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0460/13

May/June 2018

1 hour 45 minutes

Additional Materials: Calculator
 Ruler

READ THESE INSTRUCTIONS FIRST

DO **NOT** WRITE IN ANY BARCODES.

Answer **three** questions, **one** from each section.

Sketch maps and diagrams should be drawn whenever they serve to illustrate an answer.

The number of marks is given in brackets [] at the end of each question or part question.

LEDCs – Less Economically Developed Countries

This document consists of **25** printed pages, **3** blank pages and **1** Insert.

Section A

Answer **one** question from this section.

- 1 (a) Study Figs. 1.1 and 1.2, which show information about population.

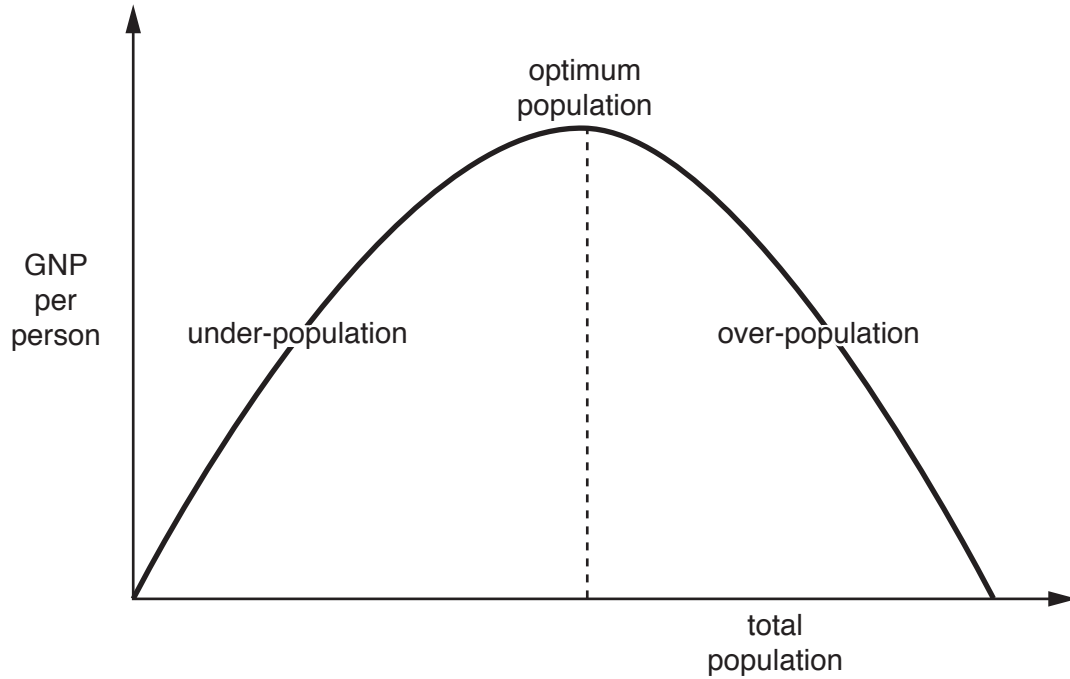


Fig. 1.1



Fig. 1.2

- (i) Using Fig. 1.1 **only**, define *optimum population*.

.....
[1]

- (ii) Using Fig. 1.2 **only**, define:

under-population

.....

over-population

.....
[2]

- (iii) Explain why some countries become over-populated.

.....

[3]

- (iv) Describe **four** problems which are caused by over-population.

1

 2

 3

 4
[4]

(b) Study Fig. 1.3, which shows different opinions about under-population in Canada.

