Cambridge Assessment International Education

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GEOGRAPHY **0460/21**

Paper 2 Geographical Skills **May/June 2020**

1 hour 30 minutes

You must answer on the question paper.

You will need: Insert (enclosed)
1:50 000 survey map (enclosed)
Calculator
Plain paper
Protractor
Ruler

INSTRUCTIONS

- Answer **all** questions.
- 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 60.
- The number of marks for each question or part question is shown in brackets [ ].
- The insert contains additional resources referred to in the questions.

This document has **20** pages. Blank pages are indicated.

DC (PQ/CB) 180192/6

1 Study the map extract for Stoumont, Belgium. The scale is 1:50 000.

(a) Fig. 1.1 shows some of the features around the main settlement at Stoumont. Study Fig. 1.1 and the map extract, and answer the questions below.

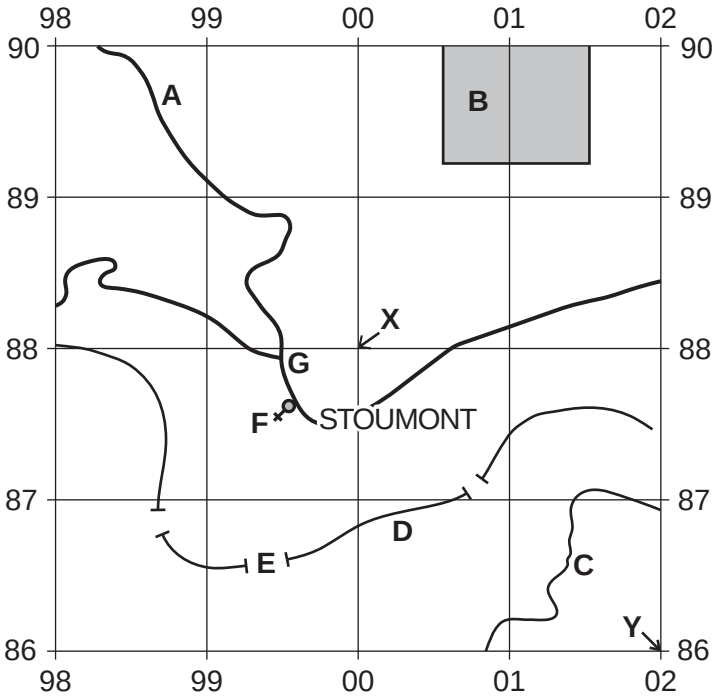

Fig. 1.1

Using the map extract, identify the following features shown in Fig. 1.1:

(i) feature **A**

..... [1]

(ii) the land use at **B**

..... [1]

(iii) the height above sea level of the contour at **C**

..... metres [1]

(iv) feature **D**

..... [1]

(v) feature **E**

..... [1]

(vi) feature **F**.

..... [1]

(b) What is the six-figure grid reference of the junction at point **G** in Fig. 1.1?

..... [1]

(c) Fig. 1.2 is a cross section from point **X** to point **Y** in Fig. 1.1.

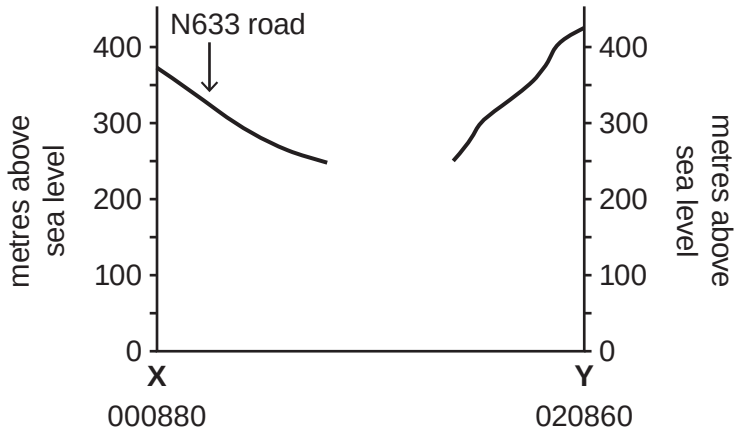

Fig. 1.2

(i) The cross section shown in Fig. 1.2 is incomplete. Using information from the map extract, draw a line on Fig. 1.2 to **complete the cross section**. [2]

(ii) In Fig. 1.2, **use a labelled arrow** to show the position of the L'Amblève river. [1]

(d) Find the N645 road that runs from near the settlement of Chevron in the south west of the map extract to the bridge over the L'Amblève river.

