



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

CANDIDATE
 NAME

CENTRE
 NUMBER

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CANDIDATE
 NUMBER

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ENVIRONMENTAL MANAGEMENT

8291/21

Paper 2 Hydrosphere and Biosphere

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



- 2 (a) Study Fig. 2.1 which shows information on the number of people unserved by water supply and sanitation.

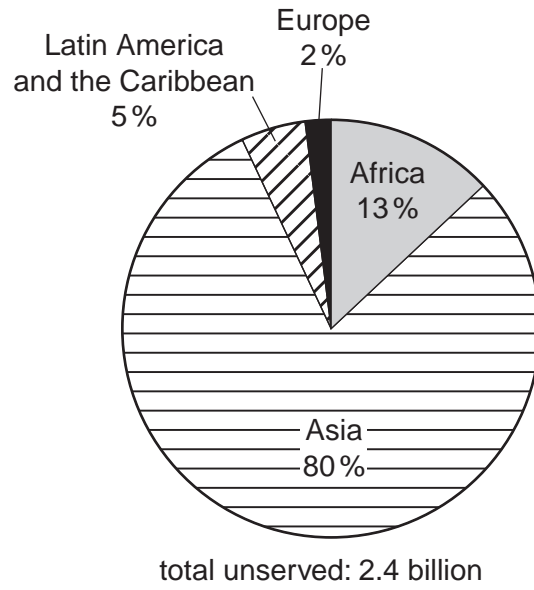


Fig. 2.1

- (i) State the difference in the percentage of people unserved by water supply and sanitation in:

- Europe and Africa
- Asia and Africa [2]

- (ii) Suggest **one** reason for the difference between:

- Europe and Africa

- Asia and Africa

 [4]

Section B

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

- 3 (a) Hydrographs are visual representations of the variation in river discharge over time. Describe and explain how the river discharge shown in Fig. 3.1 responds, over time, to the rainfall event shown in the graph. [10]

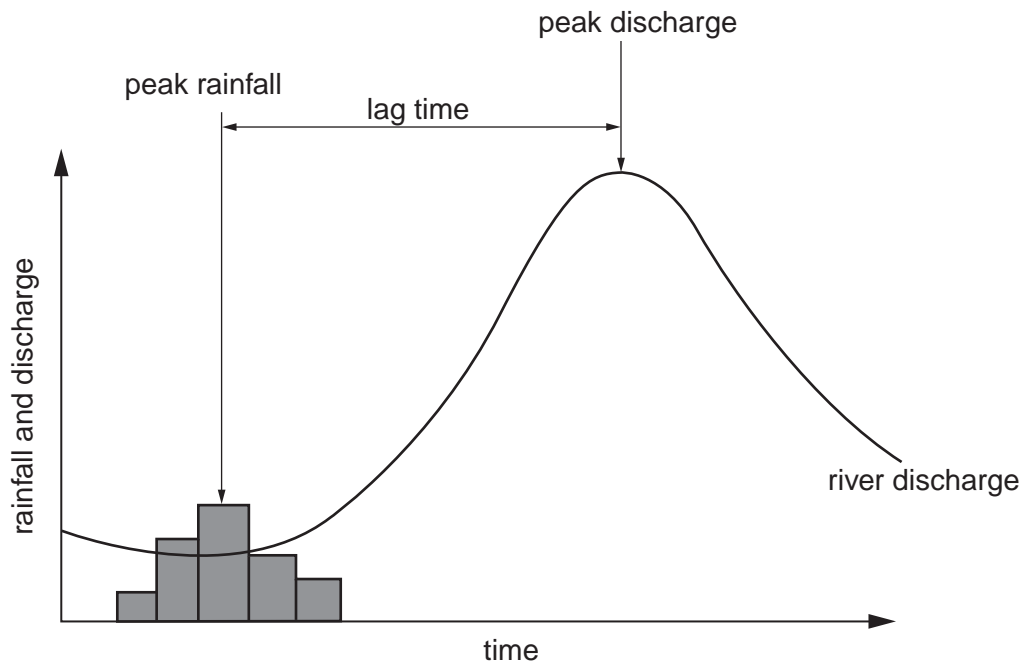


Fig. 3.1

- (b) Some hydrologists argue that it is inevitable that some rivers will flood. With reference to examples you have studied, assess the extent to which human activity can contribute to river flooding. [30]

[Total: 40]

- 4 (a) Most of the region shown in Fig. 4.1 consists of tropical rain forest. Fig. 4.1 shows pressures on this region through illegal logging, mining and hunting.

