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GEOGRAPHY **0460/12**

Paper 1 Geographical Themes **February/March 2021**

1 hour 45 minutes

You must answer on the question paper.

You will need: Insert (enclosed)
Calculator
Ruler

INSTRUCTIONS

- Answer **three** questions in total, **one** from each section.
- Use a black or dark blue pen. You may use an HB pencil for any diagrams or graphs.
- Write your name, centre number and candidate number in the boxes at the top of the page.
- Write your answer to each question in the space provided.
- Do **not** use an erasable pen or correction fluid.
- Do **not** write on any bar codes.
- If additional space is needed, you should use the lined pages at the end of this booklet; the question number or numbers must be clearly shown.

INFORMATION

- The total mark for this paper is 75.
- The number of marks for each question or part question is shown in brackets [ ].
- The insert contains additional resources referred to in the questions.

Definitions
MEDCs – More Economically Developed Countries
LEDCs – Less Economically Developed Countries

This document has **32** pages. Any blank pages are indicated.

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Section A

Answer **one** question from this section.

1 **(a)** Study Fig. 1.1 and Fig. 1.2 (Insert), which show information about population density and economic activity in Honduras (an LEDC in Central America).

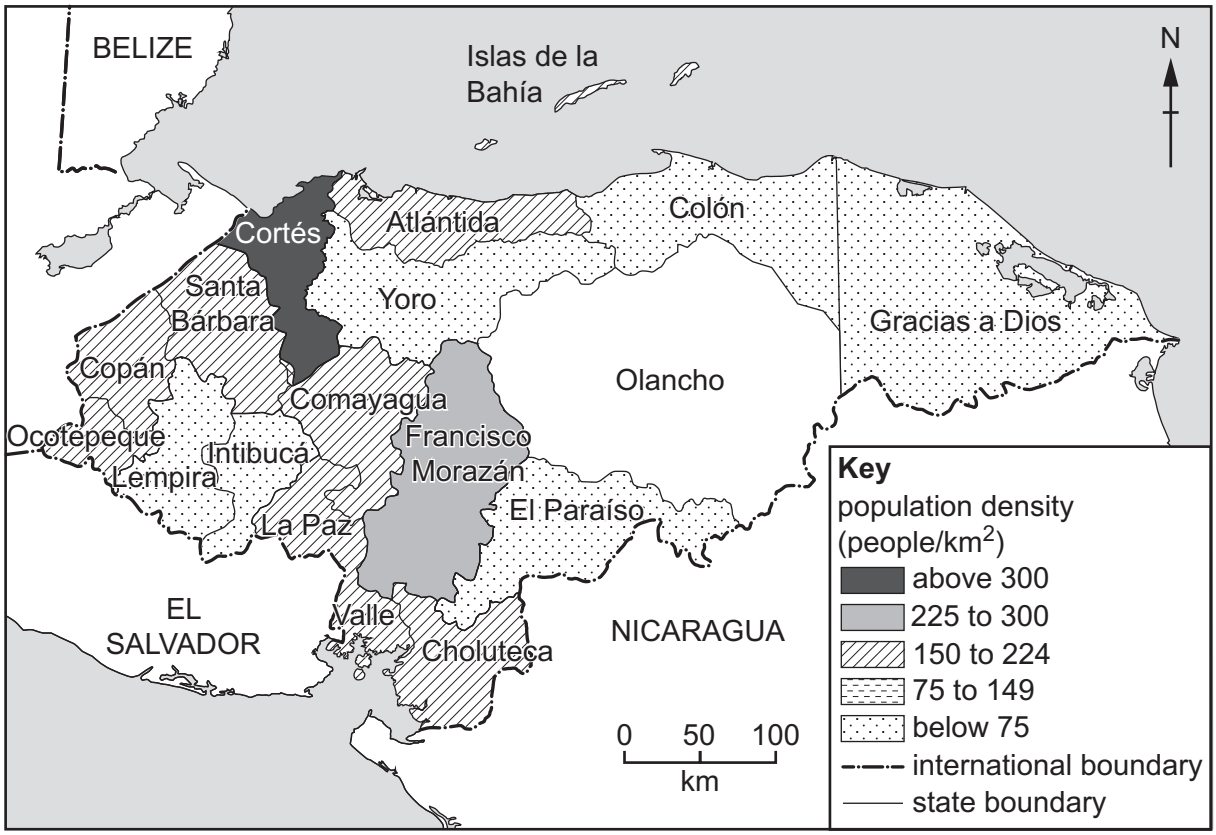

Fig. 1.1

(i) On Fig. 1.1, **complete the shading** for the Olancho region.

The Olancho region has a population density of 24 people per km^2. [1]

(ii) Put the following regions in rank order of their population density.