(i) What is the distance along the road from the south edge of the map to the bridge over the L'Amblève river? Tick (✓) **one** box below.

	Tick (✓)
3780 metres	
4780 metres	
5500 metres	
7780 metres	

[1]

(ii) What is the compass direction **from** the point where the road meets the south edge of the map **to** the bridge over the L'Amblève river?

..... [1]

(iii) Measure the bearing **from** the point where the road meets the south edge of the map **to** the bridge over the L'Amblève river.

..... degrees [1]

(iv) Describe the route of the N645 road.

.....

.....

.....

.....

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.....

..... [3]

(e) Fig. 1.3 shows an area in the north east of the map extract.

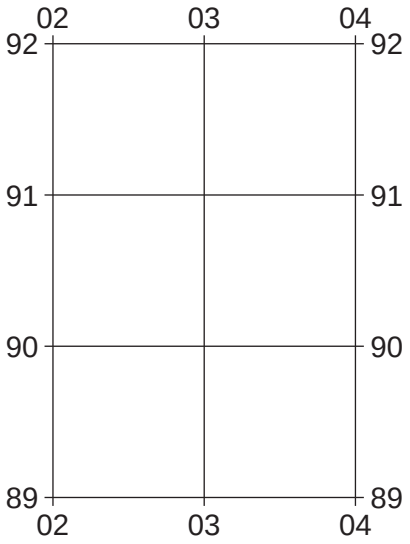

Fig. 1.3

Which **three** of the following statements describe the relief of the area shown in Fig. 1.3? Tick (✓) only **three** boxes below.

	Tick (✓)
The highest point is over 550 m.	
It is an area of gentle slopes.	
It is lowest in the north.	
The lowest land is below 200 m.	
It is an area of deeply cut relief.	
There is a river flood plain.	
There is a plateau in the south.	
The slopes face north.	
There is a V-shaped valley.	
It is a mountainous area.	

[3]

(f) Look at the main settlement on the map extract at Stoumont. Give **one** reason for the growth of the settlement.

.....

..... [1]

[Total: 20]

2 Fig. 2.1 shows the estimated population growth of the continents between 1960 and 2100. Answer the questions below using Fig. 2.1.

