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Cambridge IGCSE

Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CANDIDATE NAME

CENTRE NUMBER | | | | | |

CANDIDATE NUMBER | | | | |

2805540670

ENVIRONMENTAL MANAGEMENT **0680/13**

Paper 1 **May/June 2015**

1 hour 30 minutes

Candidates answer on the Question Paper.

No Additional Materials are required.

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.

Answer **all** questions.

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

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.

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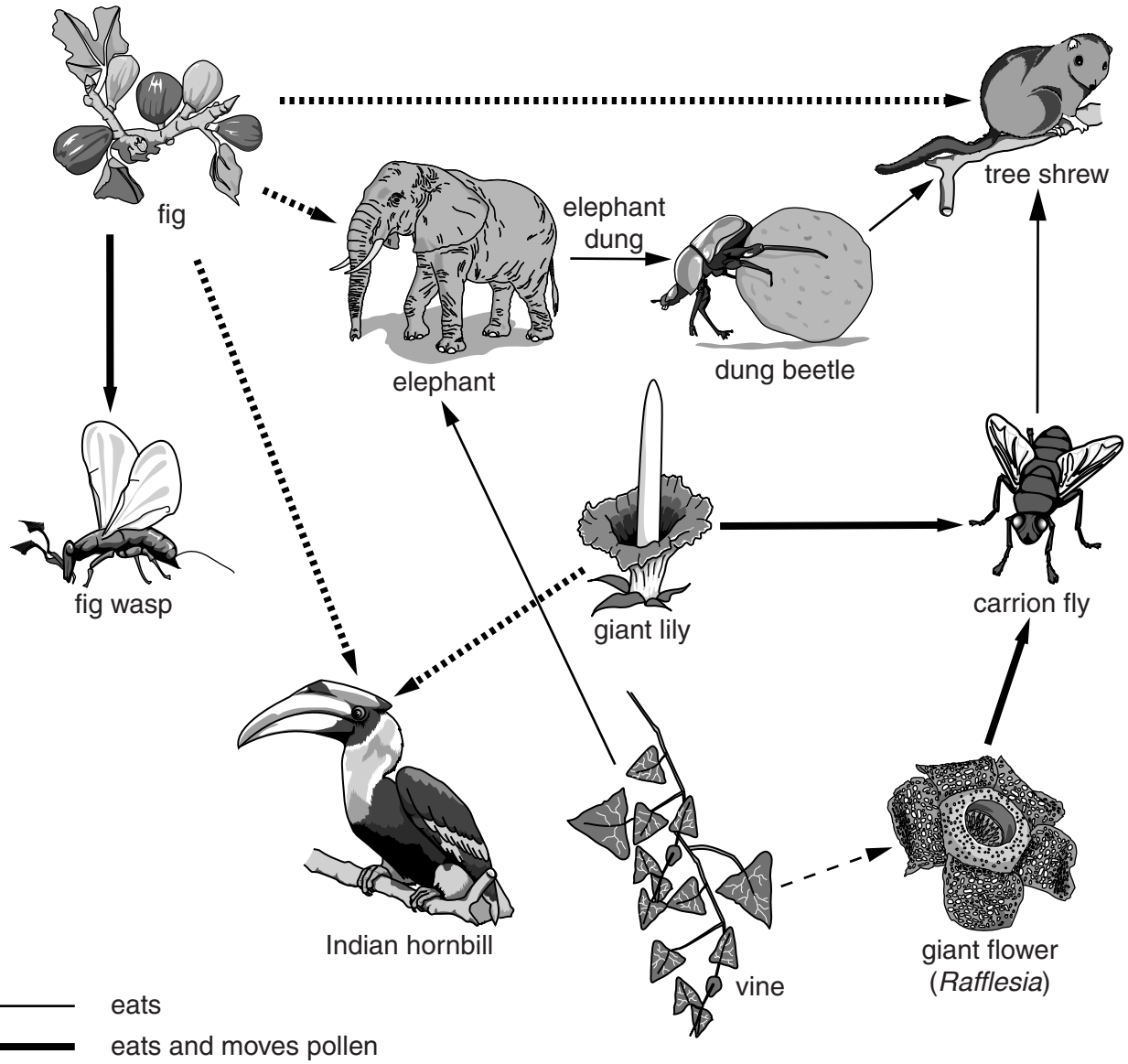
1 Look at the diagram below, which shows relationships between some living organisms.



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(a) (i) Use the information in the diagram to describe an example of each of the following:

predation

.....

.....