Atlántida Colón Cortés Francisco Morazán

1st ..... highest density

2nd .....

3rd .....

4th ..... lowest density [2]

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(iii) Using evidence from Fig. 1.2 **only**, suggest **three** different reasons why some regions of Honduras are densely populated.

1 .....

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2 .....

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3 .....

..... [3]

(iv) Explain how **physical** factors can influence population density.

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(b) Study Figs. 1.3, 1.4 and 1.5 (Insert), which are photographs taken in an overpopulated country.

(i) Use evidence in each of Figs. 1.3, 1.4 and 1.5 to identify different problems caused by overpopulation.

Fig. 1.3 .....

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Fig. 1.4 .....

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Fig. 1.5 .....

..... [3]

(ii) Overpopulation occurs when the population is greater than the resources can support. Explain why this may occur in a country.

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(c) For a named country you have studied, describe a government policy used to influence population growth.

Country .....

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2 **(a)** Study Fig. 2.1, which shows a map of settlements in the Osijek-Baranja region of Croatia (an MEDC in Europe).

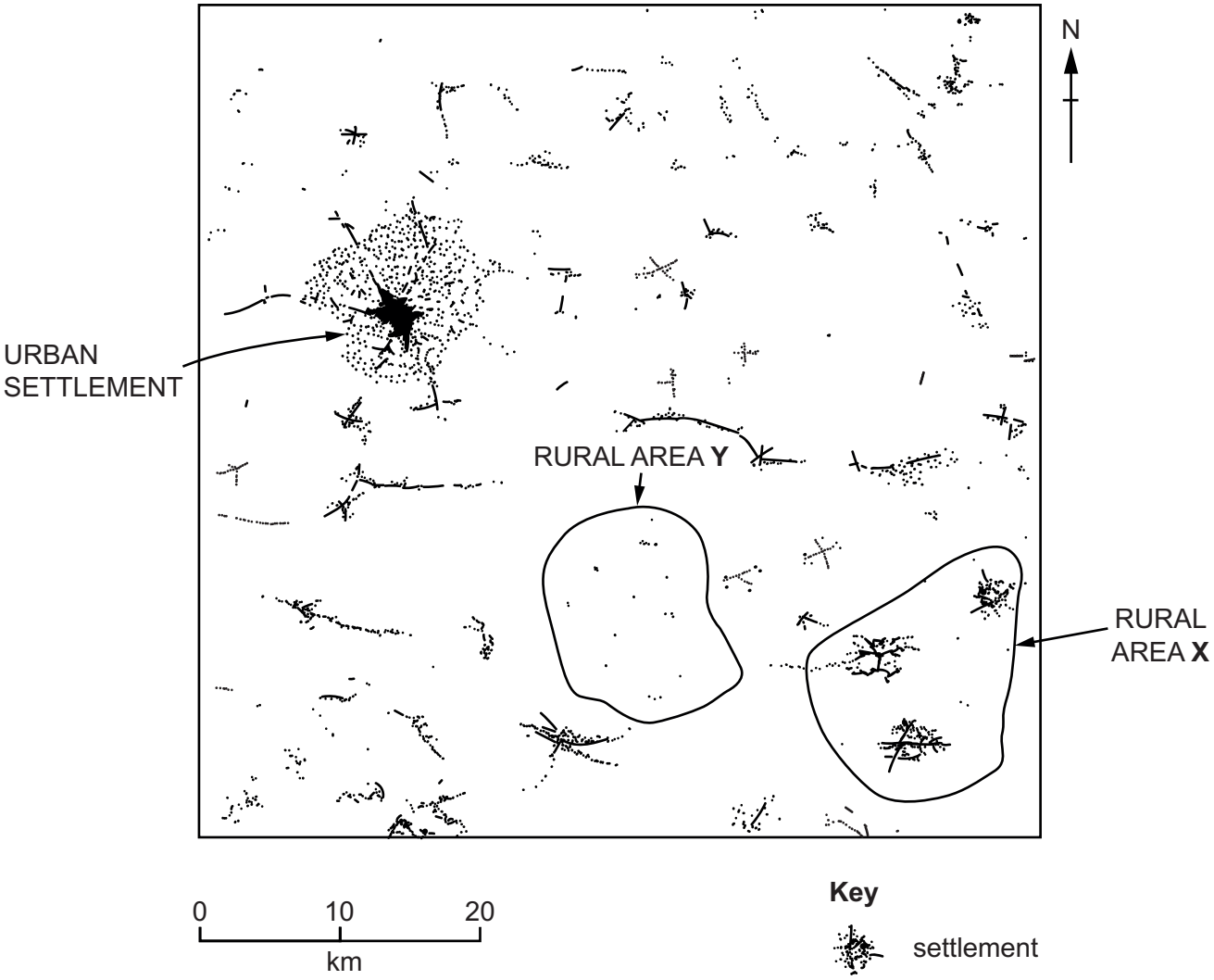

Fig. 2.1

(i) What is meant by the term *settlement*?

