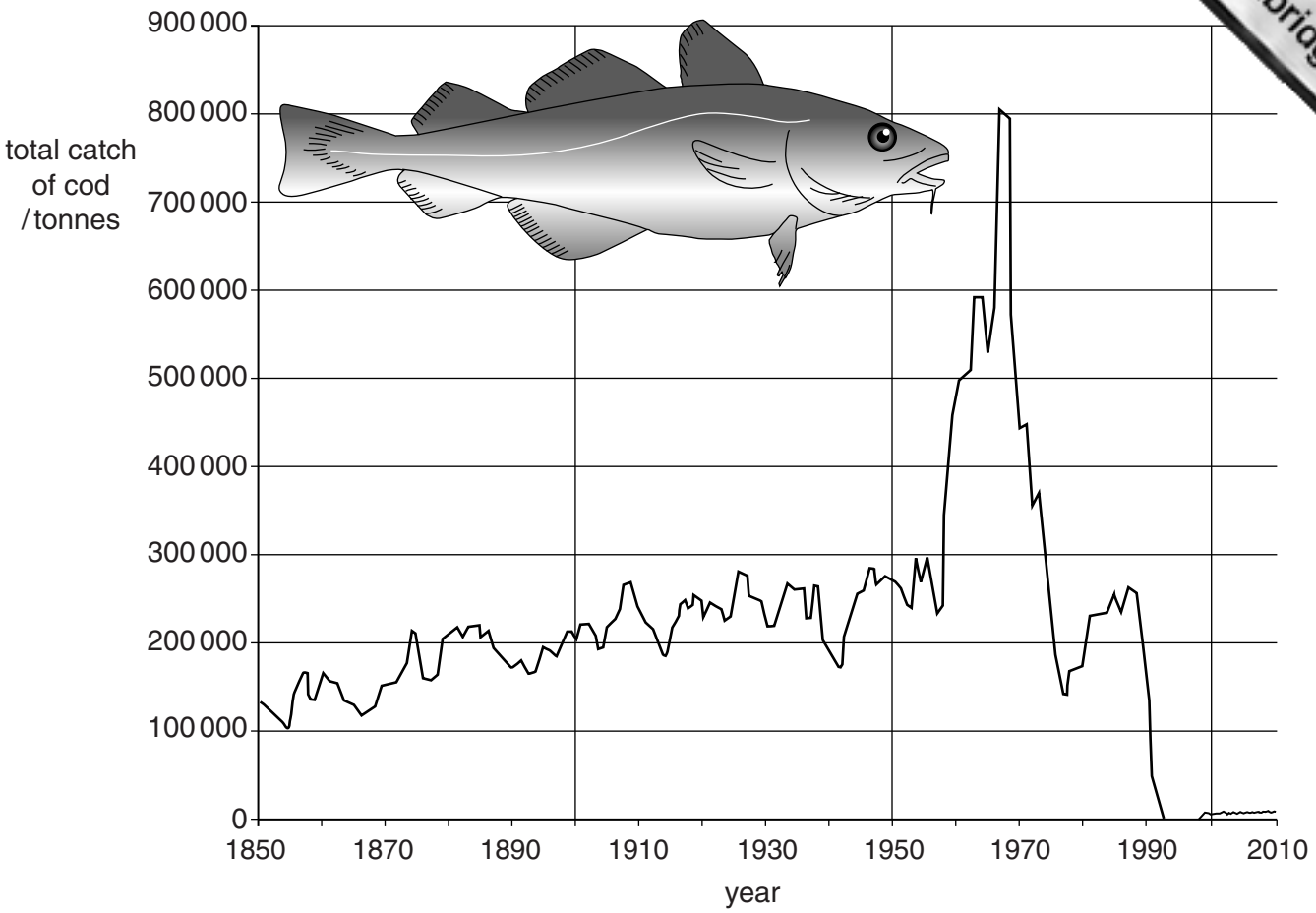

Fig. 5.1

(a) Describe and explain the changes in the total catch of cod in the years between 1850 and 2010 shown in Fig. 5.1. [10]

(b) With reference to examples with which you are familiar, describe the impact of human activities on marine ecosystems **and** assess the measures that are being used to conserve these ecosystems. [30]

[Total: 40]

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