.....

seed dispersal

.....

.....

.....

pollination

.....

.....

.....
[3]

(ii) State the names of **two** organisms shown in the diagram that might be in competition with each other for food.

.....

..... [1]

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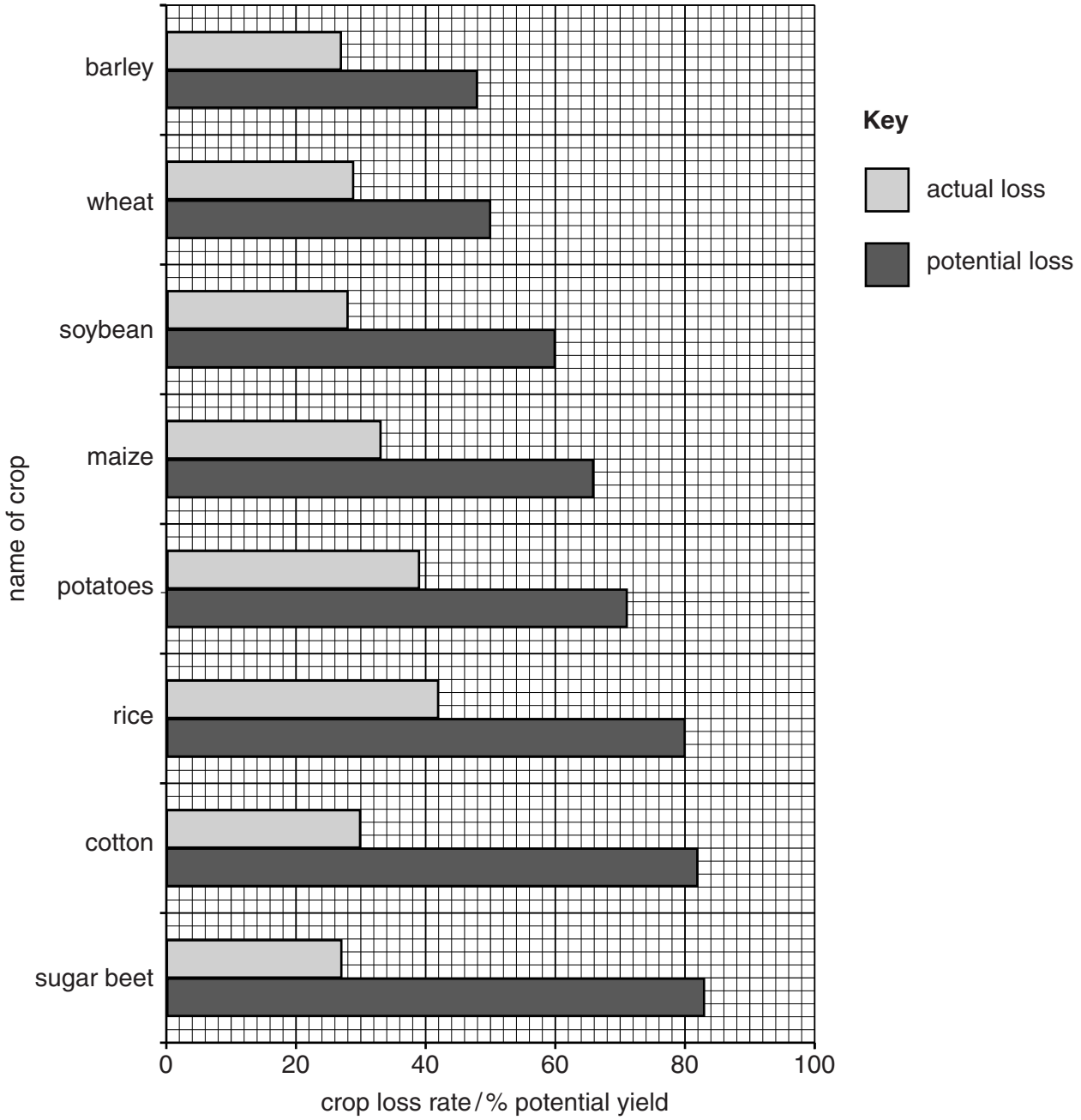
(b) In areas where crops are grown, animals that eat the crops can become pests, leading to a reduction in crop yield. Look at the diagram below, which shows crop losses to pests.



(i) State the crop with the greatest actual loss.

..... [1]

(ii) State the **two** crops with the smallest difference between actual and potential loss.

..... [1]

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(iii) One way to reduce losses to pests is to produce new crop strains. Describe **two** ways in which new crop strains could be produced.