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..... [1]

(ii) Identify the settlement patterns in the **two** rural areas labelled **X** and **Y** in Fig. 2.1.

X .....

Y ..... [2]

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(iii) Suggest **three** factors which may have resulted in the growth of linear settlement patterns in parts of the area shown in Fig. 2.1.

1 .....

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(iv) Suggest likely differences in service provision between the urban and rural settlements shown in Fig. 2.1.

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(b) Study Fig. 2.2, which is a map showing the location of Aliano, a settlement in a rural part of Southern Italy (an MEDC in Europe).

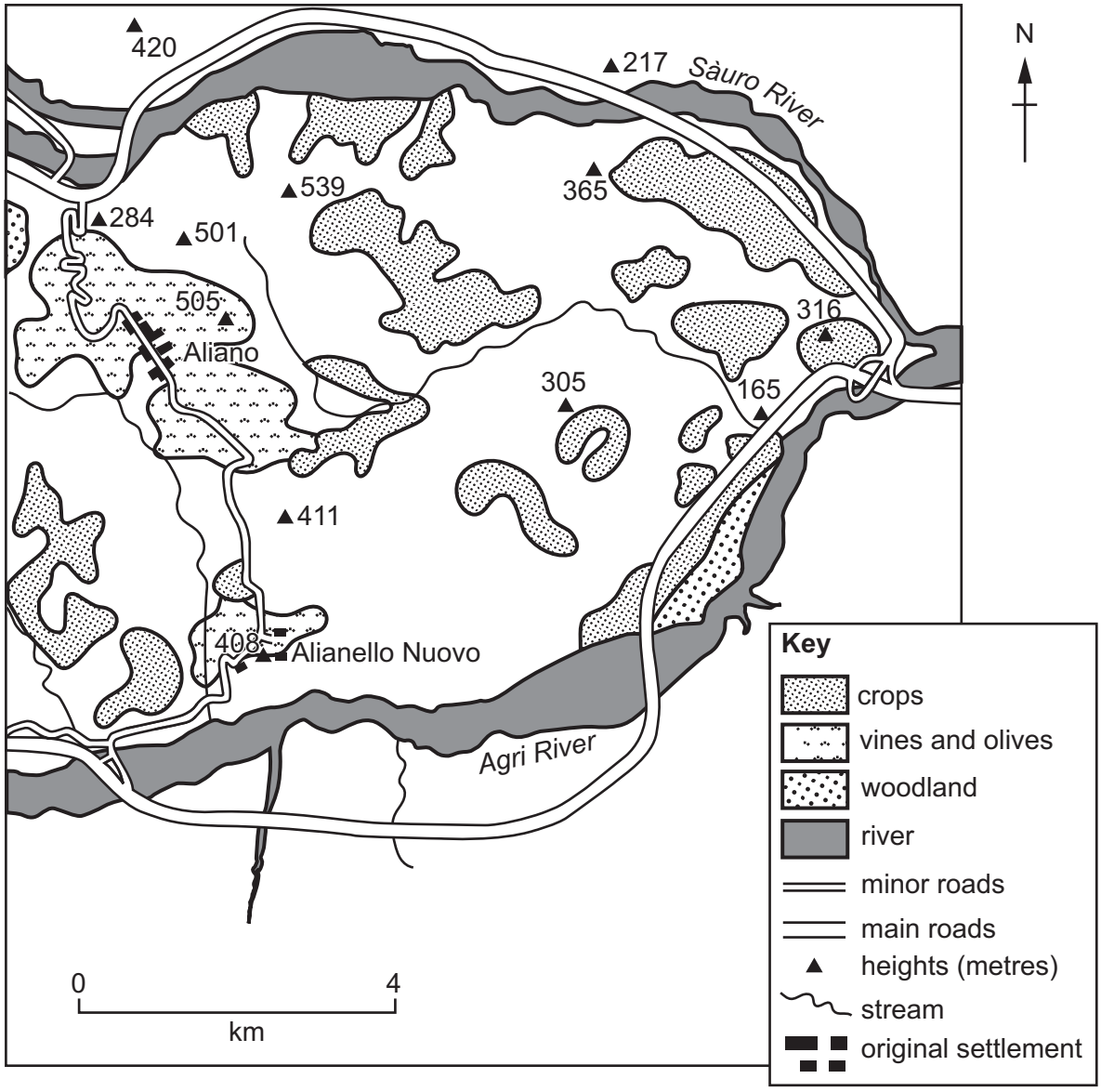

Fig. 2.2

(i) Suggest reasons for the original growth of a settlement at Aliano.

