Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CANDIDATE
NAME

CENTRE
NUMBER

CANDIDATE
NUMBER

ENVIRONMENTAL MANAGEMENT 0680/11

Paper 1
October/November 2017
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.

CAMBRIDGE
International Examinations

[Turn over

1   A textbook states that successful farming requires good soil.

(a) (i) Describe the characteristics of soil that allow good crop growth.

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....[3]

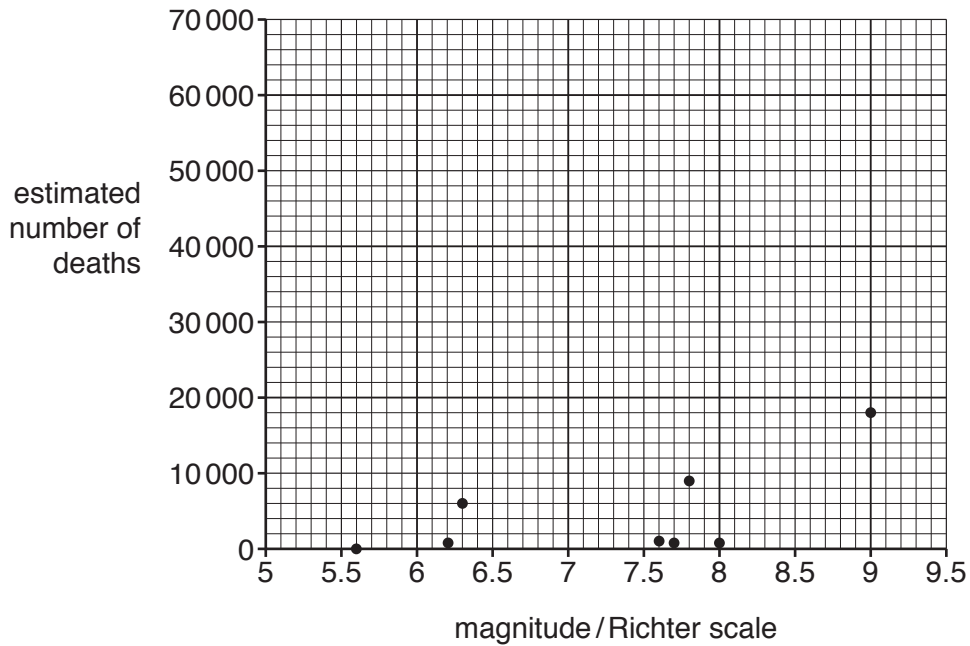(ii) It is important for a farmer to manage the soil. Good management can reduce problems of soil erosion.

Explain strategies to reduce soil erosion.

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....[3]

(b) In the last twenty years 8 million hectares of rainforest in South-East Asia have been removed to grow oil palm trees. This may cause problems. The diagram shows an oil palm plantation and part of a rainforest.

oil palm plantation

rainforest

A student said

> oil palms form a forest so I don't think we need to worry

To what extent do you agree with this statement? Give reasons for your answer.

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....[4]

4

2 The table shows information about some earthquakes between 2006 and 2015.

location of earthquake	year	estimated number of deaths	magnitude /Richter Scale
Nepal	2015	9 018	7.8
Yunnan, China	2014	617	6.2
Pakistan	2013	825	7.7
Sichuan, China	2012	81	5.6
Japan	2011	18 184	9.0
Sumatra	2009	1 115	7.6
Sichuan, China	2008	69 197	7.9
Peru	2007	519	8.0
Java, Indonesia	2006	5 782	6.3

(a) (i) Complete the graph of estimated number of deaths plotted against magnitude using information from the table about the earthquake in Sichuan in 2008.

[1]

(ii) State the country and magnitude of the earthquake with the lowest estimated number of deaths.

....[1]

(iii) State the country and estimated number of deaths of the earthquake with the highest magnitude.

....[1]

(iv) Circle the statement which describes the relationship between magnitude and estimated number of deaths for these earthquakes. [1]

    A. There is a positive relationship

    B. There is a negative relationship

    C. There is no relationship

(v) State **three** factors, other than magnitude, which may affect the number of deaths caused by earthquakes.

1 ....

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2 ....

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[3]

(b) Describe strategies for managing the impacts immediately after an earthquake.

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....[3]

3 World population reached 7 500 000 000 in 2015. It was estimated that 750 000 000 lived in the world's 100 largest cities.

(a) (i) Calculate the estimated percentage of the world population living in the 100 largest cities in 2015 using these figures.

Space for working.

....[1]

(ii) By the beginning of 2009, an estimated 52% of the world population were living in urban areas.

Calculate the number of people living in urban areas in 2009, when the world population reached 7 100 000 000.

Space for working.

....[1]

One of the main reasons for urban growth is migration to cities from rural areas.
A questionnaire was given to a group of recent migrants to the city of Bangalore in India.
Questions were asked about the reasons for their migration. Some answers are shown below.