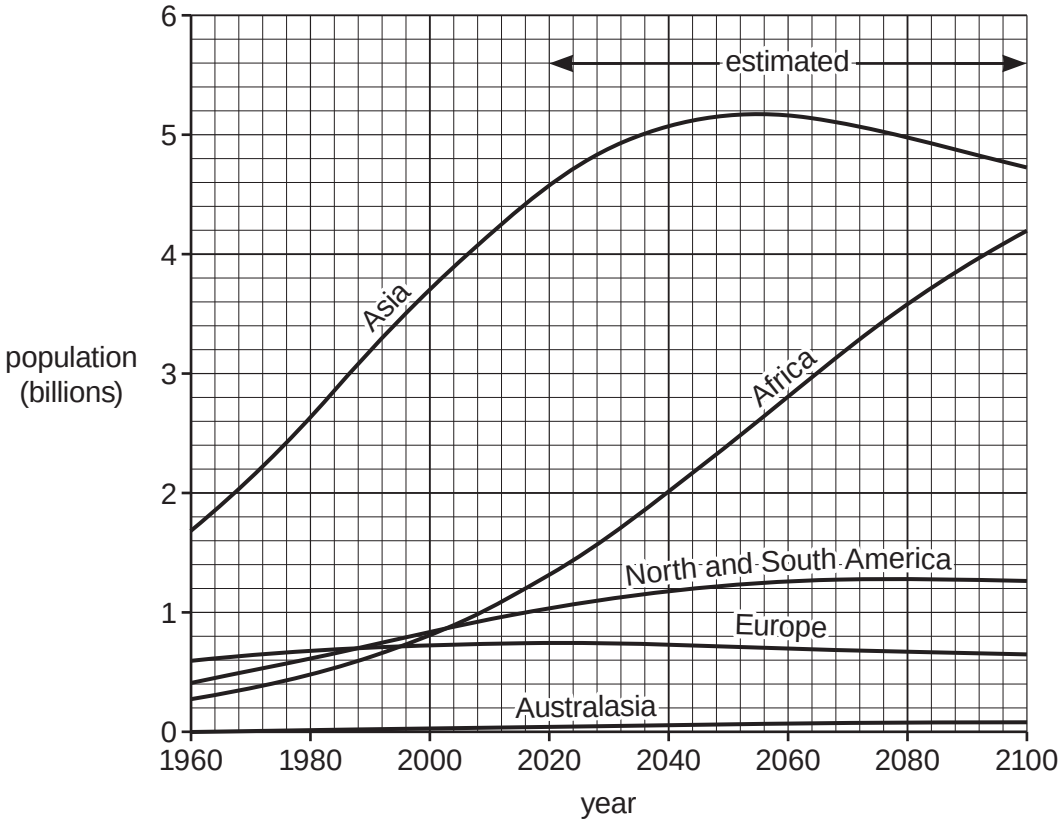

Fig. 2.1

(a) (i) What is the population of Africa expected to be in 2040?

..... [1]

(ii) In which continent did the population grow the most between 1960 and 2000?

..... [1]

(iii) In which continent is the population expected to grow the most between 2050 and 2100?

..... [1]

(iv) Estimate the world population in 2100. Circle **one** answer below.

7 billion 9 billion 11 billion 13 billion [1]

(b) Table 2.1 gives information about the population in five countries.

Table 2.1

	Growth rate (per thousand)	Birth rate (per thousand)	Death rate (per thousand)	Net migration (per thousand)
India	11.7		7.3	0
Italy	1.9	8.6	10.4	3.7
Japan	–2.1	7.7	9.8	0
Latvia	–10.9	9.7	14.5	–6.1
Malawi	33.1	41.0	7.9	0

(i) Calculate the birth rate of India.

..... per thousand [1]

(ii) Which **one** of the five countries has the greatest change per thousand in its population?

..... [1]

(iii) The population of Latvia is decreasing. Using Table 2.1 **only**, give **two** reasons why.

1 .....

.....

2 .....

.....

[2]

[Total: 8]

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3 Figs. 3.1, 3.2 and 3.3 (Insert) show three coastlines.

(a) Identify each of the following landforms:

(i) landform **W** in Fig. 3.1

..... [1]

(ii) landform **X** in Fig. 3.2

..... [1]

(iii) landform **Y** in Fig. 3.2

..... [1]

(iv) landform **Z** in Fig. 3.3.

..... [1]

(b) Which **one** of the three photographs shows a coastline where deposition is the most important process? Tick (✓) **one** box below.

	Tick (✓)
Fig. 3.1	
Fig. 3.2	
Fig. 3.3	

[1]

(c) Explain how landform **W**, in Fig. 3.1, was formed.

.....

.....

.....

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.....

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..... [3]

[Total: 8]

4 Fig. 4.1 shows the annual rainfall totals for ten years for a place with a hot desert climate and a place with an equatorial climate.

