



Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CANDIDATE
NAME

CENTRE
NUMBER

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ENVIRONMENTAL MANAGEMENT

0680/12

Paper 1

February/March 2018

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.

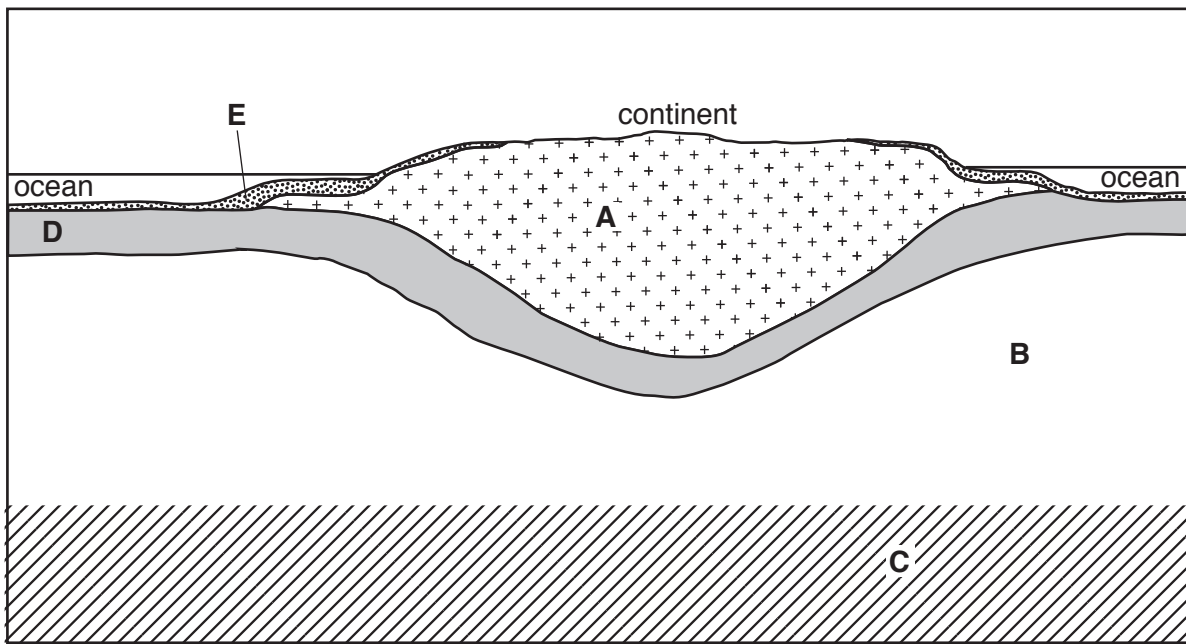
You may lose marks if you do not show your working or if you do not use appropriate units.

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.

This document consists of **13** printed pages and **3** blank pages.

1 The diagram shows features of the Earth's crust.



not to scale

(a) (i) Complete the table using letters **A** to **E** from the diagram.

feature	letter
continental crust
core
mantle
oceanic crust
sediment

[3]

(ii) State the meaning of the terms:

igneous rock

.....
.....

metamorphic rock

.....
.....

sedimentary rock

.....
.....

[3]

(b) Most rocks are mined using opencast (open-pit) methods.

Describe **four** impacts of opencast mining on the environment.

