



UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS  
International General Certificate of Secondary Education

CANDIDATE  
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**GEOGRAPHY**

**0460/12**

Paper 1

**October/November 2013**

**1 hour 45 minutes**

Candidates answer on the Question Paper.

Additional Materials:     Ruler  
                                     Protractor  
                                     Calculator

**READ THESE INSTRUCTIONS FIRST**

Write your Centre number, candidate number and name in the spaces provided.  
Write in dark blue or black pen.  
You may use a soft pencil for any diagrams, graphs or rough working.  
Do not use staples, paper clips, highlighters, glue or correction fluid.  
**DO NOT WRITE ON ANY BARCODES.**

Write your answer to each question in the space provided.  
If additional space is required, you should use the lined page at the end of this booklet. The question number(s) must be clearly shown.

Answer **three** questions.

The Insert contains Photographs A and B for Question 2 and Fig. 10 for Question 6.  
The Insert is **not** required by the Examiner.  
Sketch maps and diagrams should be drawn whenever they serve to illustrate an answer.

At the end of the examination, fasten all your work securely together.  
The number of marks is given in brackets [ ] at the end of each question or part question.

| For Examiner's Use |  |
|--------------------|--|
| <b>Q1</b>          |  |
| <b>Q2</b>          |  |
| <b>Q3</b>          |  |
| <b>Q4</b>          |  |
| <b>Q5</b>          |  |
| <b>Q6</b>          |  |
| <b>Total</b>       |  |

This document consists of **24** printed pages, **4** blank pages and **1** Insert.



**QUESTION 1**

(a) Study Fig. 1, a map showing net migration.



**Fig. 1**

(i) What is meant by *migration*?

.....  
 ..... [1]

(ii) Identify:

**one** country with positive net migration in North America;

.....

**one** country with negative net migration in South America.

.....

[2]

(iii) Using evidence from Fig. 1 **only**, compare net migration in Western Europe and Africa north of the Equator.

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(iv) Refer to push factors **only** to explain why many people migrate from LEDCs to MEDCs.

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- (b) Study Fig. 2 below, a graph showing the increase in population in Bogota. Bogota is the capital city of Colombia, an LEDC in South America.

For Examiner's Use

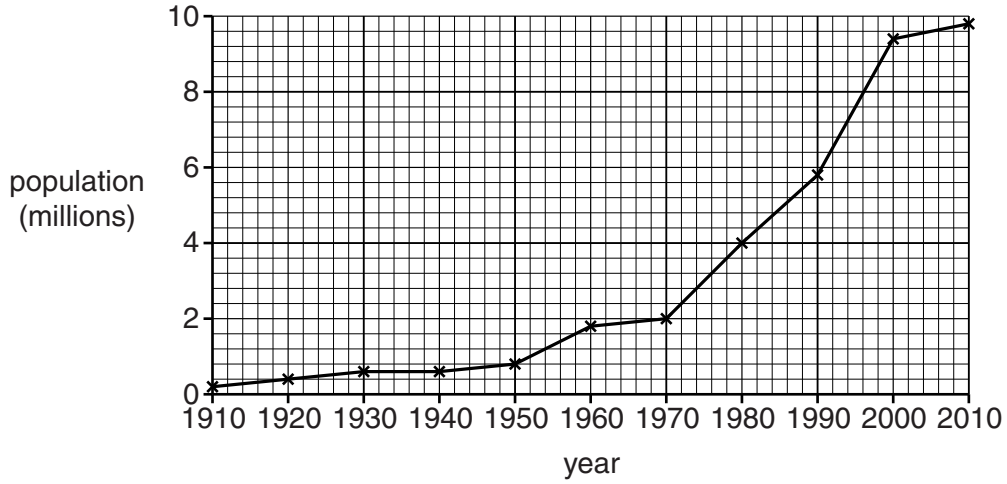


Fig. 2

- (i) Describe the growth of Bogota’s population. Refer to statistics and years in your answer.

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- (ii) Explain why governments are concerned by the rapid increase in the population of LEDC cities, such as Bogota.

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(c) For a named country which you have studied, explain why the rate of natural population growth is low.

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Name of country .....