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(ii) The population of Aliano is now less than 1000 people.
Explain why the population has declined in settlements in some rural areas in MEDCs.

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(c) The function of a settlement is its purpose, such as:

– a port
– a tourist resort
– administration
– manufacturing.

For a named settlement you have studied, state its function(s) and explain why this/these function(s) developed there.

Name of settlement .....

Function(s) .....

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TURN PAGE FOR QUESTION 3

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Section B

Answer **one** question from this section.

3 **(a)** Study Fig. 3.1, which shows information about an earthquake.

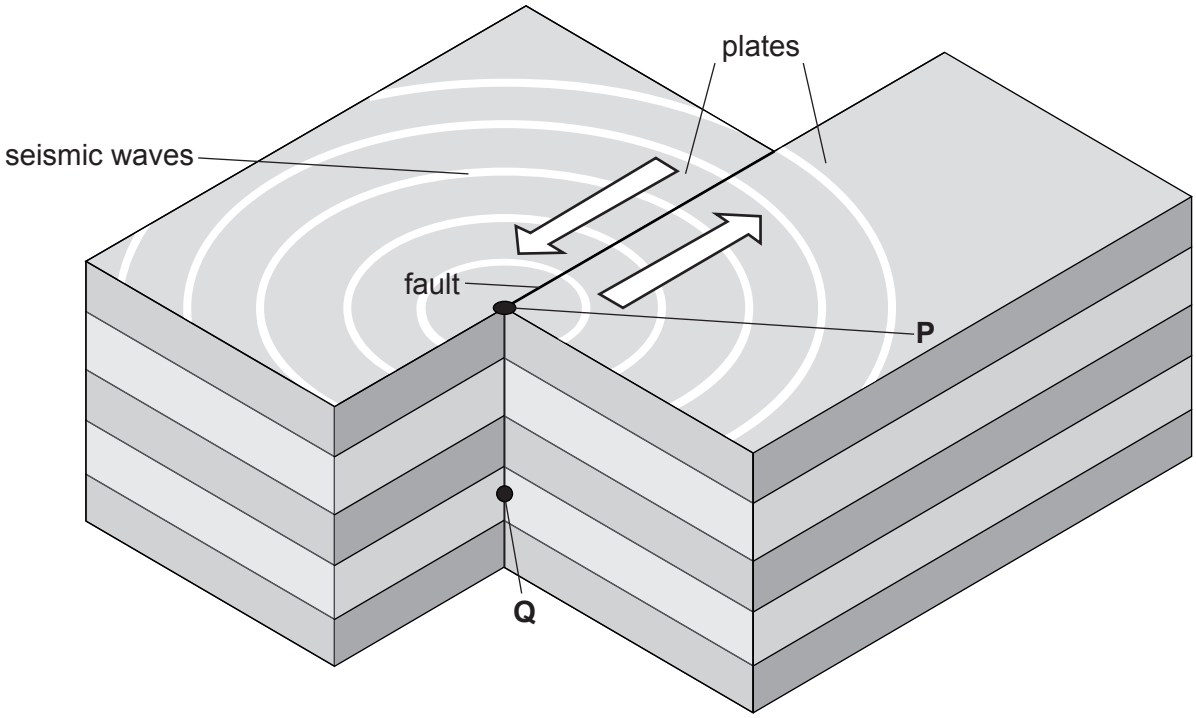

Fig. 3.1

(i) Tick (✓) the **one** statement in the table below which is the correct definition of a fault.

	tick (✓)
a fracture of the rocks that make up the Earth's crust	
large slowly moving slabs of rock	
the point at the surface of the Earth where the earthquake occurs	
waves that transmit the energy released by an earthquake	

[1]

(ii) Identify the points labelled **P** and **Q** in Fig. 3.1.

P .....

Q ..... [2]

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(iii) Using evidence from Fig. 3.1, explain why earthquakes occur.

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(b) Study Fig. 3.2, which shows information about two earthquakes which occurred in 2018.

Venezuela 21 August 2018

The August 2018 Venezuela earthquake measured 7.3 on the Richter scale and was one of the largest earthquakes ever to strike Venezuela. It occurred at a depth of 154 kilometres and was felt as far away as Bogotá, Colombia and Paramaribo, Suriname. The earthquake killed five people.

Indonesia 28 September 2018

Following the earthquake in Indonesia measuring 7.5 on the Richter scale, at a depth of 20 kilometres, a tsunami occurred. This had a height of around 5 to 7 metres, and flooded the settlements of Palu, Donggala and Mamuju. At least 2256 people were confirmed killed, with hundreds more missing.