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.....

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..... [4]

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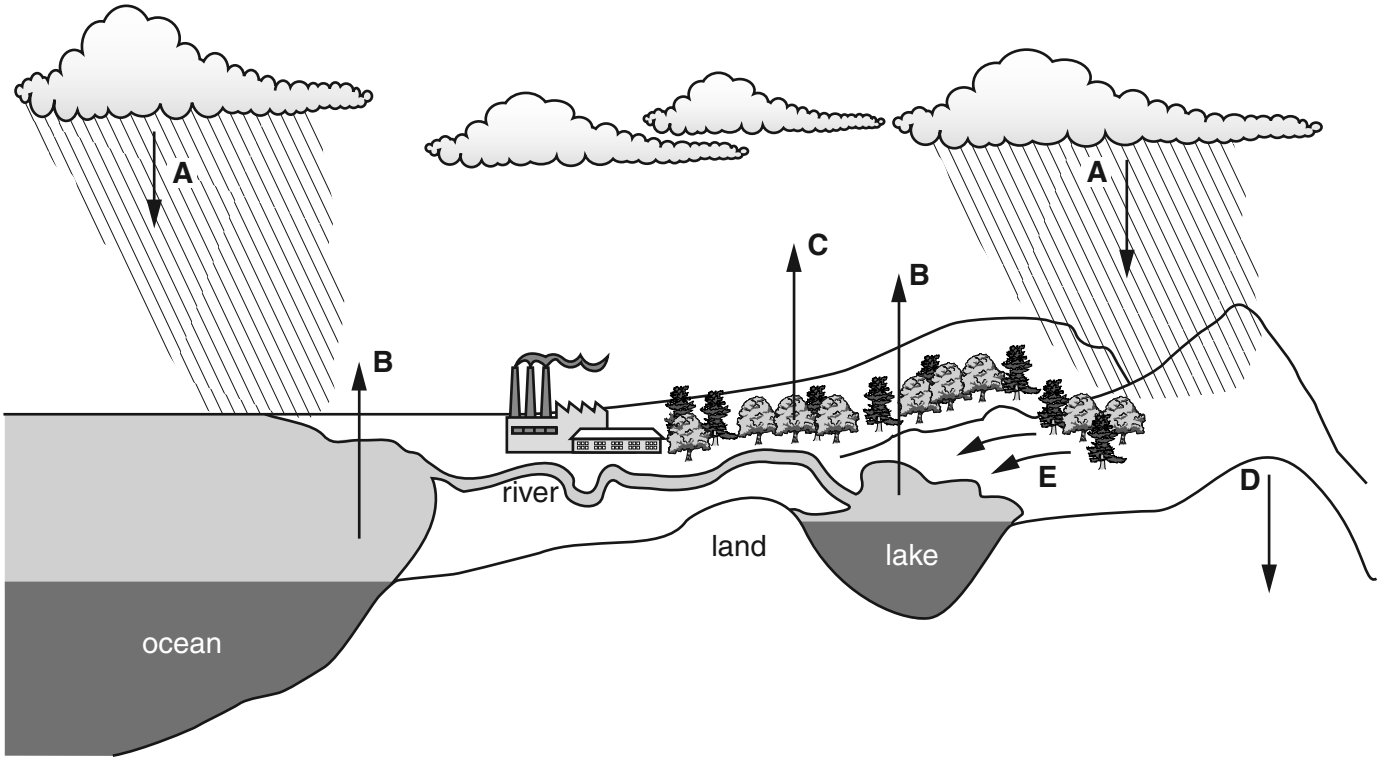
2 Look at the diagram below of the water cycle



(a) (i) Name the processes **A**, **B** and **C**.

A .....

B .....

C .....

[3]

(ii) A news report said that environmentalists in Ghaziabad, India have warned of serious problems due to building on open green areas.

Using information in the diagram and your own knowledge, describe and explain the problems that might arise in Ghaziabad due to building on open green areas.

.....

.....

.....

.....

.....