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[7]

[Total: 25 marks]

**END OF QUESTION 1**

## QUESTION 2

- (a) Study Fig. 3, which shows information about the hierarchy of settlements, along with Photograph A (Insert), which shows part of a settlement.

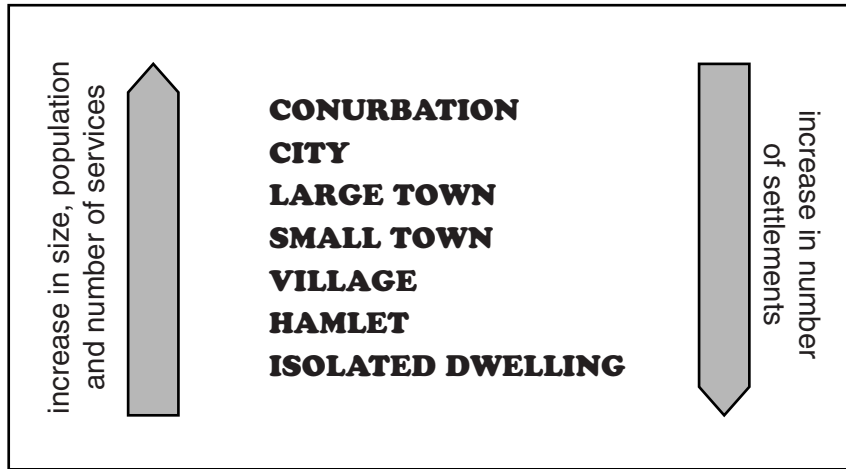


Fig. 3

- (i) What is meant by the *hierarchy of settlements*?

.....  
 ..... [1]

- (ii) What is the general relationship shown by Fig. 3 between:

the size of population and the number of services;

.....  
 .....

the size of population and number of settlements?

.....  
 .....

[2]

(iii) Identify the type of settlement shown in Photograph A. Give **two** pieces of evidence from Photograph A to justify your choice.

Underline your choice from the following types of settlement:

city                      isolated dwelling                      town                      village

Evidence 1 .....  
.....

Evidence 2 .....  
..... [3]

(b) Study Photograph B (Insert), which shows an area in the CBD of Warsaw in Poland (MEDC in Europe) where redevelopment has taken place.

(i) Describe **three** features of the redevelopment shown in Photograph B.

1 .....  
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2 .....  
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3 .....  
..... [3]

(ii) Suggest reasons why redevelopment such as this has taken place in many cities.

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**(iii)** Explain why some new leisure and retail areas are located on the edge of cities in MEDCs.

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[5]

**(c)** For a named rural settlement which you have studied, describe the types of services provided.

Name of rural settlement .....

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[7]

[Total: 25 marks]

**END OF QUESTION 2**



**QUESTION 3**

(a) Study Fig. 4, which shows weather data.

| Day | Maximum temperature (°C) | Minimum temperature (°C) | Precipitation (mm) | Wind speed (km/hr) | Wind direction | Cloud cover (oktas) | Atmospheric pressure (millibars) |
|-----|--------------------------|--------------------------|--------------------|--------------------|----------------|---------------------|----------------------------------|
| 1   | 13                       | 7                        | 5                  | 7                  | NE             | 2                   | 1003                             |
| 2   | 16                       | 10                       | 0                  | 4                  | SE             | 0                   | 1004                             |
| 3   | 15                       | 12                       | 9                  | 12                 | S              | 5                   | 998                              |

**Fig. 4**

(i) What is meant by *weather*?

.....  
 ..... [1]

(ii) Explain how information about cloud cover is obtained.

.....  
 .....  
 .....  
 ..... [2]

(iii) Name the instrument which is used to measure the following:

amount of precipitation; .....

wind speed; .....

atmospheric pressure. .... [3]

(iv) Many weather instruments are kept in a Stevenson Screen. Describe where a Stevenson Screen should be sited. Give reasons for your answer.

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(b) Study Fig. 5, which shows a scale used to measure tropical storms.