Fig. 3.2

(i) Using information from Fig. 3.2 **only**, state **three** reasons why the earthquake in Indonesia caused more deaths and injuries than the earthquake in Venezuela.

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[Turn over

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(ii) Explain why large earthquakes are likely to cause more deaths and injuries in LEDCs than in MEDCs.

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(iii) Explain why many people live in areas which are at risk from earthquakes.

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(c) For a named **volcano** you have studied, explain the causes of an eruption.

Name of volcano .....

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4 **(a)** Study Fig. 4.1, which shows Golden Bay on New Zealand's South Island.

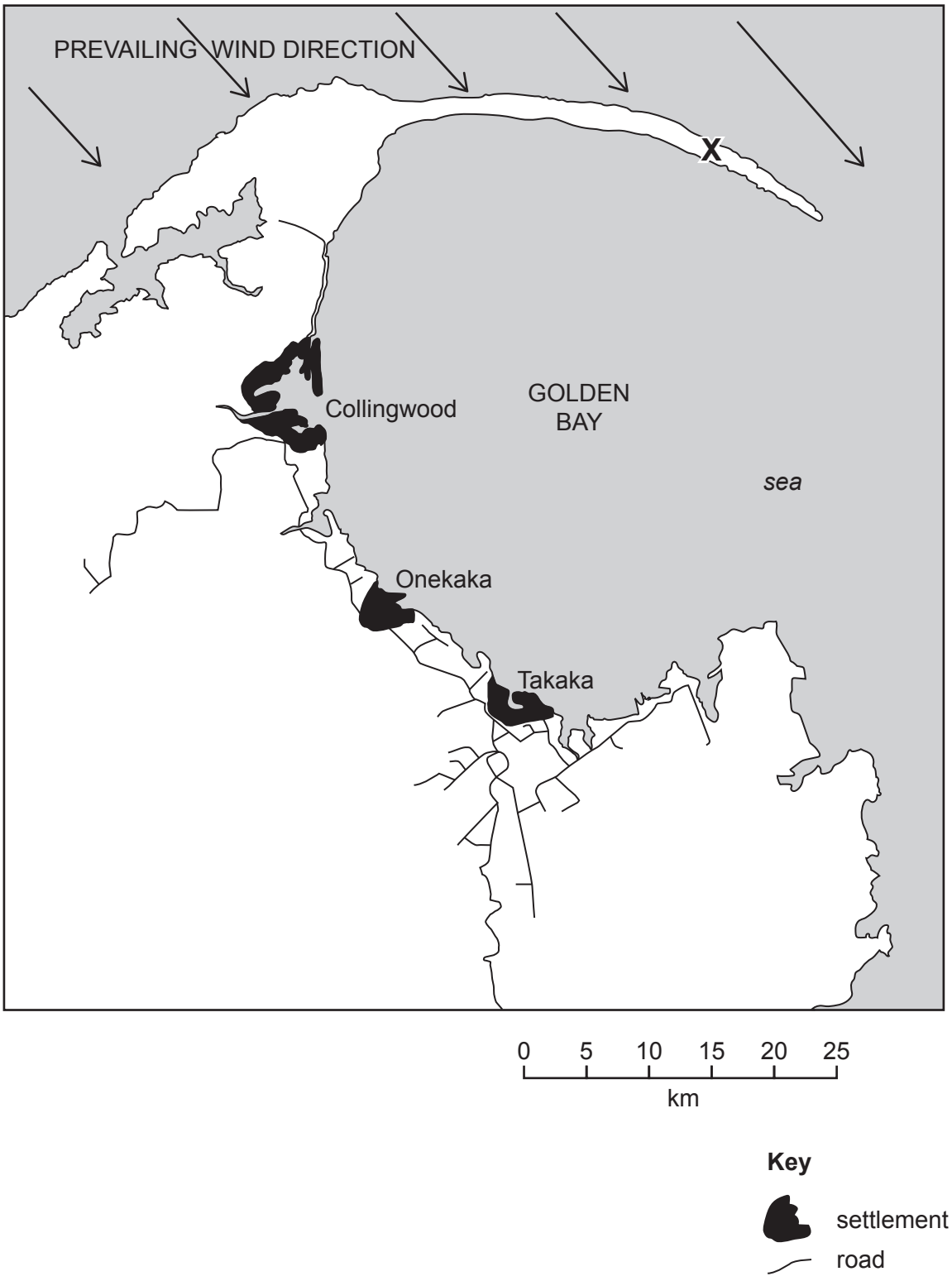

Fig. 4.1

(i) Which type of coastal landform is labelled **X**?

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[1]

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(ii) What is the distance (measured in a straight line) and the direction from Onekaka to the eastern end of coastal landform **X**?

Distance ..... km

Direction ..... [2]

(iii) Suggest how coastal landform **X** was formed by coastal processes.