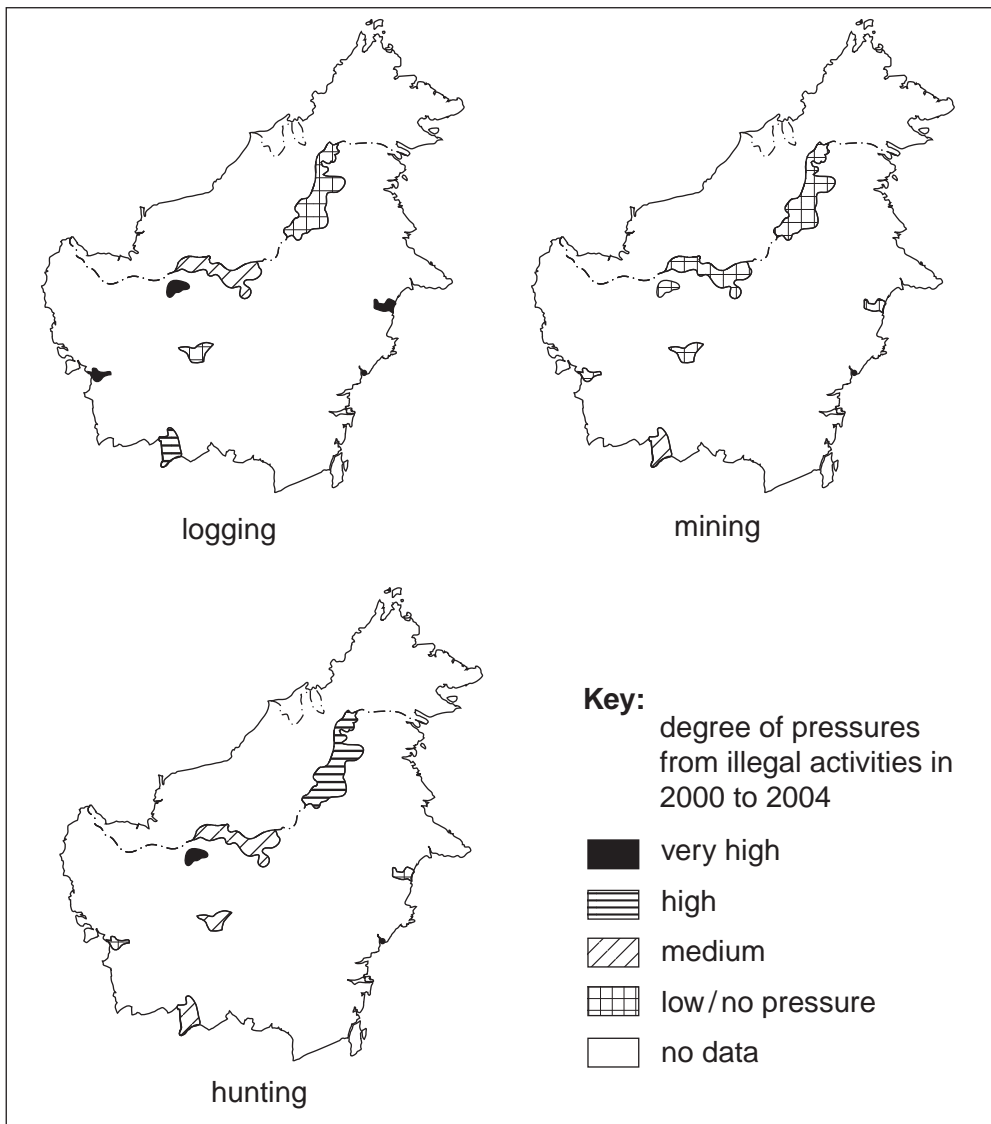


Fig. 4.1

Briefly describe the extent of pressures from these illegal activities upon the tropical rain forest of this region. [10]

- (b) With reference to named examples, describe the policies that are being used to conserve ecologically important areas. Assess the extent to which these policies have been successful. [30]

[Total: 40]

- 5 (a) Use the information shown in Fig. 5.1 to describe how an urban water cycle sustainable.

