Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CANDIDATE NAME	

CENTRE NUMBER						CANDIDATE NUMBER			

ENVIRONMENTAL MANAGEMENT **0680/23**

Paper 2 **October/November 2015**

1 hour 45 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 **both** 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 **15** printed pages and **1** blank page.

Cambridge International Examinations

[Turn over

1 (a) (i) Look at the table below. Match the following rock types with their correct definition in the table.

**igneous
metamorphic
sedimentary**

definition	type of rock
Rocks usually formed in shallow seas and often formed from eroded rock. They occur in layers.	....
Rocks changed by heat and pressure.	....
Rocks formed from the cooling of molten material.	....

[2]

(ii) Look at the table below, which shows how limestone from a quarry is used in industry. Draw a bar graph on the grid using the information in the table. Label your axes.

limestone use	total limestone quarried/%
road construction	30
cement	25
steelworks	45
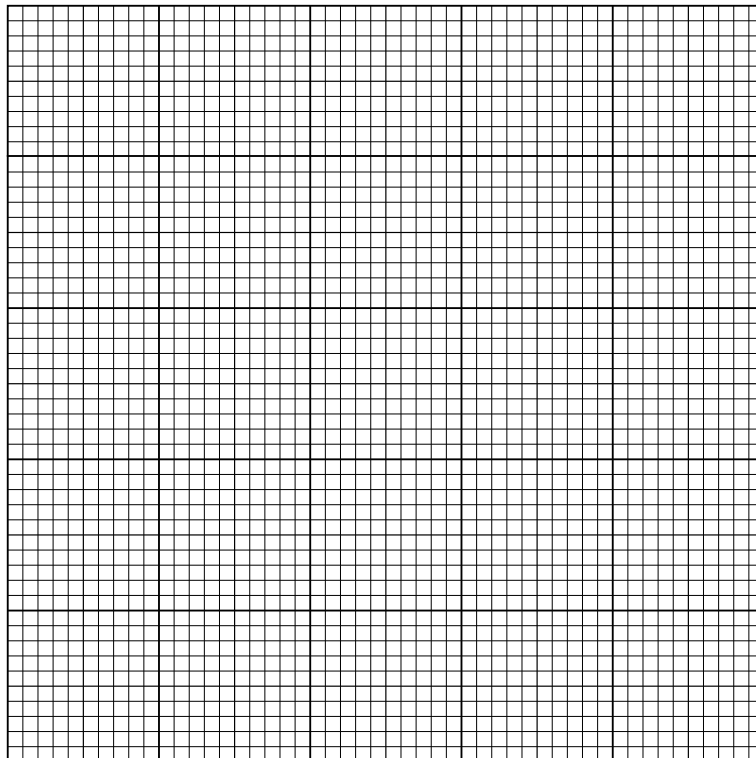
[4]

(iii) Describe how rocks such as limestone are extracted and processed.

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.... [3]