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(iv) Suggest reasons why there are many beaches in Golden Bay.

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(b) Study Figs. 4.2, 4.3 and 4.4 (Insert), which are photographs which show different features formed on a headland.

(i) Identify the coastal landform shown by the arrows in each of Figs. 4.2, 4.3 and 4.4.

Fig. 4.2 .....

Fig. 4.3 .....

Fig. 4.4 ..... [3]

(ii) Explain how coastal landforms on a headland, such as those shown in Figs. 4.2, 4.3 and 4.4, are formed by coastal erosion.

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(c) For a named area of coastline you have studied, explain how it provides opportunities for people.

Area of coastline .....

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Section C

Answer **one** question from this section.

5 **(a)** Study Fig. 5.1, which shows information about the relationship between two indicators of development.

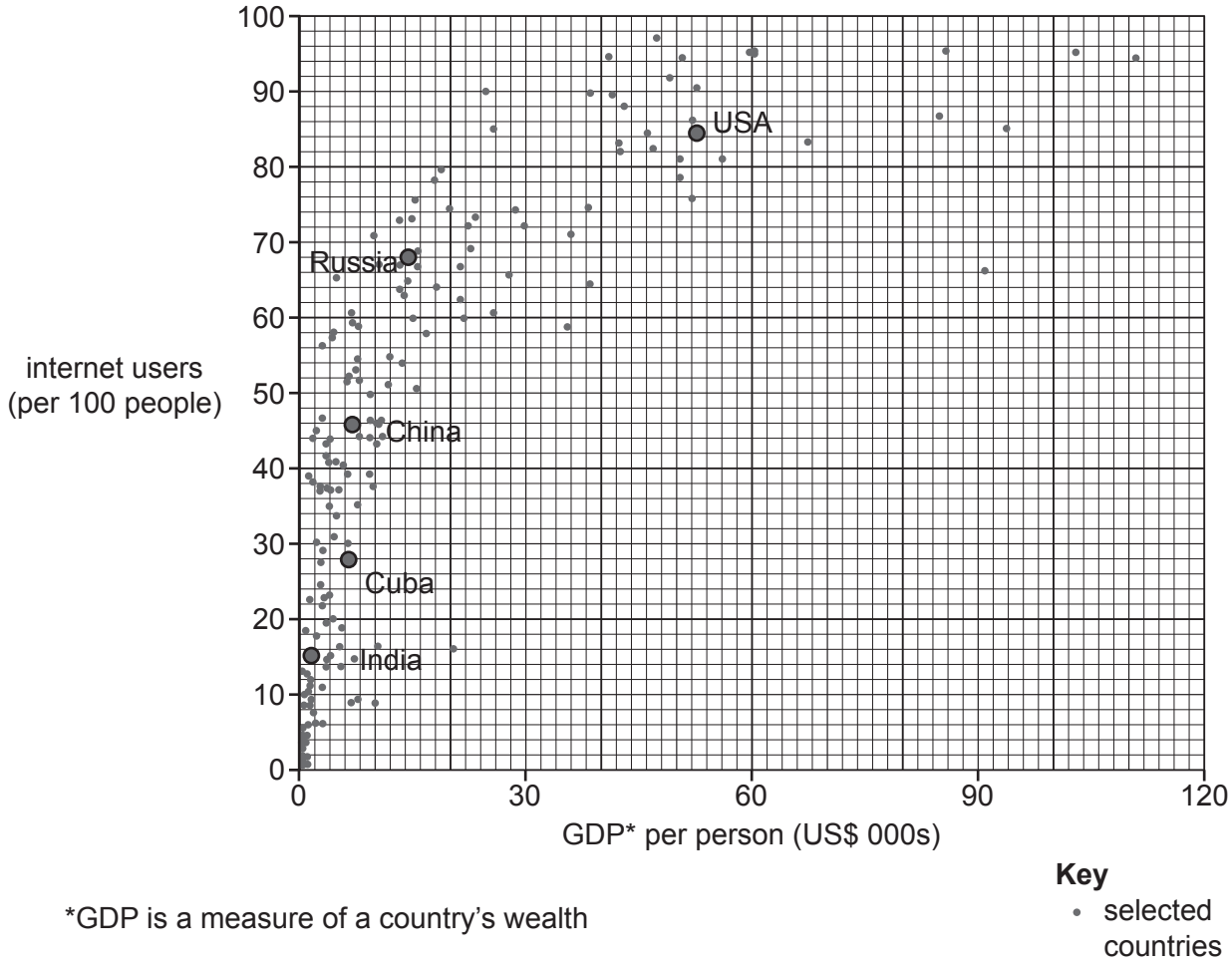

Fig. 5.1

(i) Identify the named country which has a GDP per person of US$15 000 and 68 internet users per 100 people.