1

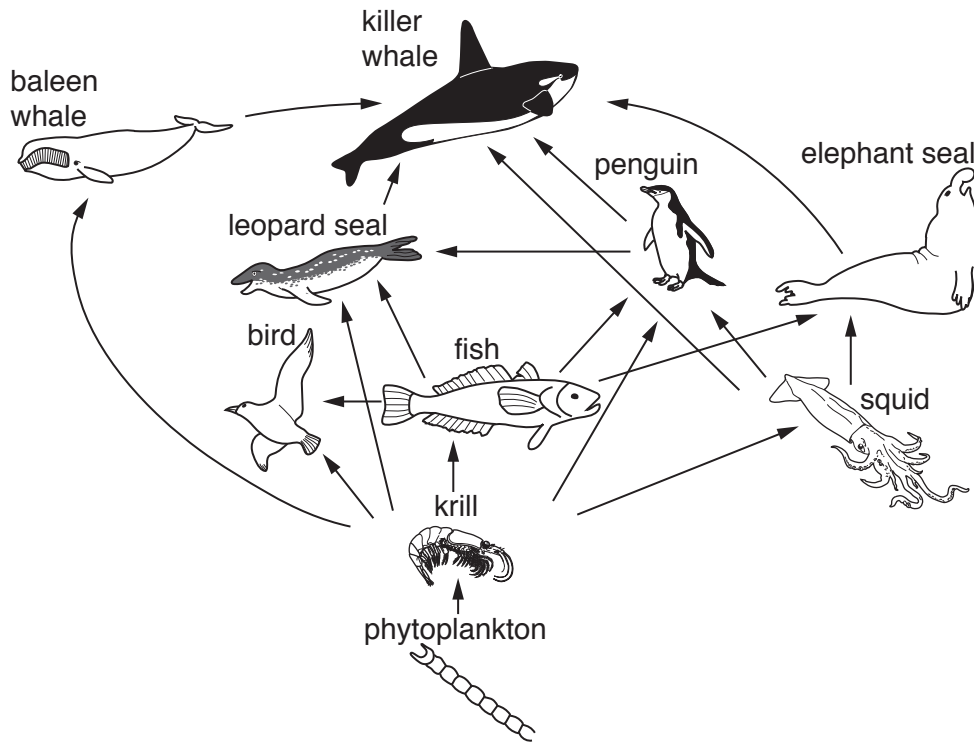
2

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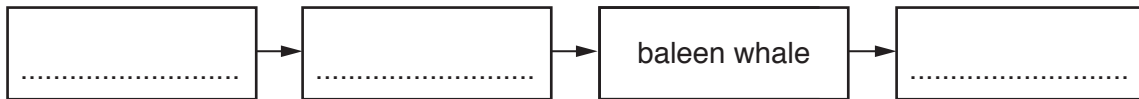
[4]

2 The diagram shows part of a food web in the Southern Ocean.



not to scale

(a) (i) Use the diagram of the food web to complete the food chain.



[1]

(ii) Name the producer in this food web.

.....[1]

(iii) Determine the largest number of trophic (feeding) levels in this food web.

.....[1]

(iv) Scientists have reported that the population of krill is decreasing.

Explain what will happen to leopard seals if the population of krill decreases.

.....

[2]

(b) (i) State **four** resources that oceans can provide.

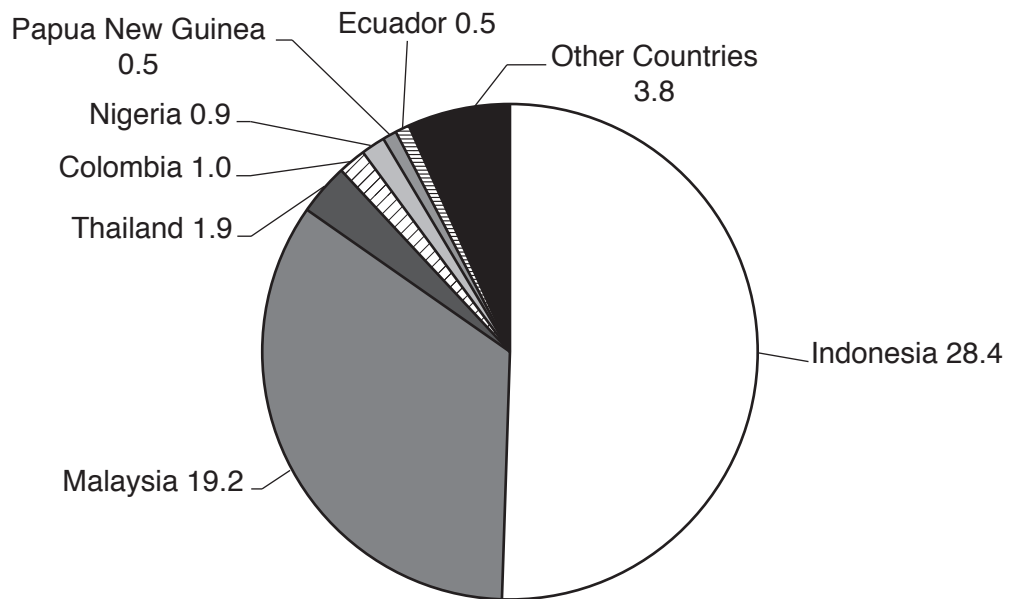
- 1
- 2
- 3
- 4 [4]

(ii) Suggest why most of the marine resources that people use are found on continental shelves.