(b) Look at the map, which shows the location of a quarry, the towns around the quarry and how much limestone they use. The width of the arrows shows the amount of limestone transported. 1 cm width on the arrow is equal to 1 million tonnes of limestone transported.
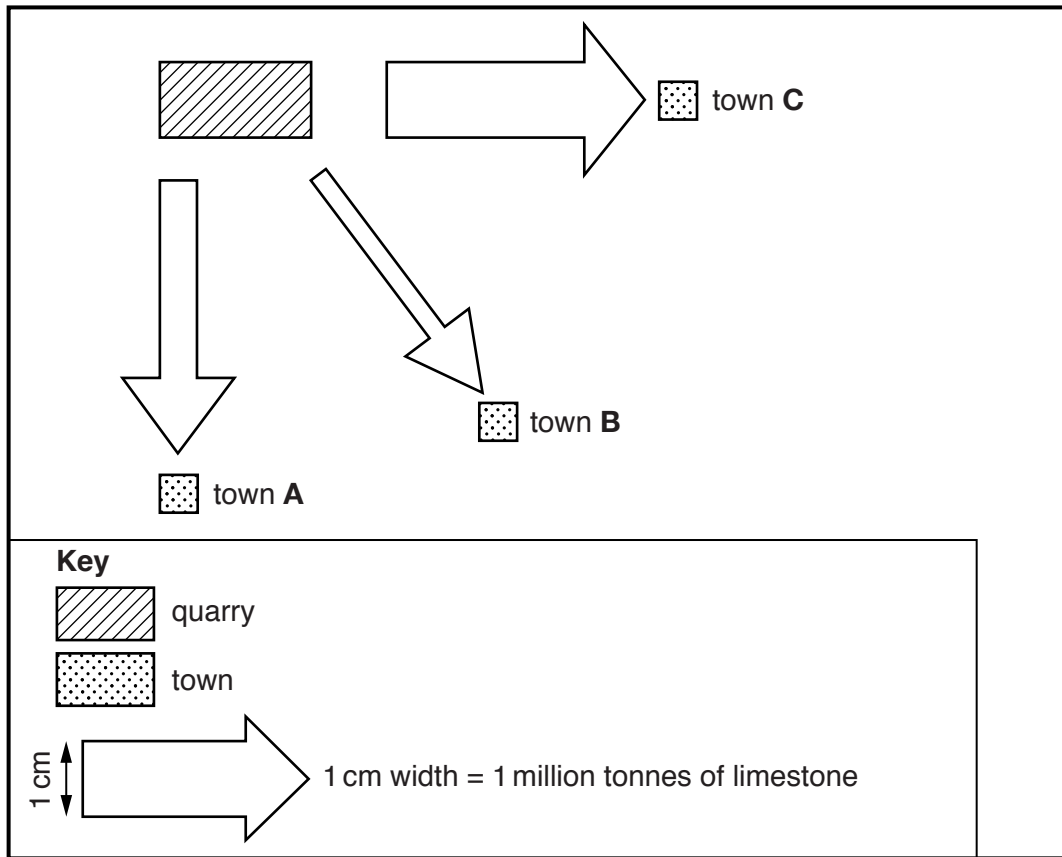
(i) State which town receives the most limestone from the quarry.

.... [1]

(ii) State how much limestone is transported to town **A**.

.... [1]

(iii) Calculate the difference in the amount of limestone transported from the quarry to towns **A** and **C**.

Space for working.

.... million tonnes [1]

(iv) Look at the information below about the quarry.

> Another quarry has been open for 10 years. The site was a mixture of farmland and woodland before the quarry opened. The quarry produces three million tonnes of limestone each year that is used in local industries. There are 200 people employed at the quarry. Other jobs are created in industries that serve the quarry. Although some of the rock is transported by train, most is transported by lorries on local roads. Lorry drivers often stop to buy food at a shop in the local village. The quarry owners say that it will be open for another 15 years before the supply of limestone runs out. After this time, there are plans to flood the quarry to set up a nature reserve.

Suggest why some people living in a village near to the quarry might be in favour of the quarry.

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....

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.... [4]

   (v) Suggest why some people might be against the quarry.

   ....[4]

   ....

   ....

   ....

   ....

   ....

   ....

   .... [4]

(c) Look at the photograph, which shows an example of a landscape changed after quarrying.

   Describe how the landscape changed after quarrying provides opportunities for people.

   ....

   ....

   ....

   ....

   ....

   ....

   ....

   .... [4]

(d) Look at the information below about the importance of wetland ecosystems.

> Wetland ecosystems provide a habitat for a wide range of species. Many birds feed there during the winter months. Wetlands can store lots of water, which reduces flooding in other areas. Jobs can be created in wetlands, through fish farming and on nature reserves. However, wetlands are being damaged. They have been drained to create land for farming and housing. Water is also extracted for use in homes and factories. Wetlands are also being polluted by waste products from factories and by run-off from farms. Tourism also has an impact on the wetland ecosystem.

    (i) State **two** reasons why it is important to conserve wetland ecosystems.

....

....

....

.... [2]

    (ii) Suggest **two** ways in which wetland ecosystems could be damaged by tourism.

....

....

....