    A.   I have a higher income in Bangalore.
    B.   Lack of jobs.
    C.   I could not grow enough food.
    D.   I got a job here.
    E.   My family are in Bangalore.
    F.   I only had a small plot of land.
    G.   There was poor health care.
    H.   Other reasons.

(iii) Write the letters of **three** push factors and **three** pull factors in the table.

push	pull

[2]

(iv) Suggest **one** of the *other reasons* (H) for the migration to Bangalore and state whether it is a push or pull factor.

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....[1]
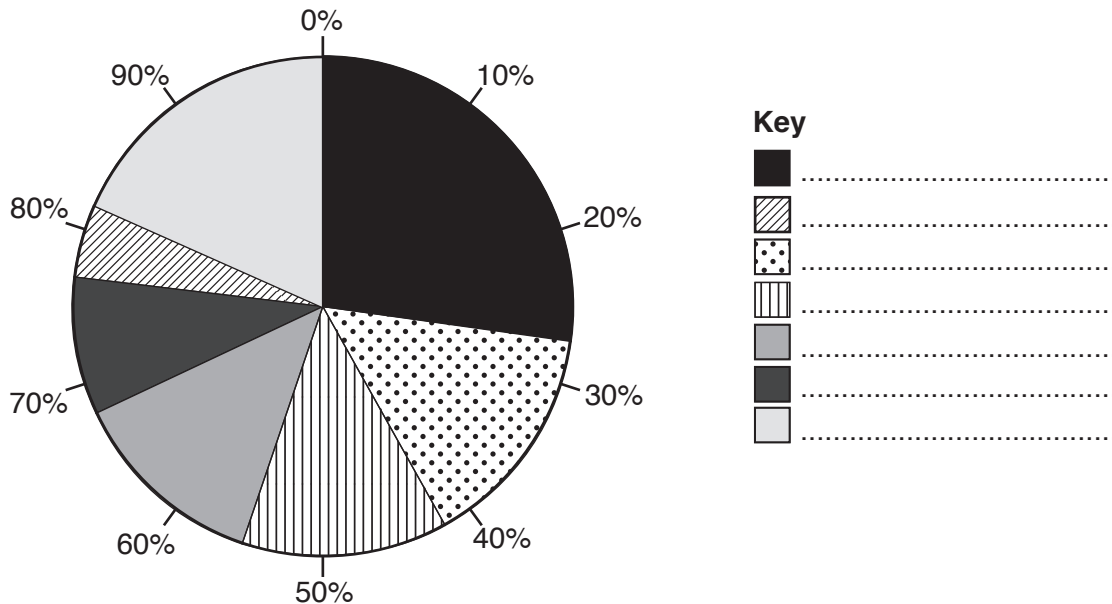
(b) In a report it was stated that,

'Bangalore is a rapidly expanding city. Parts of the city lack adequate infrastructure and services. For example, only 1100 of the estimated 3000 tonnes of waste produced each day is collected.'

(i) The table below shows the composition of the solid waste. Complete the key to the pie graph using the information in the table. [2]

type of waste	percentage of total waste
paper	27.4
food	14.5
garden waste	13.5
plastic	12.7
metal	8.9
glass	4.6
other	18.4

Key

◼ ....
▨ ....
⬚ ....
▥ ....
▦ ....
◼ ....
◻ ....

(ii) Suggest the problems that are caused by uncollected waste.

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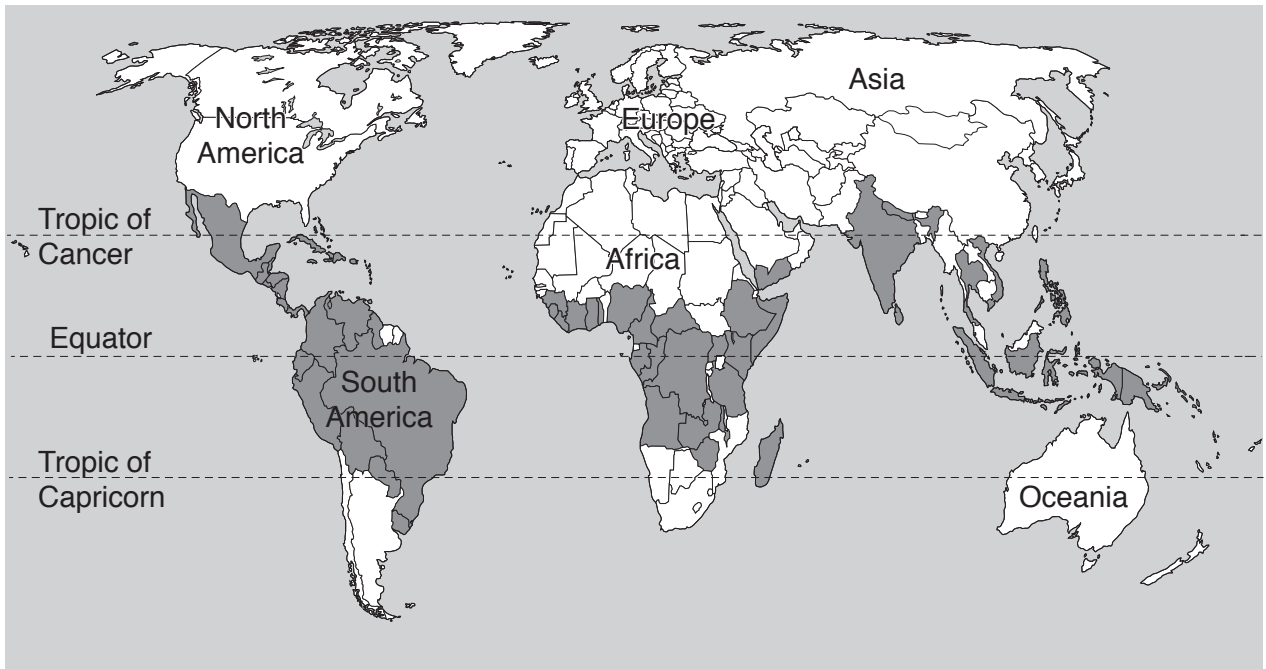..[3]