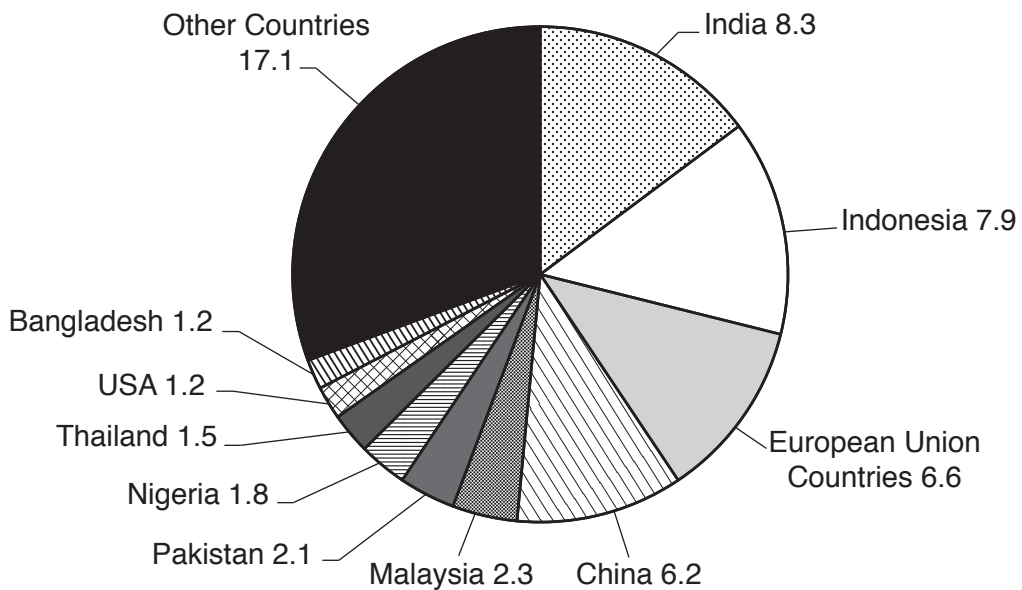
.....
..... [1]

3 The pie graphs, **A** and **B**, show the production and consumption of palm oil in million tonnes per year. Palm oil is used in food, cosmetics, animal feed and biofuel.

A: palm oil production



B: palm oil consumption



(a) Use the pie graphs to answer the following questions.

(i) Name **two** countries that are both producers and consumers of palm oil.

1

2

[1]

(ii) The total world palm oil production in pie graph **A** is 56.2 million tonnes.

Calculate the percentage of palm oil production produced by Indonesia and Malaysia combined.

..... % [1]

(iii) Name the **two** countries that consume the same amount of palm oil.

..... and [1]

(b) Palm oil trees grow in an equatorial climate.

Describe the temperature and precipitation during the year in an equatorial climate.

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

(c) Some tropical rainforests have been cleared for plantations of palm oil trees.

Suggest advantages and disadvantages of replacing tropical rainforests with palm oil trees.