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Use

| Category | Central pressure (mb) | Wind velocity (km/hour) | Storm surge (metres) | Damage       |
|----------|-----------------------|-------------------------|----------------------|--------------|
| 1        | More than 980         | 119–153                 | 1.2–1.5              | Minimal      |
| 2        | 965–980               | 154–177                 | 1.6–2.4              | Moderate     |
| 3        | 945–964               | 178–209                 | 2.5–3.6              | Extensive    |
| 4        | 920–944               | 210–248                 | 3.7–5.5              | Extreme      |
| 5        | Less than 920         | More than 248           | Over 5.5             | Catastrophic |

**Fig. 5**

(i) Using Fig. 5 identify **three** differences between a category 1 and a category 3 tropical storm.

1 .....

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..... [3]

(ii) Describe the likely impacts of a tropical storm on a coastal area.

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**QUESTION 4**

(a) Study Fig. 6, which shows information about natural hazards between 1996 and 2005 in MEDCs and LEDCs.

| Natural hazard       | MEDCs            |                       | LEDCs            |                       |
|----------------------|------------------|-----------------------|------------------|-----------------------|
|                      | Number of deaths | Damage (million US\$) | Number of deaths | Damage (million US\$) |
| Drought              | 0                | 10 715                | 220 879          | 293                   |
| Earthquakes/tsunamis | 2265             | 62 669                | 82 140           | 6976                  |
| Floods               | 3471             | 77 568                | 13 276           | 4968                  |
| Volcanic eruptions   | 52               | 34                    | 200              | 7719                  |

**Fig. 6**

(i) Identify the type of natural hazard which caused the greatest total number of deaths.

..... [1]

(ii) Compare the impacts of floods in MEDCs and LEDCs.

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 .....  
 ..... [2]

(iii) Suggest reasons why earthquakes caused more financial damage in MEDCs than LEDCs.

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 ..... [3]

(iv) Explain why volcanic eruptions often do not cause a large number of deaths.

For  
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[4]

(b) Study Fig. 7, which shows information about a drought in East Africa.

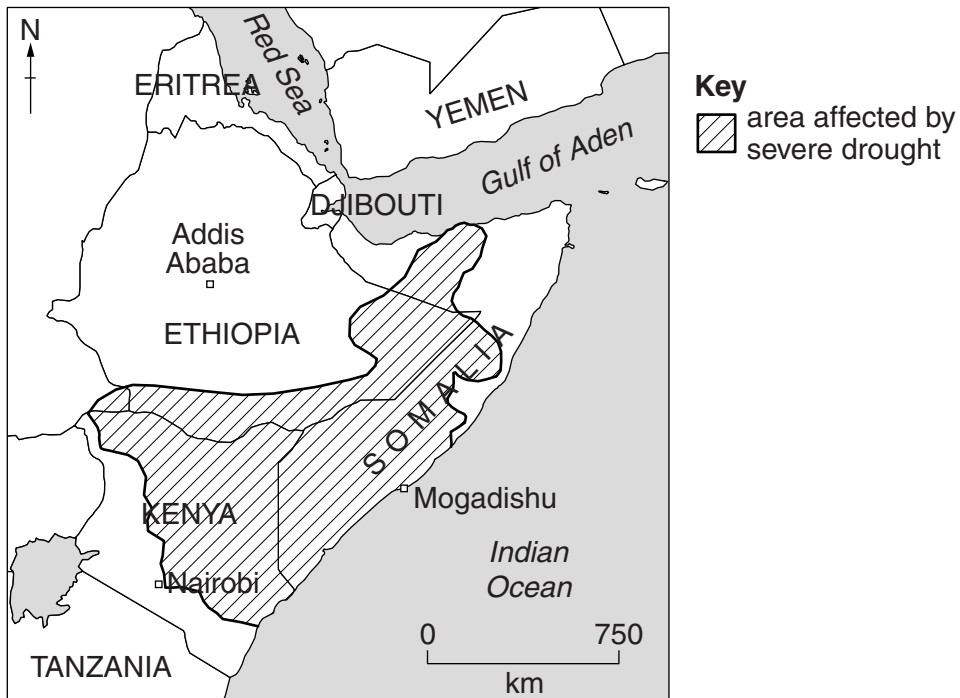


Fig. 7

(i) Describe the distribution of areas which were affected by severe drought.