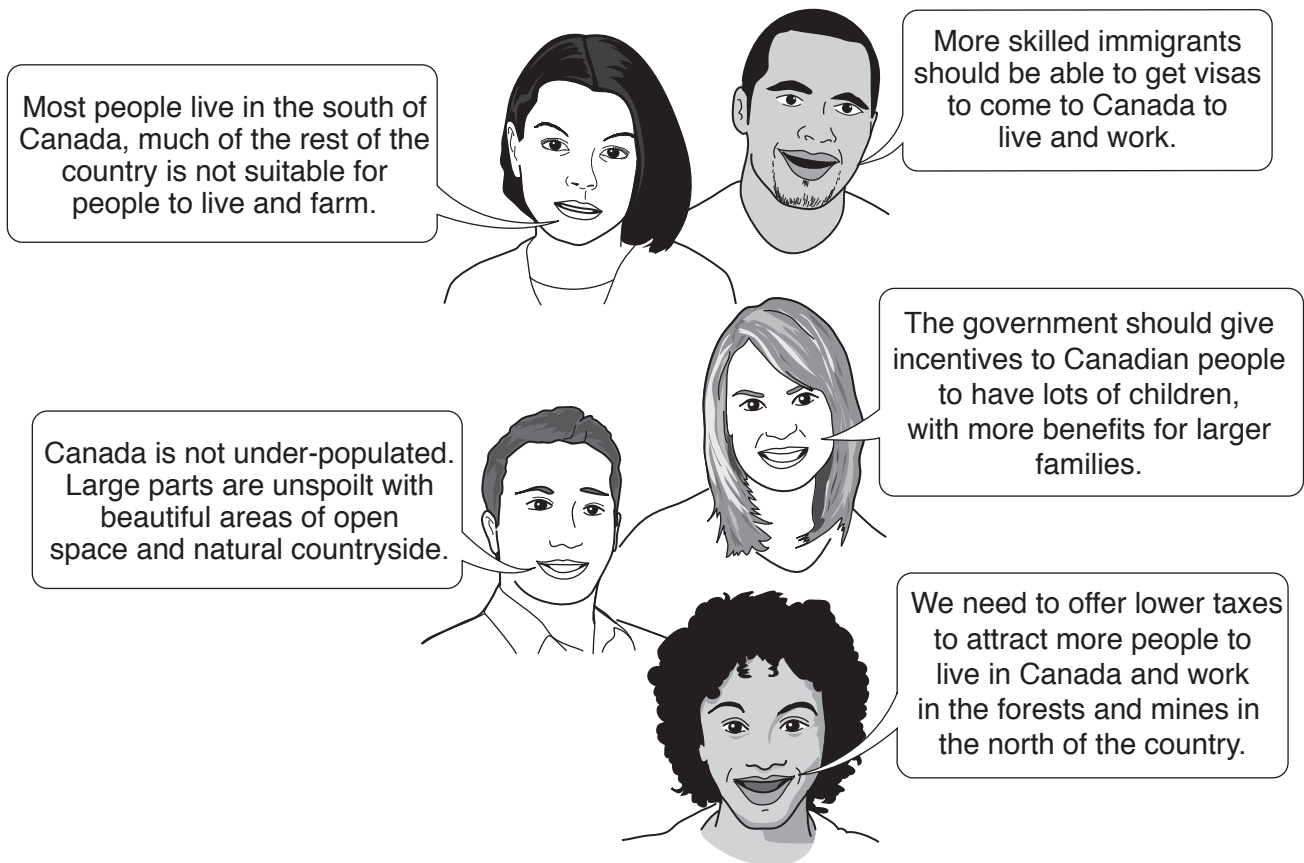


Fig. 1.3

(i) Using Fig. 1.3 **only**, identify **three** possible methods which could be used in Canada to reduce the impacts of under-population.

- 1
- 2
- 3[3]

- (ii) Explain why countries with large areas of land may **not** be under-populated.

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.....[5]

- (c)** For a named country you have studied, describe the problems caused by a large percentage of dependent population.

Name of country

[7]

[Total: 25]

2 (a) Study Fig. 2.1 (Insert), which shows information about urbanisation.

(i) What is meant by *urbanisation*?

.....
[1]

(ii) Using Fig. 2.1 **only**:

- name the continent with the lowest percentage of people living in urban areas

.....

- state the percentage of the population living in urban areas in most countries in Australasia and North America

..... % [2]

(iii) Using Fig. 2.1 **only**, describe the distribution of cities with over 10 million inhabitants in 2000.

.....

[3]

(iv) Explain why the population of many cities has grown rapidly since 2000.

.....

[4]

(b) Study Fig. 2.2 (Insert), which is a photograph of part of the urban area of Mumbai, India (an LEDC).

(i) Compare the location of the squatter settlements labelled **X** and **Y**.

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.....[3]

(ii) Describe the problems faced by people living in squatter settlements, such as those shown in Fig. 2.2.

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.....[5]

- (c)** For a named urban area you have studied, describe what has been done to reduce the negative impacts of urbanisation.

Name of urban area

[7]

[Total: 25]

Section B

Answer **one** question from this section.

- 3 (a) Study Fig. 3.1, which is a flow diagram showing information about water flows and stores in a drainage basin.