advantages

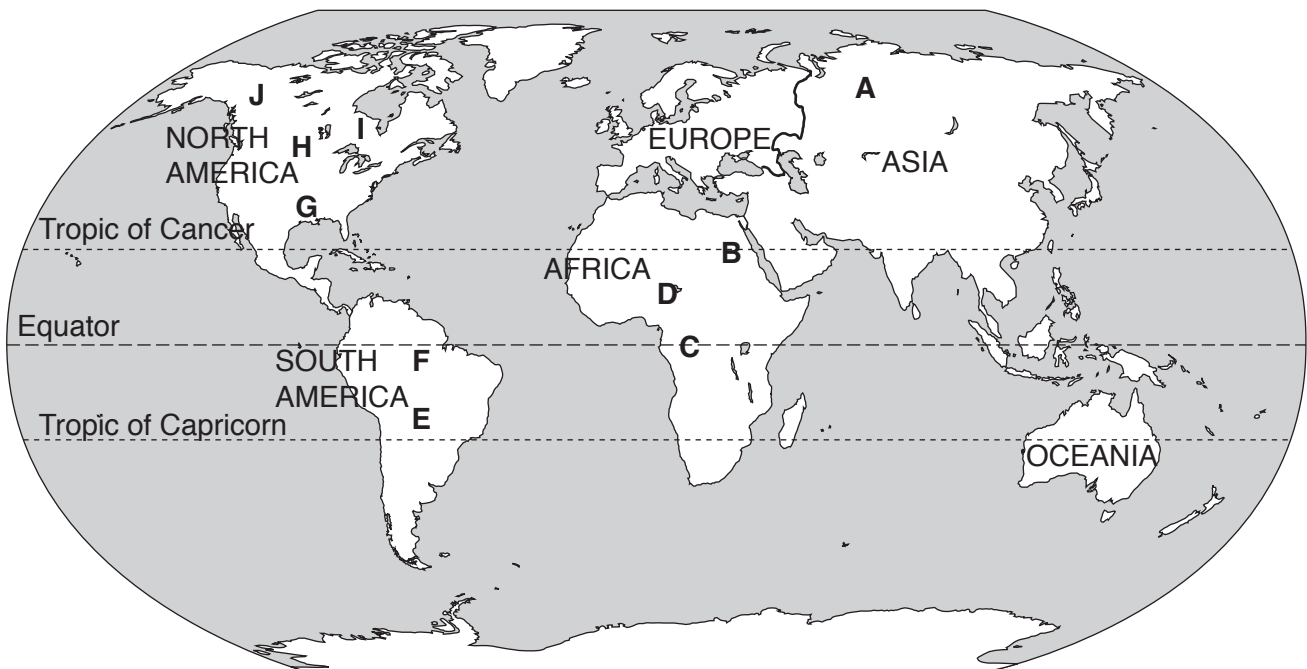
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disadvantages

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[4]

4 The map and table show information about the ten largest wetlands in the world.



letter on map	name of wetland	area/km ²
A	West Siberian Lowland	2 745 000
B	River Nile Basin	92 000
C	Congo River Basin	189 000
D	Lake Chad Basin	106 000
E	Pantanal	138 000
F	Amazon River Basin	1 738 000
G	Mississippi River Basin	108 000
H	Prairie Potholes Region	63 000
I	Hudson Bay Lowland	374 000
J	Mackenzie River Basin	166 000

(a) Use the map and table to answer the following questions.

(i) State the size of the largest wetland and name the continent where it is found.

size

continent

[1]

(ii) Name the continent with the largest number of wetlands and state the number of wetlands.

continent

number of wetlands

[1]

(iii) Name the largest tropical wetland.

.....[1]

(b) (i) Suggest **three** reasons why people drain wetlands.

1

.....

2

.....

3

.....

[3]

(ii) Suggest **four** reasons why wetlands should **not** be drained.

1

.....

2

.....