..... [3]

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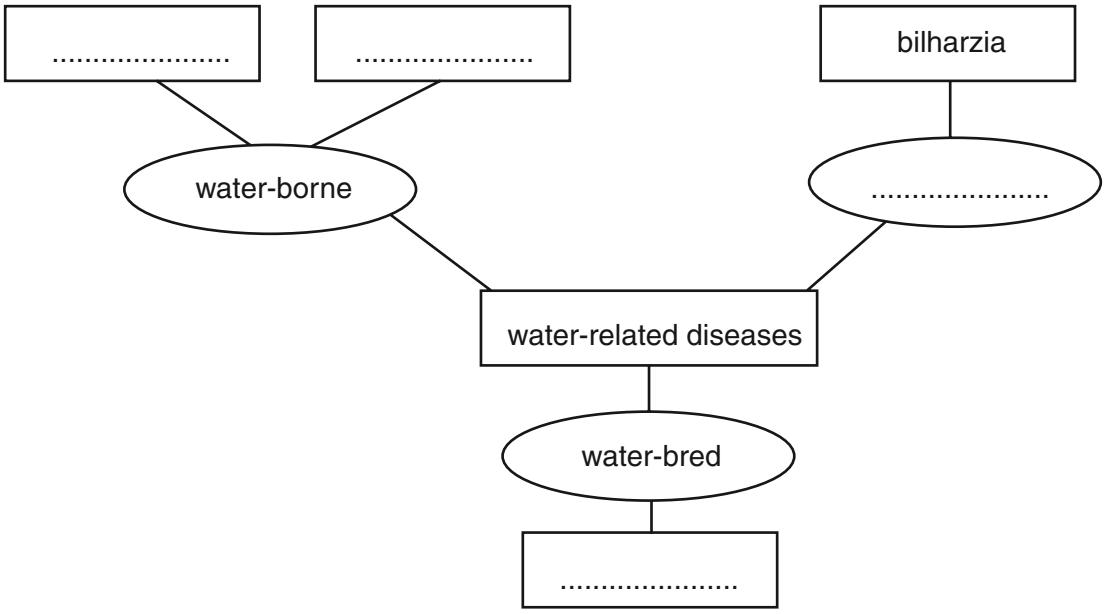
(b) Water-related diseases are harmful to humans.

(i) Complete the diagram below about three types of water-related diseases.



[2]

(ii) Five ways of controlling water-related diseases are:

chlorination

clean water supply

drugs

improved sanitation

vector eradication

State and explain the way that would be best for controlling bilharzia.

way .....

explanation .....

.....

.....

[2]

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[Turn over

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3 **(a)** The Earth's atmosphere is a mixture of gases, mainly nitrogen, oxygen and carbon dioxide.

(i) Name **one** other gas found naturally in the atmosphere.

..... [1]

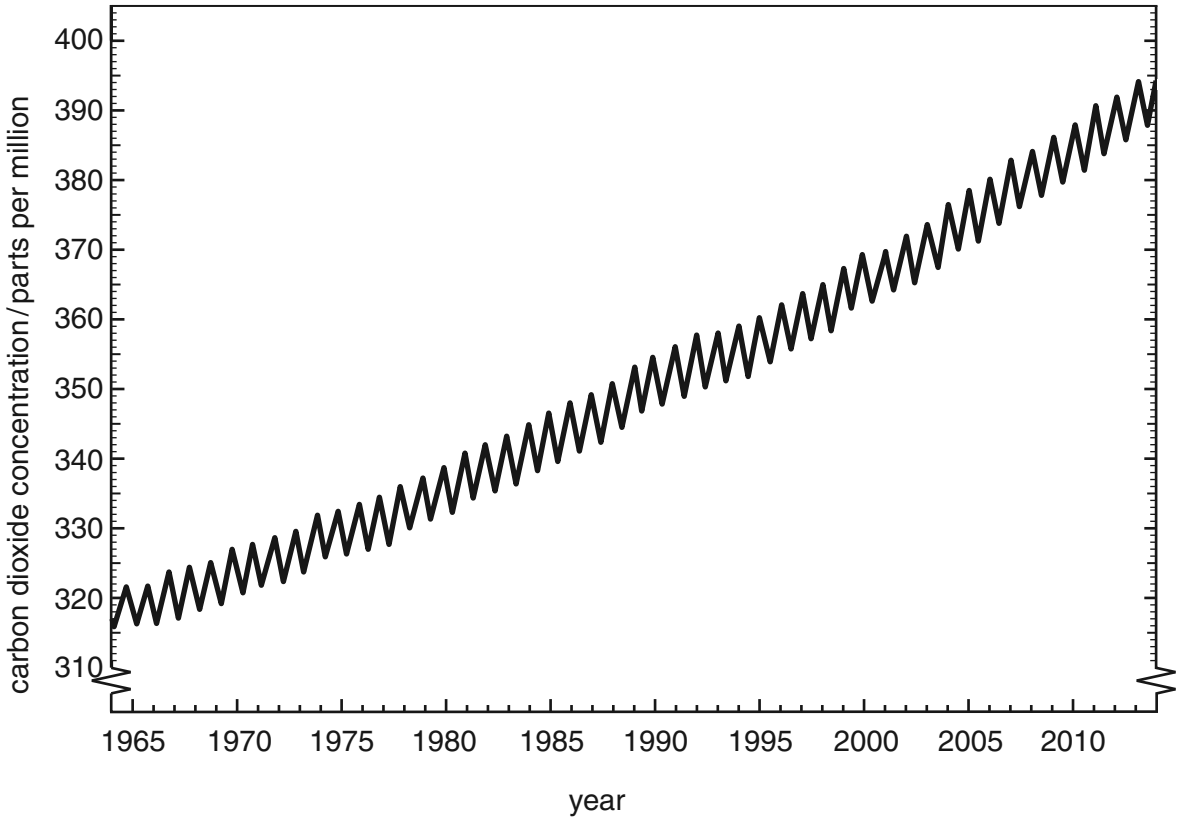
(ii) State **one** process that removes carbon dioxide from the atmosphere and one that returns it.