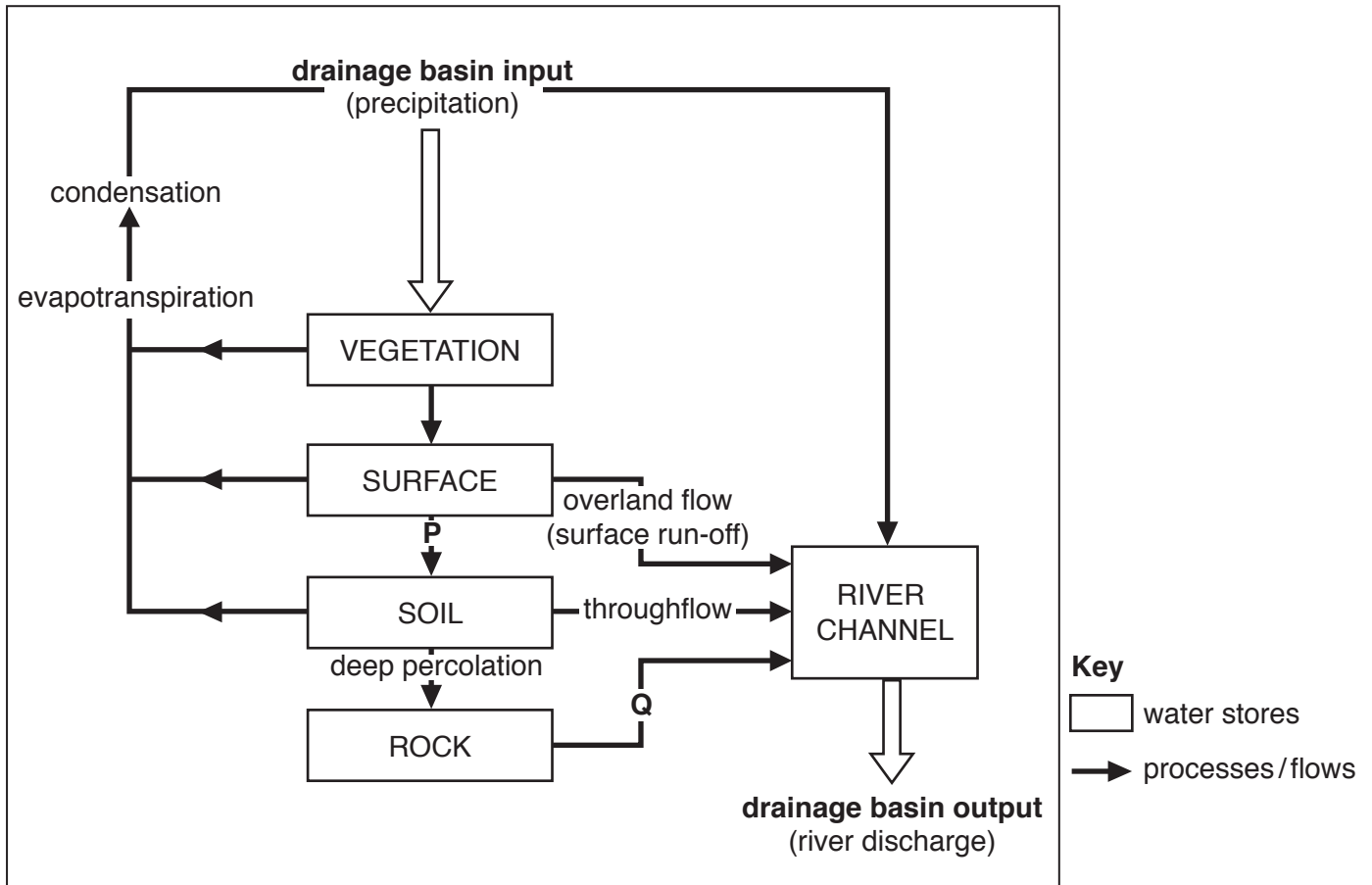


Fig. 3.1

- (i) What is a *drainage basin*?

.....
[1]

- (ii) Name the processes/flows which take place at **P** and **Q** on Fig. 3.1.

P

Q

[2]

- (iii) Give different reasons to explain why the amount of overland flow varies in a drainage basin:

A from season to season

.....

.....

.....

.....

.....

.....[3]

B from place to place

.....

.....

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.....[4]

(b) Study Figs. 3.2 and 3.3 (Insert), which are photographs showing two rivers in an upland area in the UK.

(i) Describe **three** differences between the river and valley in Fig. 3.2 compared with the river and valley in Fig. 3.3.

1

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2

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3

.....[3]

(ii) Suggest how rivers such as those shown in Figs. 3.2 and 3.3 transport their load.

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.....[5]

- (c) Explain how an oxbow lake is formed.
Include a diagram or series of diagrams.