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[3]

(ii) Describe the impacts of severe drought in LEDCs such as those shown on Fig. 7.

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(c) For a named area of tropical desert, explain why the climate is hot and dry.

Name of tropical desert .....

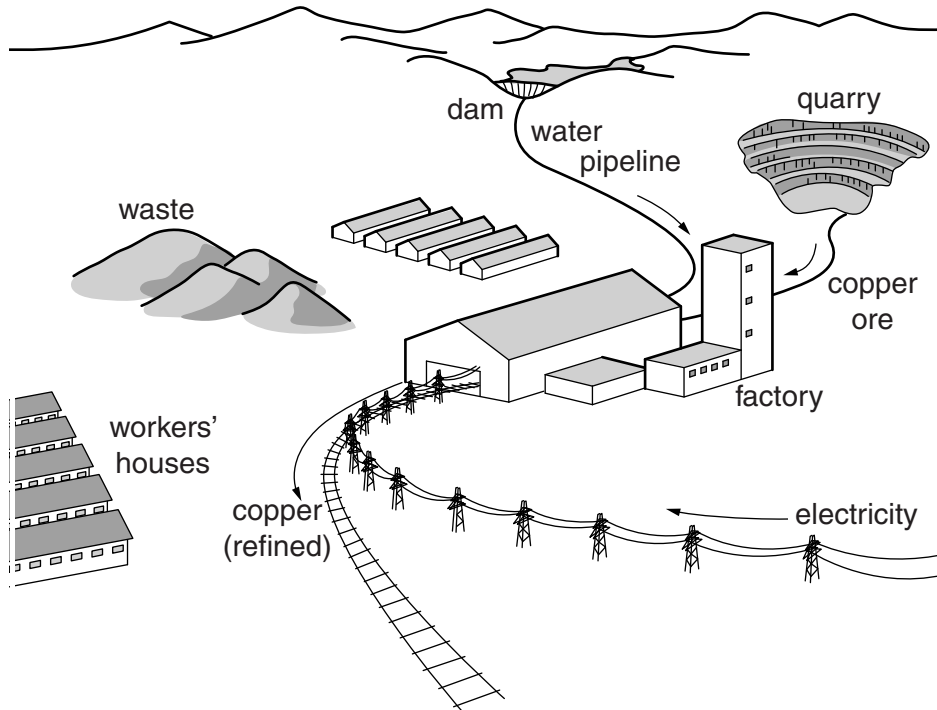
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[Total: 25 marks]

**END OF QUESTION 4**

**QUESTION 5**

(a) Study Fig. 8, which shows information about a factory in Chile.



**Fig. 8**

(i) Identify the main output of the factory.

..... [1]

(ii) State **two** inputs used in the factory.

1 ..... 2 ..... [2]

(iii) Suggest reasons to explain why the factory is located near to its raw materials.

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(iv) Suggest the likely threats to the natural environment caused by the industrial activity shown in Fig. 8.

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Examiner's  
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(b) Study Fig. 9, which shows the location of Bangalore, India. Many companies have recently located high technology industries in Bangalore.