removes .....

returns .....

[2]

(b) Look at the diagram below, which shows carbon dioxide concentration in the atmosphere in the Northern Hemisphere between 1964 and 2014.



(i) Describe the trend shown.

.....

..... [1]

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(ii) Explain the changes in carbon dioxide concentration over the 50 year period.

.....

.....

.....

..... [2]

(iii) Suggest why the trend is **not** smooth.

.....

.....

.....

..... [2]

(c) Explain why burning biomass is less harmful to the environment than burning fossil fuels.

.....

.....

.....

..... [2]

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4 **(a)** Describe **one** similarity and **one** difference between the formation of coal and the formation of oil.

.....

.....

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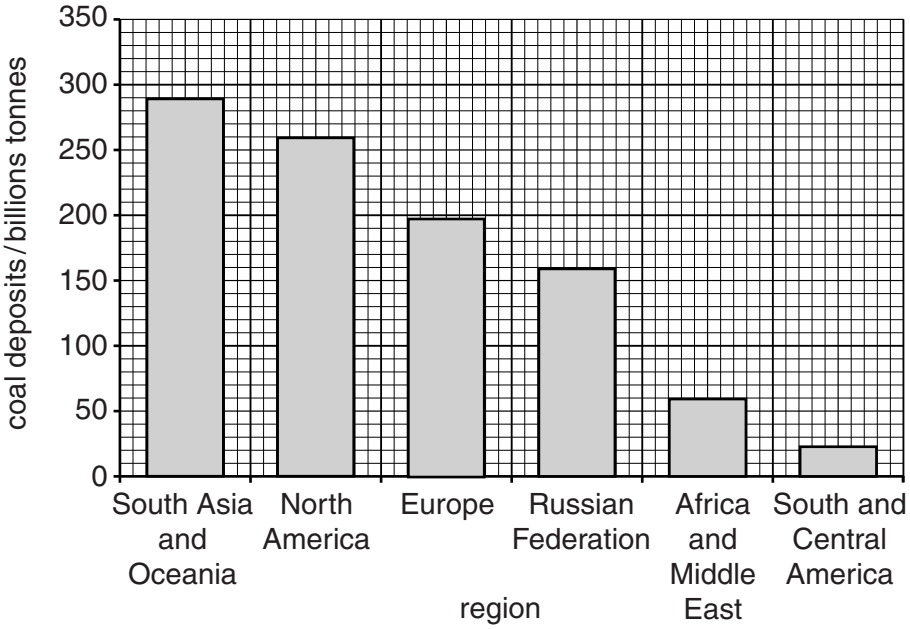
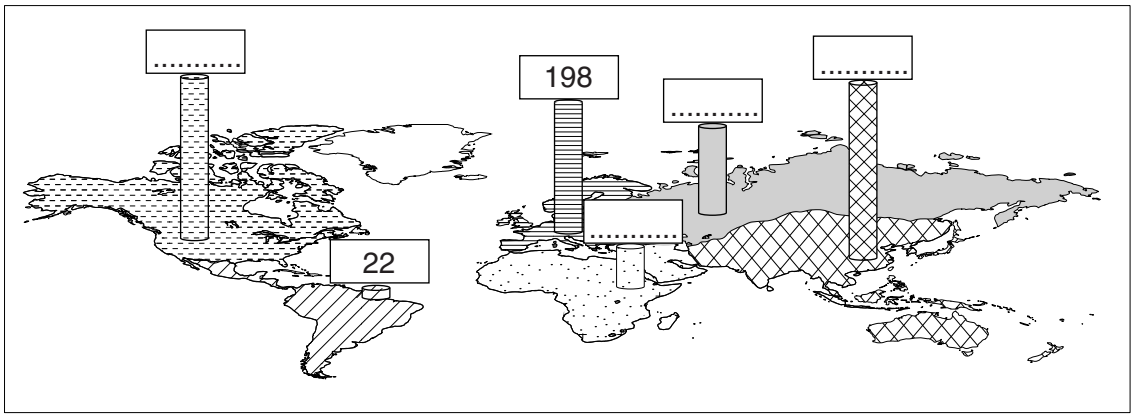
..... [2]