.... [2]

    (iii) Explain how fertiliser run-off from farming can change wetland ecosystems.

....

....

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....

....

.... [3]

(e) The bar graph shows sources of marine pollution.

(i) Complete the bar graph by drawing a bar for transport with a contribution to marine pollution of 9%. [1]

sources of marine pollution
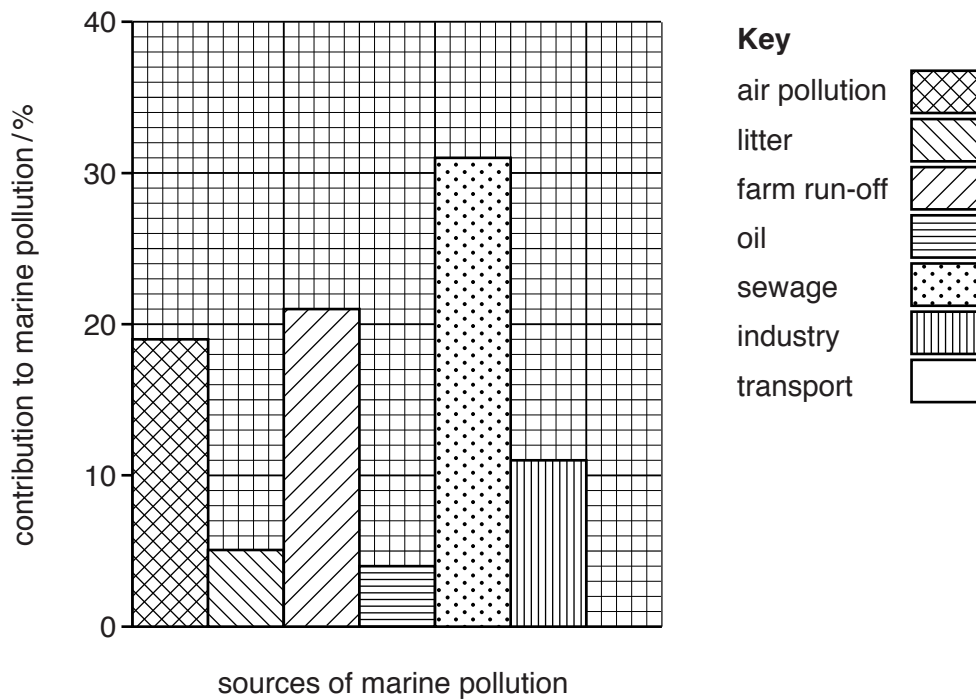
(ii) The bar graph was drawn incorrectly because the sources should have been arranged in size order. Use the bar graph to place the sources of marine pollution in size order (highest to lowest) in the table below. Some have been completed for you.

size order (highest to lowest)	source of marine pollution/%
1	sewage
2	....
3	....
4	....
5	transport
6	litter
7	....

[2]

(iii) Suggest ways in which the problem of marine pollution could be managed to ensure our oceans are a sustainable resource.