For  
Examiner's  
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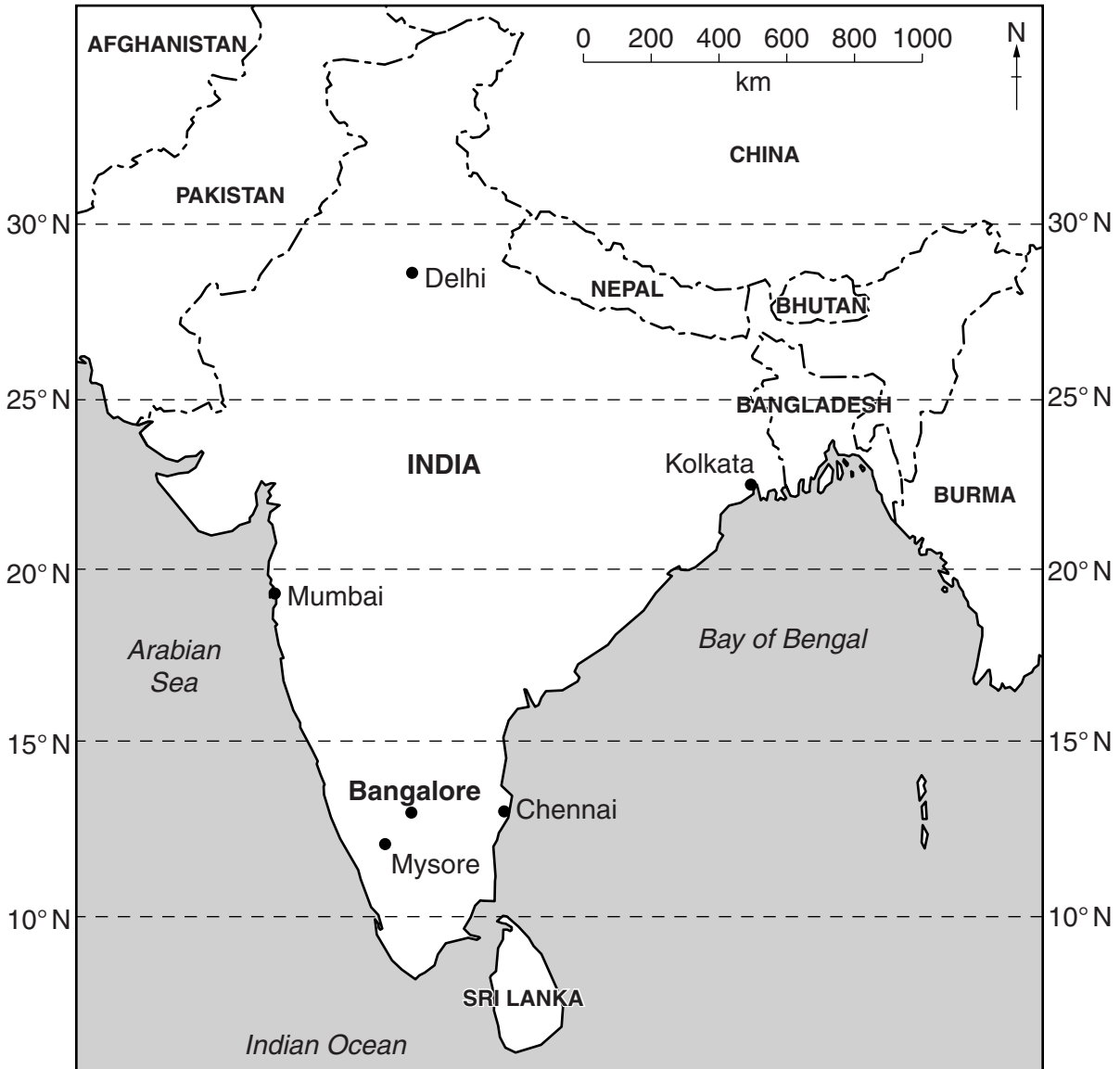


Fig. 9

(i) Describe the location of Bangalore.

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[3]

- (ii) Explain why many large companies have located high technology industries in LEDC cities, such as Bangalore.

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Examiner's  
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(c) For a named area which you have studied, describe the benefits of the growth of high technology industry.

For  
Examiner's  
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Name of area .....

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[Total: 25 marks]

**END OF QUESTION 5**

**QUESTION 6**

(a) Study Fig. 10 (Insert), which shows information about the production and use of energy in the USA in 2008.

(i) Complete the table below by arranging the **uses** of energy in rank order from the largest to the smallest.

|               |          |
|---------------|----------|
| Use of energy |          |
|               | Largest  |
|               | ↑        |
|               | ↓        |
|               | Smallest |

[1]

(ii) Underline:

the main user of crude oil in the USA in 2008;

residential                  commercial                  industrial                  transport

the type of power station which generated the most electricity in 2008.

thermal                  nuclear                  HEP                  solar

[2]

(iii) Suggest reasons why the USA wants to reduce its dependence on imported oil.

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..... [3]

(iv) Explain why the percentage of energy generated from renewable sources is low in many countries.