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(ii) To what extent does Fig. 5.1 show that there is a relationship between GDP per person and internet users per 100 people?

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(iii) Suggest why there is a relationship between GDP per person and internet users per 100 people.

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(iv) Another indicator of development is employment structure.
Describe the changes in the employment structure of a country as its GDP per person increases.

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(b) Study Fig. 5.2, which shows the Human Development Index (HDI) in different countries in Africa.

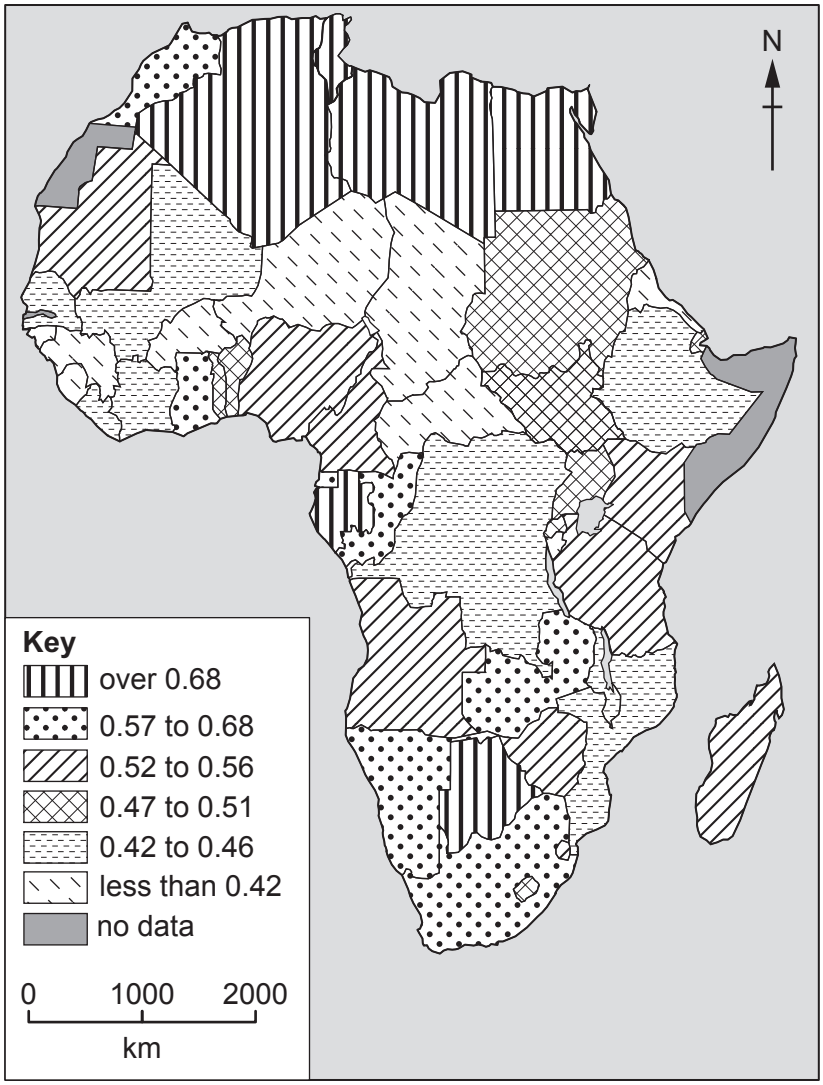

Fig. 5.2

(i) Using Fig. 5.2 **only**, compare the distribution of the countries with the highest (over 0.68) and lowest (less than 0.42) HDI within Africa.

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(ii) Explain why there are inequalities in wealth between countries.

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(c) For a named transnational corporation (TNC) you have studied, explain why it operates in many countries.

Name of transnational corporation (TNC) .....

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TURN PAGE FOR QUESTION 6

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6 **(a)** Study Fig. 6.1, which shows a map of the Nujiang River in Yunnan Province, China, showing the location of four dams built to generate hydro-electric power (HEP).