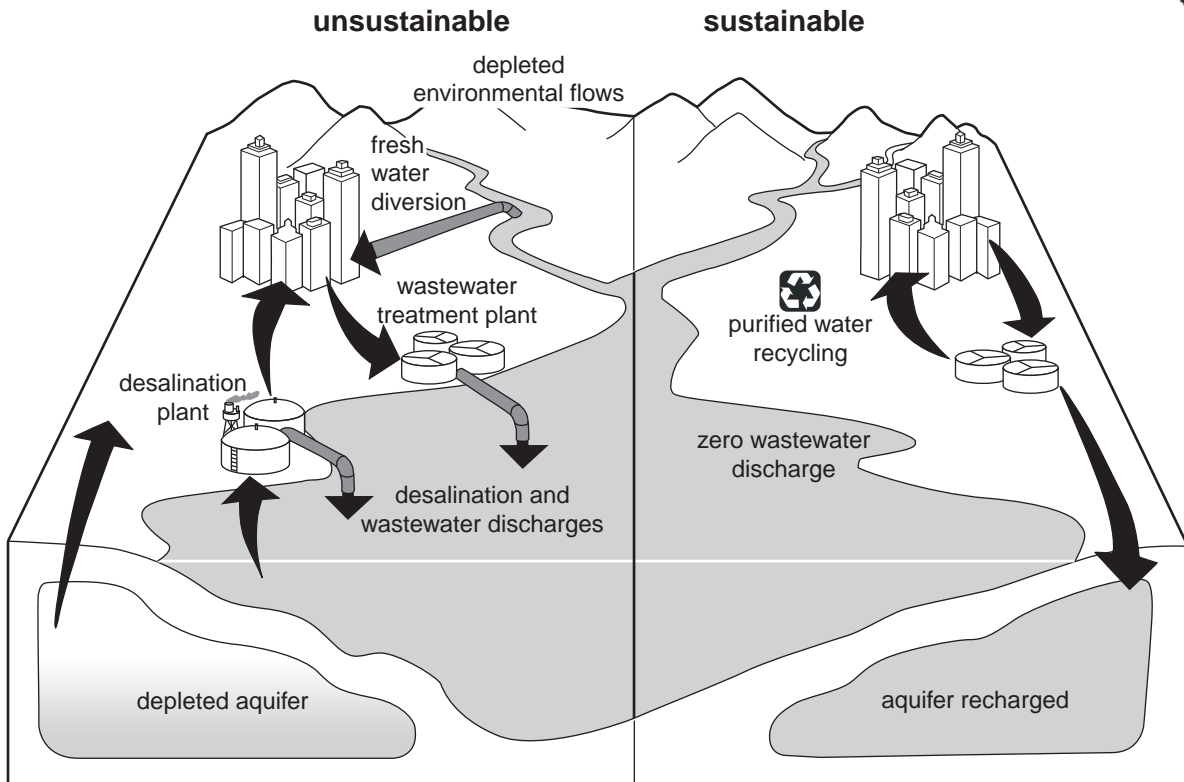


Fig. 5.1

- (b) With reference to a large urban area you have studied, assess the measures that are being used to manage the pollution of rivers by industrial and domestic waste. [30]

[Total: 40]

Copyright Acknowledgements:

Question 1a Figure. 1.1	© K Byrne; <i>Environmental Science</i> ; Nelson Thomas and Sons; 2001.
Question 1c Figure. 1.2	© Reimar 6/Alamy; <i>Thick tropical rainforest jungle and stream with waterfall at Poas volcano Costa Rica</i> ; March 2008.
Question 2b Figure. 2.2	© http://ga.water.usgs.gov/edu/waterquality.html .
Question 2c Figure. 2.3	© http://www.grida.no/publications/vg/water2/page/3229.aspx .
Question 4a Figure. 4.1	© http://maps.grida.no/region/geoasiap/ .
Question 5a Figure. 5.1	© http://www.cleanocean.org/The%20sustainable%20urban%20water%20cycle.jpg .

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