*For  
Examiner's  
Use*

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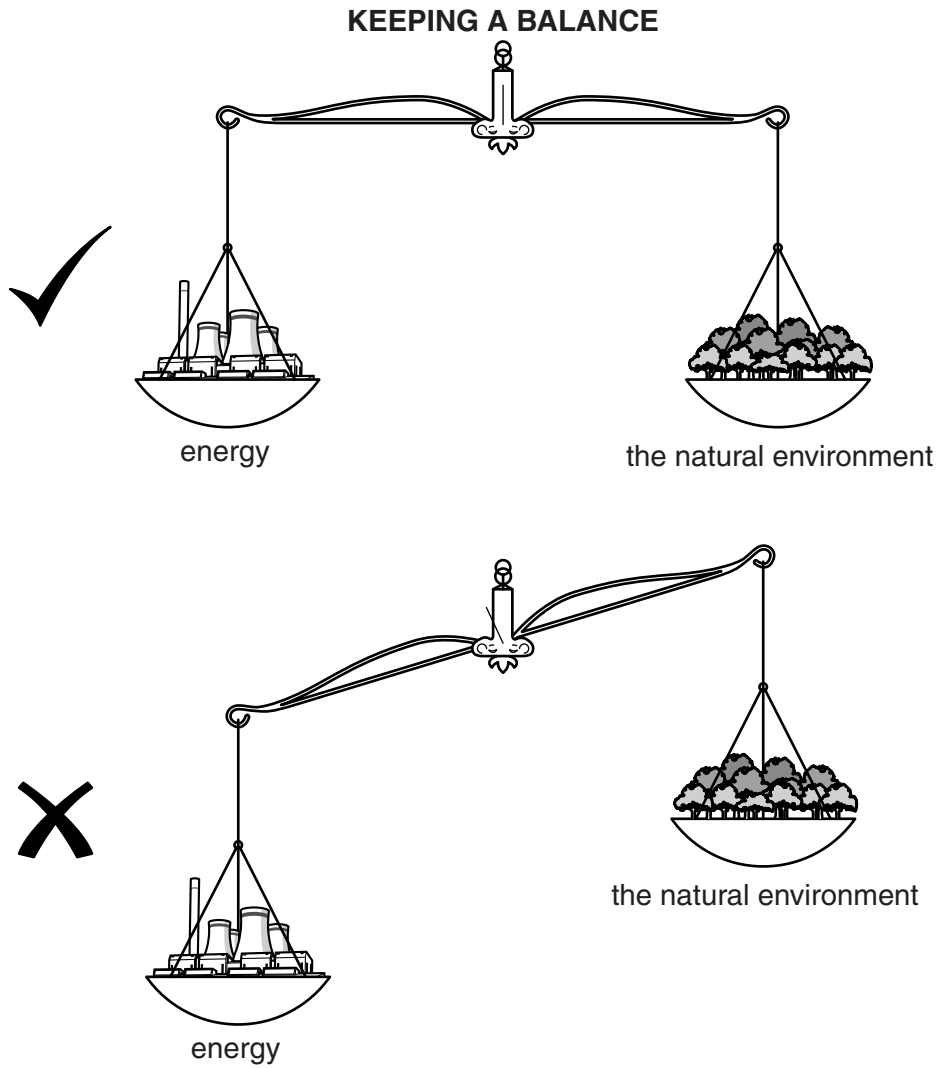
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(b) Study Fig. 11, which shows information about energy and the environment.

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**Fig. 11**

(i) Suggest what message is being given by Fig. 11.

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..... [3]













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*Copyright Acknowledgements:*

- Question 1 Fig. 1 © adapted: [http://familypedia.wikia.com/wiki/Human\\_migration](http://familypedia.wikia.com/wiki/Human_migration).  
Question 4 Fig. 7 © amended: *Map of Drought in East Africa*; <http://teachingwithdata.blogspot.com/2011/07/severe-drought-causes-famine-in-eastern.html>.  
Question 5 Fig. 8 © amended: Wideworld; Phillip Allen Publications; April 2003.  
Question 6 Fig. 10 © amended: *Energy Flows*; Lawrence Livermore National Laboratory and The Department of Energy;  
<http://mapawatt.com/2010/06/03/energy-flows>

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