3

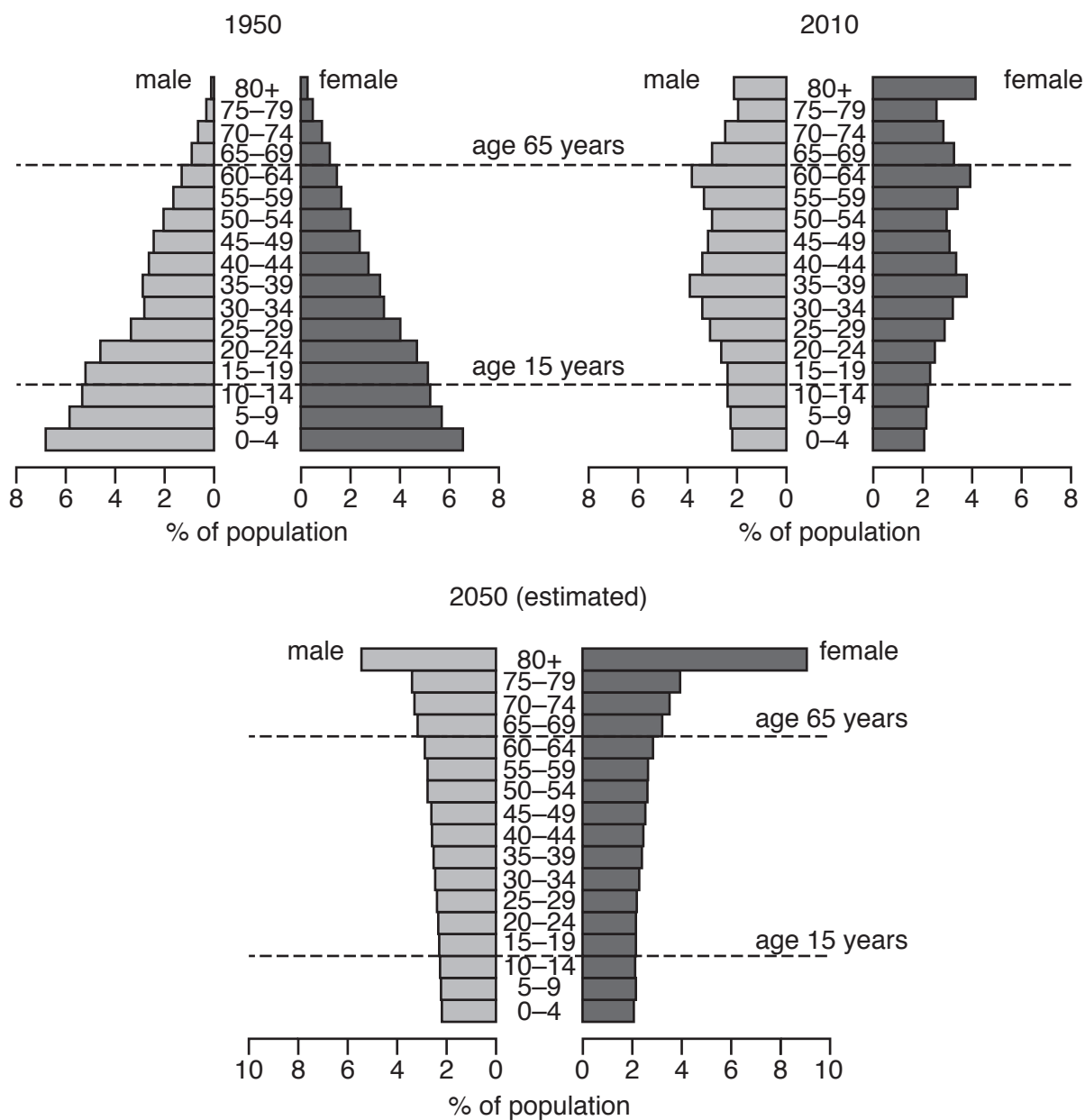
.....

4

.....

[4]

- 5 The diagram shows population pyramids for Japan in 1950 and 2010 and the estimated population pyramid for 2050.



(a) Use the diagram to answer these questions.

- (i) State the year with the largest percentage of children aged 0 to 14.

.....

[1]

- (ii) State the year with the largest percentage of the population aged 30 to 64.

.....

[1]

(iii) Determine the percentage of the population that it is estimated will be aged 80 or over in 2050.

..... % [1]

(b) Describe ways the government of a country with an ageing population can encourage population growth.