(b) Coal is unevenly distributed around the world. Look at the graph and map below, which show the known coal deposits around the world.



map showing coal deposits by region / billion tonnes



Key

North America | South and Central America | Europe | Africa and Middle East | Russian Federation | South Asia and Oceania

Complete the map using figures from the bar graph. Two have been done for you. [2]

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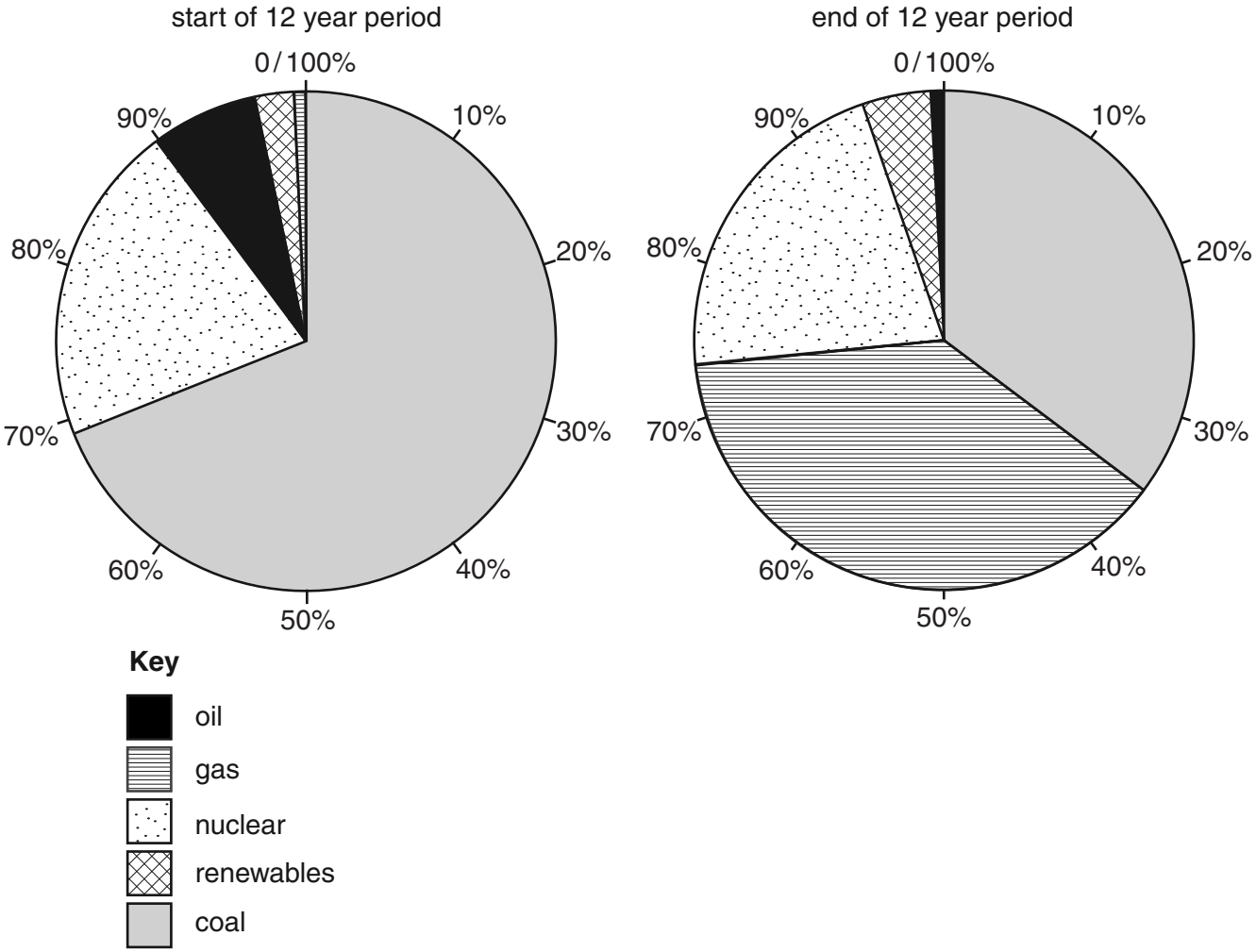
(c) One use of coal is to generate electricity. Look at the pie graphs below, which show how the sources of energy for electricity generation have changed in a developed country from the start to the end of a 12 year period.