4 The map shows the distribution of the world's coffee producing countries.

Key

☐ main coffee producing countries

(a) Describe the distribution of coffee producing countries shown on the map.

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....[2]

(b) Coffee rust fungus is a serious pest of coffee plants. The coffee rust fungus causes leaves to go yellow and eventually fall off.

(i) Explain why the coffee rust fungus reduces the yield of coffee beans from plants.

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....[2]

(ii) Coffee plants can be grown above 3500 m where it is too cold for the coffee rust fungus.
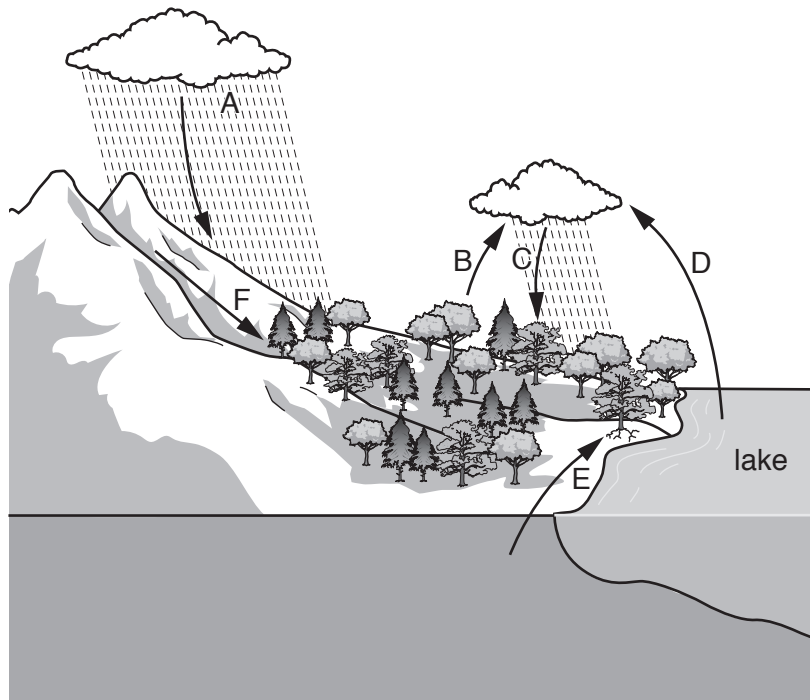
Explain how climate change might lead to an increase in the number of coffee plants affected by coffee rust fungus.

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....[2]

(c) Suggest techniques for reducing crop pests.

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....[4]

5 The diagram shows processes in the water cycle.

(a) (i) State the letter which represents the uptake of water into plants.

.... [1]

(ii) Name processes shown by letters B, C and D.

B ....

C ....

D ....

[2]

(iii) Explain how human activity may lead to an increase in process F.

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....[2]

The divided bar graph shows the use of fresh water in the world and in some regions of the world.

(b) (i) Complete the divided bar graph for North America, using the information in the table and key.

category	use of fresh water in North America %
agriculture	38
industry	44
domestic	18

[2]

(ii) Complete the paragraph using information from the divided bar graph.

The region which uses the greatest percentage of fresh water for agriculture is

.... The region which has the lowest domestic

use is .... For industry, the percentage used

by North America is .... times as much as the
world percentage.

[3]

6 The photograph shows an area of land where a lava flow stopped many years previously.

(a) (i) Describe the vegetation in the photograph.

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....[3]

   (ii) A guide explained to visitors that, after many years, vegetation would eventually grow on the lava flow.

   Explain how this would happen.

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(b) If a natural area is threatened by destruction, one strategy to conserve it is to set up a biosphere reserve.

   Describe the main features of a biosphere reserve.

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