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

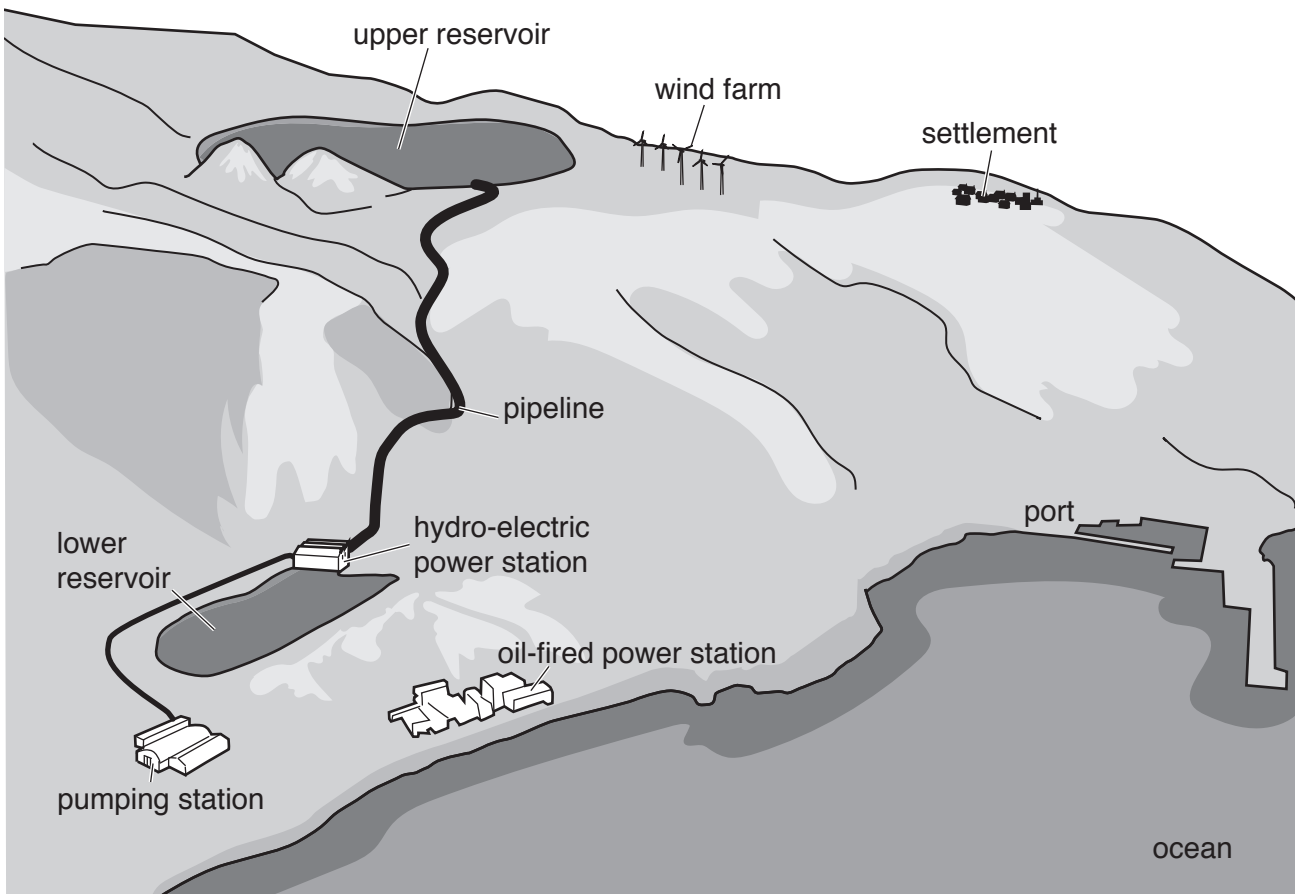
(c) State **three** possible problems for a country with large numbers of young people aged between 0 and 14.

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

(d) State the name of the model that shows changes in birth rates, death rates and total population over time in a series of stages.

.....[1]

6 The diagram shows energy supplies on the island of El Hierro in the Atlantic Ocean.



(a) (i) Use the words on the diagram to complete the passage.

When the wind is strong, the wind produces electricity.
 When this electricity is not needed, it is used to pump water in a pipeline from the reservoir to the reservoir.
 During times when there is little wind, the water is released down the to a power station to produce electricity.
 The power station provides power when other sources are unable to provide all the electricity needed. [3]

(ii) State **one** advantage of using wind power instead of oil to generate electricity.

.....
 [1]

(b) The island of El Hierro is a biosphere reserve.

Describe the purposes of a biosphere reserve.

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

(c) The island of El Hierro was formed after volcanic eruptions over a million years ago.

Suggest reasons why people live on this volcanic island.

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

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