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.... [6]
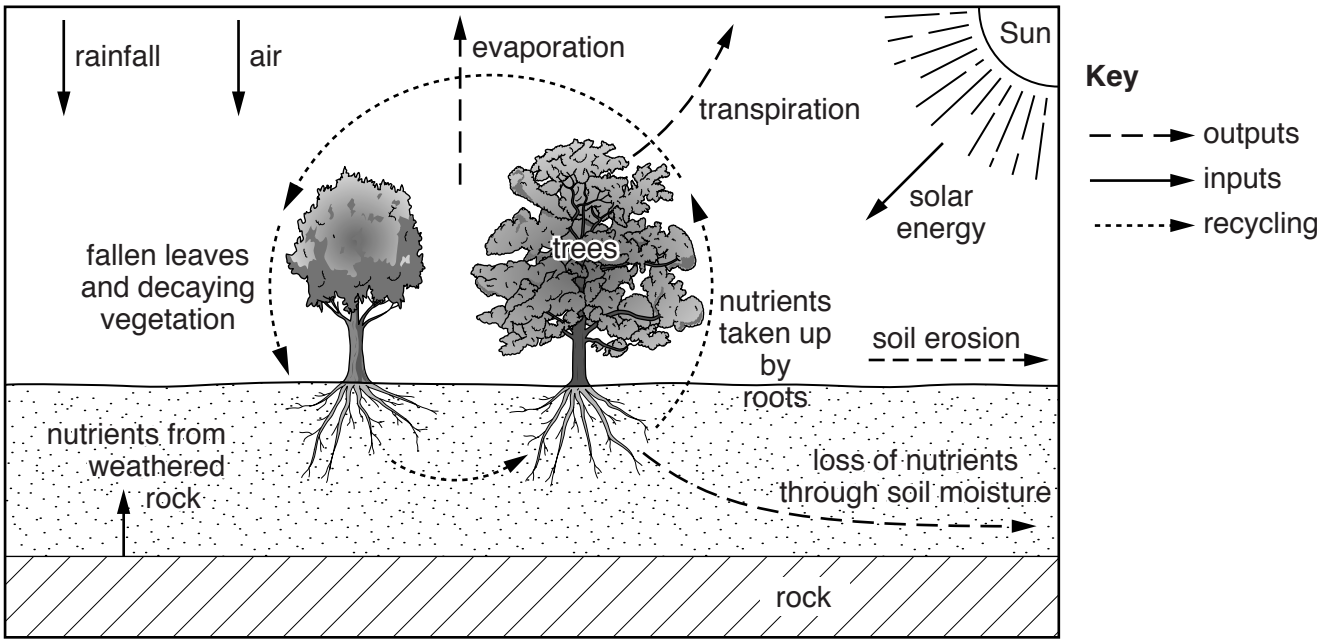
2 (a) Look at the diagram, which shows a soil system.

(i) State **two** outputs from the soil system shown on the diagram.

....

.... [2]

(ii) Using the diagram and your own knowledge, explain **two** ways in which a soil receives mineral nutrients.

....

....

....

....

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....

.... [4]

(iii) Look at the table, which gives some information about two soil types, **A** and **B**. Using the table, state which soil type would be best for growing crops. Give reasons for your answer.

soil **A** (sandy soil)	soil **B** (clay soil)
large pore spaces	small pore spaces
large particles	small particles
coarse texture	fine texture

soil type ....

reasons ....

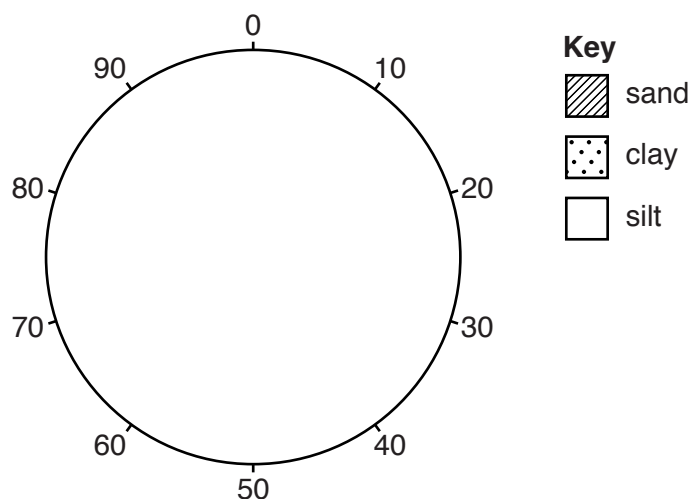...

[2]

(iv) The table below shows the composition of loam, a type of soil. Use the information in the table and the key to complete the pie graph below.

soil particle content	percentage composition/%
sand	42
clay	38
silt	20

[3]

(b) (i) State the difference between subsistence and commercial agriculture.

....

....

.... [1]

(ii) The map shows irrigated land in Egypt.