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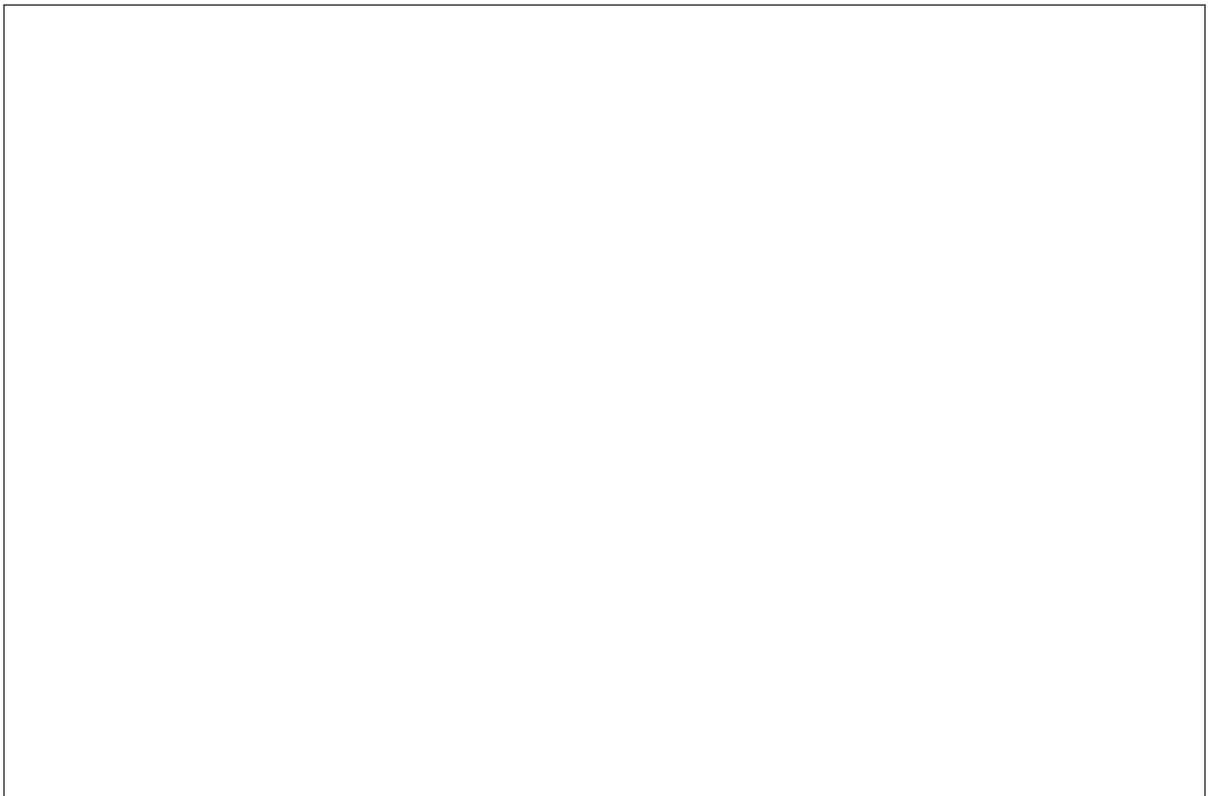
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[7]

[Total: 25]

- 4 (a) Study Fig. 4.1 (Insert), which is a cross section of the atmosphere between the Equator and the Tropics.

(i) Which letter, **X**, **Y** or **Z**, shows the position of the hot deserts?

..... [1]

(ii) Describe how the following are different in equatorial and hot desert climates.

Rainfall

.....

Temperature range

..... [2]

(iii) Explain how latitude and atmospheric pressure influence the characteristics of equatorial and hot desert climates.

.....

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..... [3]

(iv) Explain why wind direction and distance from the sea are important influences on hot desert climates.

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..... [4]

(b) Study Fig. 4.2 (Insert), which is a photograph taken in an area of hot desert.

(i) Describe **three** characteristics of the vegetation shown in Fig. 4.2.

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

(ii) Explain how vegetation is able to survive in a hot desert environment.

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.....[5]

.....[7]

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Section C

Answer **one** question from this section.

5 (a) Study Fig. 5.1 (Insert), which shows agricultural land use in Iraq.

(i) Identify the agricultural land use in north east Iraq.

..... [1]

(ii) Using evidence from Fig. 5.1 **only**, give different reasons why cultivation can take place in areas **A** and **B**.

Area **A**

.....

Area **B**

.....[2]

(iii) Iraq has recently been at war. Explain why war may cause food shortages.

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.....[3]

(iv) Explain how other economic and political factors may cause food shortages in a country.