(i) Describe the change in the use of coal as a source of energy for electricity generation compared with other sources over the 12 year period.

.....

.....

.....

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.....

..... [3]

(ii) State **one** renewable source of energy.

..... [1]

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(iii) Suggest an explanation for the change in the use of renewable energy over this period.

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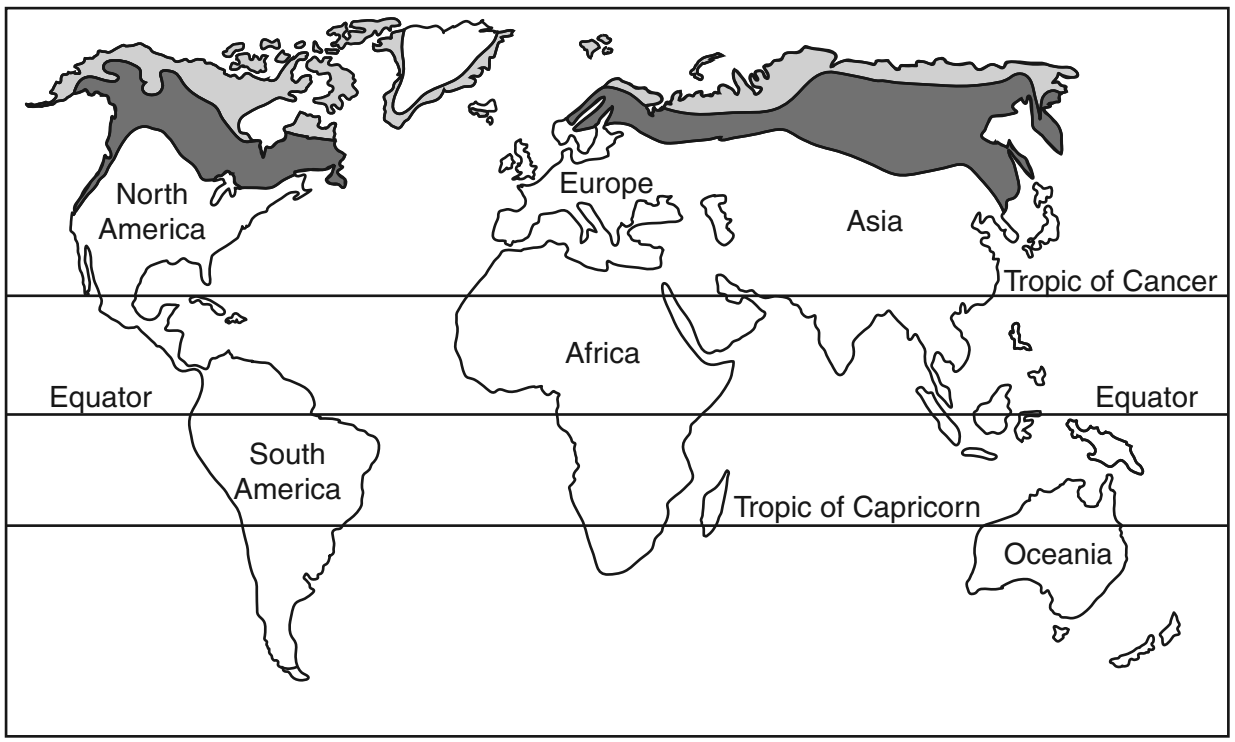
..... [2]

5 Look at the map, which shows the distribution of tundra and taiga.



Key

tundra

taiga

(a) Compare the distribution of these two biomes.

.....

.....

.....

.....[2]

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(b) Look at the photograph below, which shows typical taiga vegetation.



Using the photograph and your own knowledge, describe and explain the adaptations of taiga vegetation.

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..... [4]

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[Turn over

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(c) (i) Suggest **four** reasons for deforestation.