Key
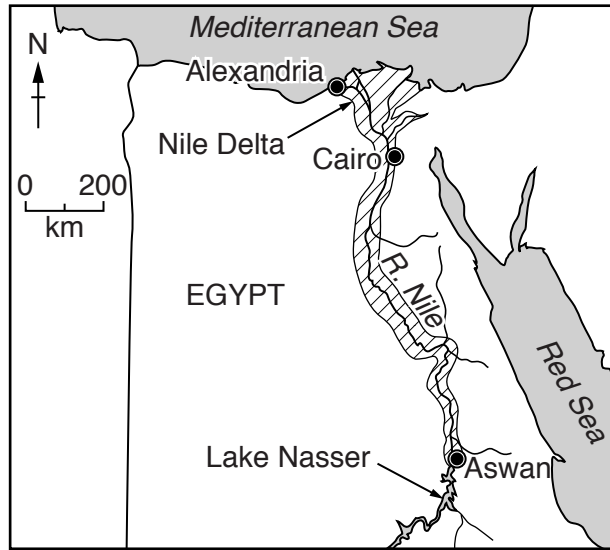
[hatched] irrigated land

⦿ city
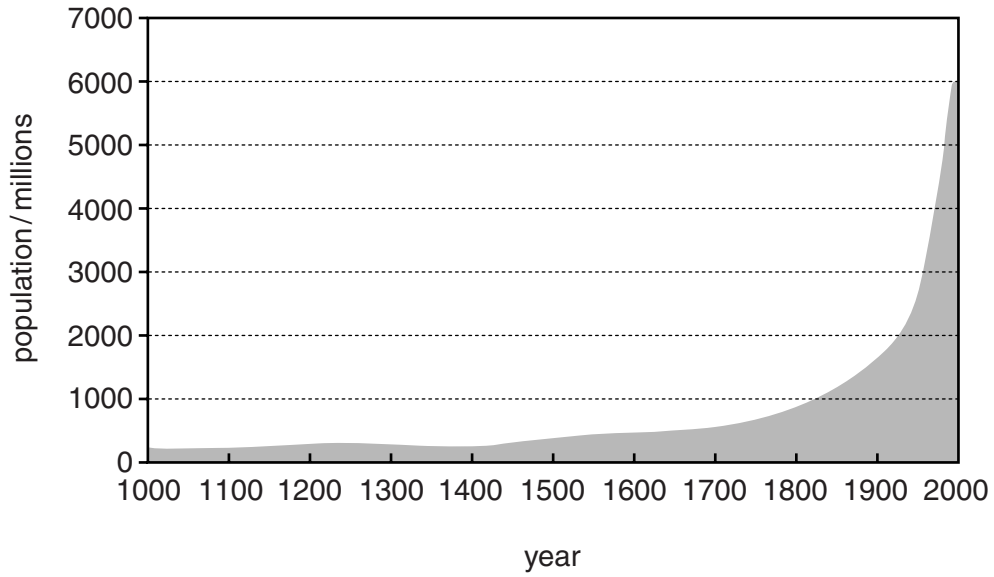
~~~ river

Describe the distribution of irrigated land as shown by the map.

....

....

....

.... [2]

(iii) Explain how badly managed irrigation can cause damage to soil.

....

....

....

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....

.... [3]

(iv) Describe a method of sustainable irrigation.

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....

.... [2]

(c) (i) Look at the graph below, which shows world population growth.

Using evidence from the graph, describe changes in world population growth.

....

....

....

....

....

.... [3]

(ii) Look at the photograph, which shows an area of land that used to be productive farmland.

Identify **two** pieces of evidence from the photograph which suggest that this area is now affected by desertification.

....

....

....

.... [2]

(iii) Explain why population growth is leading to desertification in some parts of the world.

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.... [4]

(d) Malaria is a problem in many parts of the world. Look at the table below, which shows worldwide deaths from malaria.

year	number of deaths worldwide
2000	990 000
2005	920 000
2009	789 000

(i) Calculate the percentage decrease in deaths from malaria between the year 2000 and 2009.

Space for working.

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

(ii) Suggest ways in which malaria can impact on human activity.

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.... [4]

(iii) Suggest strategies that could be used to control and eradicate water-related diseases. You should refer to named examples of diseases and strategies in your answer.

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.... [6]

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