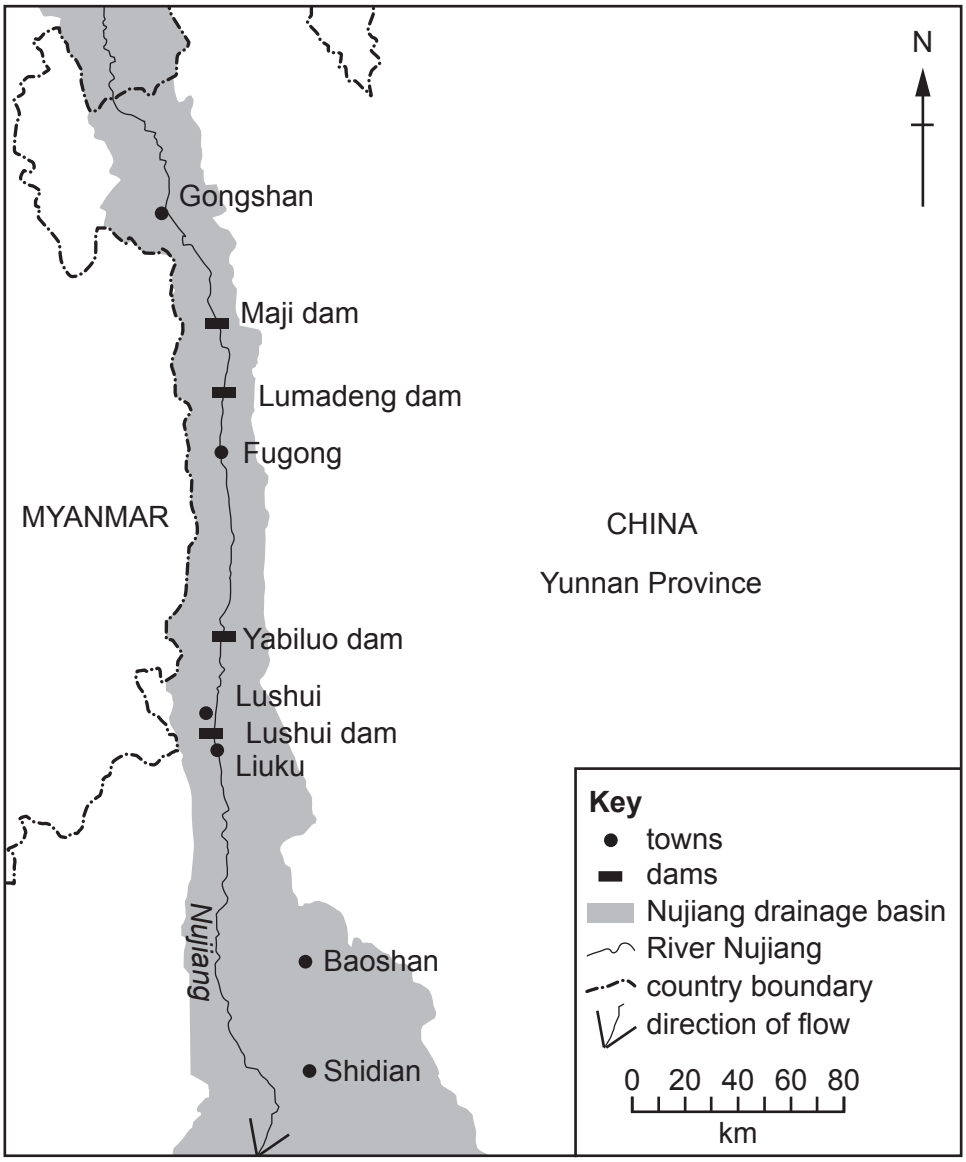

Fig. 6.1

(i) Tick (✓) the **one** statement in the table below which describes how HEP is generated.

	Tick (✓)
Atoms of uranium are split to create electricity.	
Coal is burnt to produce steam which is used in the power station.	
Running water turns a turbine to generate power.	
Strong winds blow turbines to produce electricity.	
Turbines are turned when the tide goes in and out.	

[1]

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(ii) Identify the following dams shown in Fig. 6.1:

– the dam which is nearest to the source of the river

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– the dam which is 100 km north-north west (NNW) of Baoshan.

..... [2]

(iii) Give **three** different reasons why some countries generate a greater proportion of their energy from HEP than other countries.

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3 .....

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(iv) Explain why the proportion of energy generated from renewable sources is likely to increase in the future.

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(b) Study Fig. 6.2, which shows information about the four dams on the Nujiang River which are labelled in Fig. 6.1.

dam	height of dam (metres)	area of reservoir (km^2)	annual value of electricity generated (billion RMB*)	total construction cost (billion RMB)	number of people made homeless
Lumadeng	165	11	3.2	9.1	6092
Lushui	175	19	4.0	8.8	6190
Maji	300	66	5.9	18.4	19830
Yabiluo	133	9	2.9	6.0	3982

*RMB is the currency of China.

Fig. 6.2

(i) Using the information in Fig. 6.2 **only**, describe **three** differences between the Maji and Yabiluo dams.

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..... [3]

(ii) Suggest why the building of dams to generate HEP along the Nujiang River may cause problems for people and the natural environment in the area.

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..... [5]

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(c) For a named country or area you have studied, explain how clean water is supplied for domestic use.

Name of country or area.....

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Additional Pages

If you use the following lined pages to complete the answer(s) to any question(s), the question number(s) must be clearly shown.

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