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..... [2]

(ii) For **two** of the reasons you have given, suggest why the deforestation rate is higher in tropical rainforest than in taiga forest.

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..... [2]

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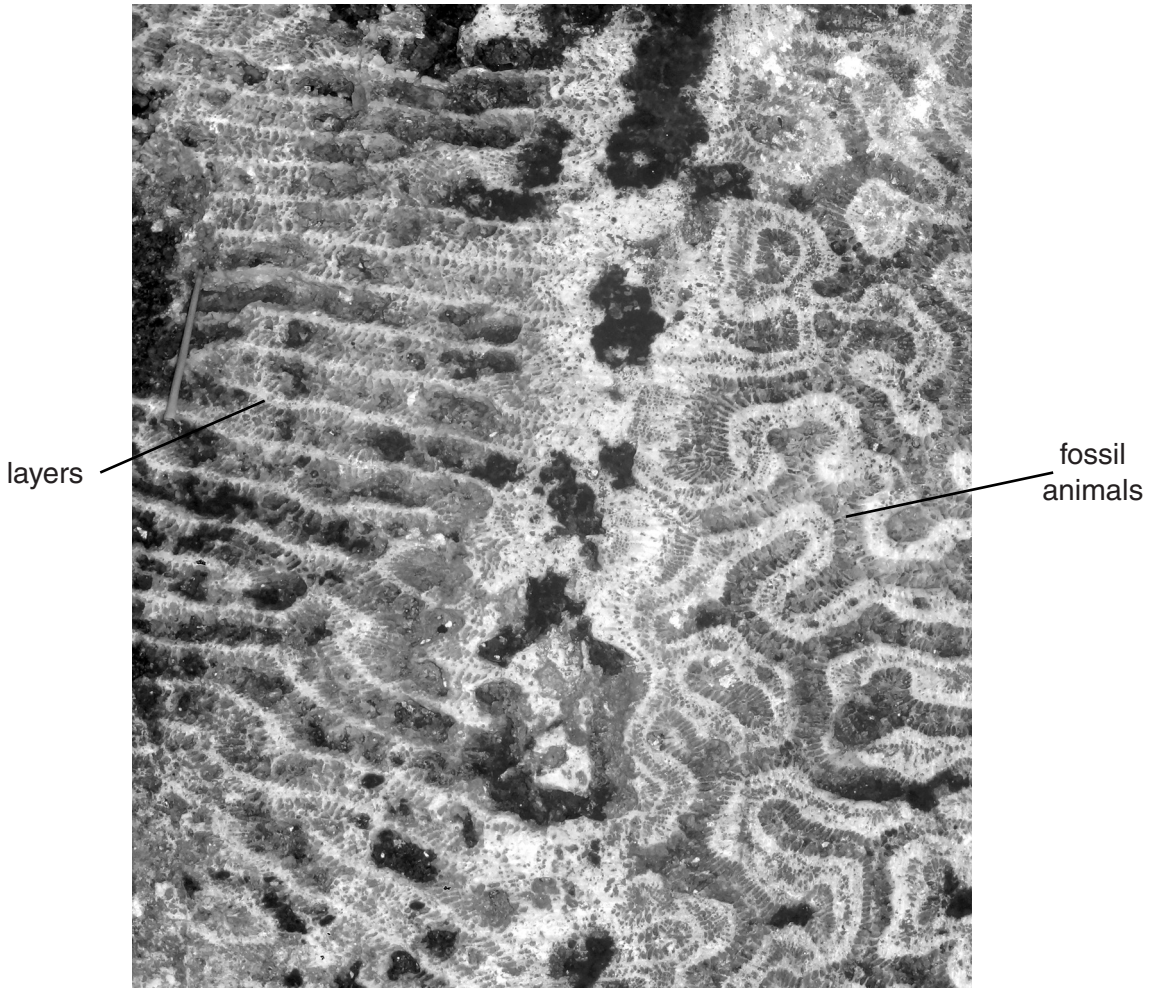
6 **(a)** Look at the photograph below, which shows a rock being used to surface a path.



Using information in the photograph and your own knowledge, circle **one** rock type shown in the photograph, from the list below.

metamorphic **sedimentary** **igneous** [1]

(b) **(i)** Describe **two** ways in which open-pit (opencast) mining is different from deep mining.

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..... [4]

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(ii) Describe the impact deep mining of coal can have on the environment.

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.....

..... [3]

(iii) Suggest **two** ways in which environments damaged by open-pit (opencast) mining might be conserved.

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..... [2]

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