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.....[4]

- (b)** Study Fig. 5.2 (Insert), which is a photograph showing an area used for agriculture in Indonesia (an LEDC in South east Asia).

- (i)** Describe the agricultural land use in Fig. 5.2.

.....

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.....[3]

- (ii)** Describe methods which could be used to increase the output of the land shown in Fig. 5.2.

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.....[5]

- (c)** Describe and explain the land use of a farm or agricultural system in a named area you have studied.

Type of farm or agricultural system

Name of area

[7]

[Total: 25]

- 6 (a) Study Fig. 6.1, which is information about melting ice.

When Glacier National Park in the USA was established in 1910, there were 150 glaciers (a glacier is a slow moving mass or river of ice). Since then the number has decreased to fewer than 30, and most of those remaining have shrunk in area by two-thirds.

Most scientists believe that human activity, in particular the burning of fossil fuels, has caused the atmosphere to become warmer and caused ice to melt. The ice on Mt Kilimanjaro has reduced by more than 80% since 1912. Glaciers in parts of the Himalayas are retreating so fast that researchers believe that most central and eastern Himalayan glaciers could virtually disappear by 2035. Arctic sea ice has thinned and its area has reduced by about 10% in the past 30 years.

When temperatures rise and ice melts, more water flows to the seas from glaciers and ice caps. Rising temperatures also cause ocean water to warm and expand in volume. This has increased average global sea level by between 10 and 20 centimetres in the past hundred years.

Fig. 6.1

- (i) Name an example of a fossil fuel.

.....[1]

- (ii) Identify from Fig. 6.1 **two** pieces of evidence that ice is melting.

1

.....

2

.....[2]

- (iii) Explain why the burning of fossil fuels may have been a cause of ice melting as described in Fig. 6.1.

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.....[3]

- (iv) Explain how the melting of ice may cause problems for people and the natural environment.

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.....[4]

- (b) Study Fig. 6.2, which shows information about average rainfall in the Sahel between 1900 and 2011. The Sahel is an area in Africa.

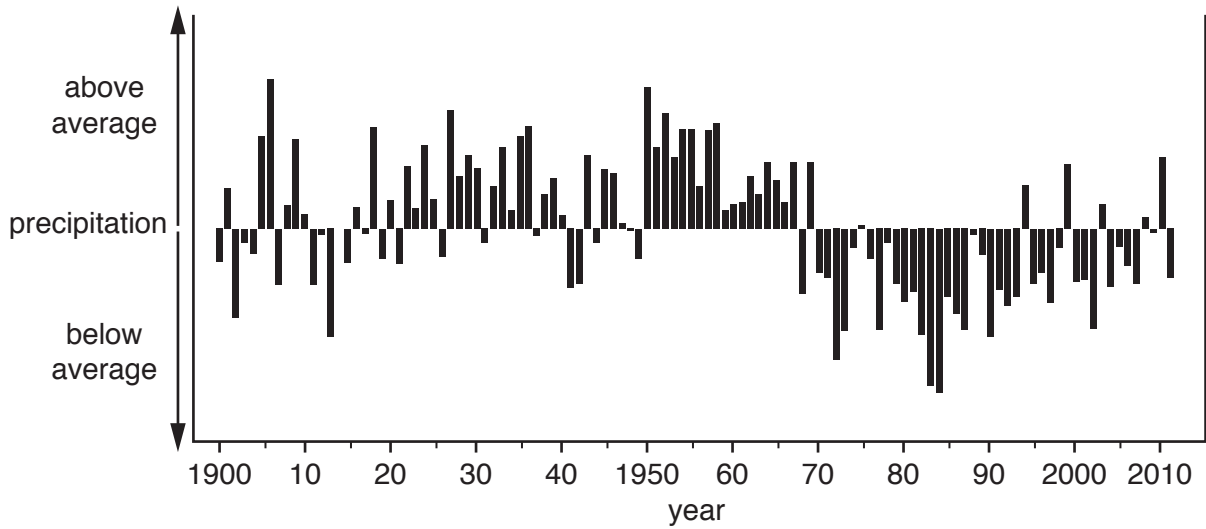


Fig. 6.2

- (i) Using evidence from Fig. 6.2 **only**, describe the changes in average precipitation between 1900 and 2011.

.....

.....

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.....[3]

- (ii) When rainfall is low desertification may occur. Explain how economic activities in regions such as the Sahel have resulted in an increased risk of desertification.

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.....[5]

- (c)** For an economic activity in a named area you have studied, describe how the environmental risks are being managed.

Name of area

Economic activity

.....[7

[Total: 25]

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