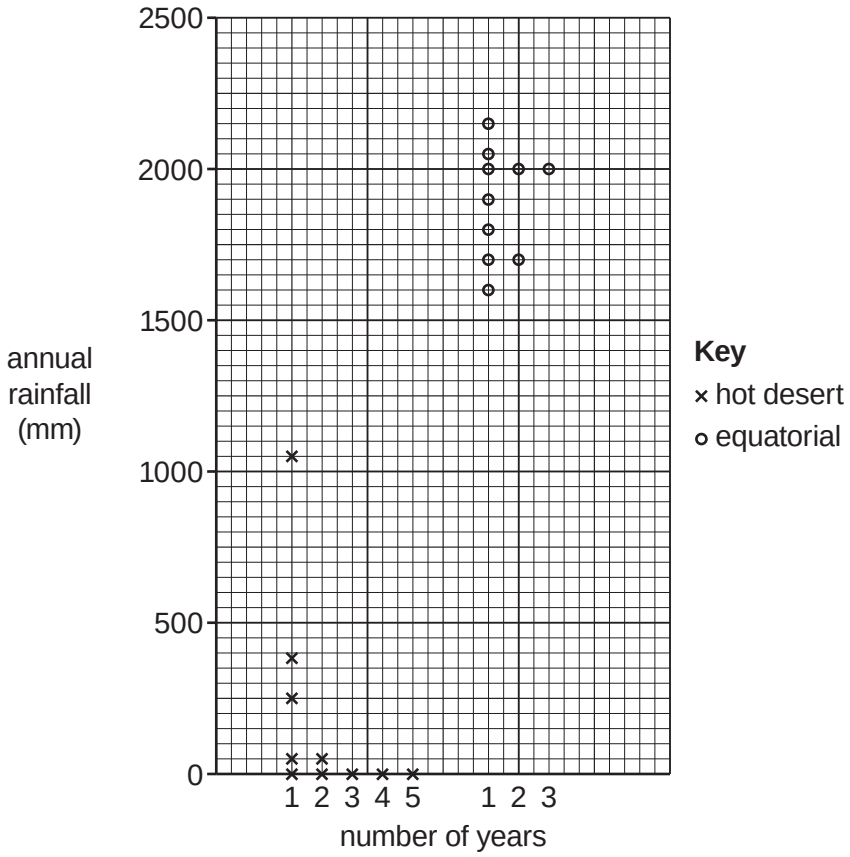

Fig. 4.1

(a) (i) What was the most frequent rainfall total for the place with a hot desert climate?

..... [1]

(ii) What was the range of rainfall totals for the place with a hot desert climate?

..... [1]

(iii) What was the average annual rainfall for the place with a hot desert climate? Circle your answer below.

50 mm 178 mm 250 mm 388 mm [1]

(b) Using Fig. 4.1, compare the amount and variability of the annual rainfall for the place with a hot desert climate and the place with an equatorial climate.

Amount of rainfall

.....

.....

.....

Variability of rainfall

.....

.....

.....

[2]

(c) Fig. 4.2 (Insert) shows a desert area where there has been recent rainfall. Explain how the vegetation shown in Fig. 4.2 has been affected by this rainfall.

.....

.....

.....

.....

.....

.....

..... [3]

[Total: 8]

5 Table 5.1 shows energy consumption in the USA in 2007 and 2016.

Table 5.1

Source of energy	Uses	Percentage of total energy consumption	
		2007	2016
Biomass	heating, electricity, transport	3.6	4.9
Coal	electricity, manufacturing	22.9	14.6
Geothermal	heating, electricity	0.5	0.2
Hydroelectricity	electricity	2.4	2.5
Natural gas	electricity, manufacturing	23.3	29.2
Oil	transport, manufacturing	37.5	36.9
Solar	light, heating, electricity	0.6	0.7
Uranium	electricity	8.7	8.6
Wind	electricity	0.5	2.4

(a) Describe the changes in non-renewable energy consumption shown in Table 5.1.

.....

.....

.....

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..... [3]

(b) Using evidence from Table 5.1, suggest why it is difficult to reduce consumption of non-renewable energy sources.

.....

.....

.....

.....

..... [2]

(c) Explain the importance of fuelwood to people in many countries.

.....

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..... [3]

[Total: 8]

6 The United Nations Children's Fund (UNICEF) is a United Nations programme which provides assistance to children and mothers in developing countries. Table 6.1 describes how UNICEF classifies water supplies.

Use information from Table 6.1 to answer the questions which follow.

Table 6.1

Type of water supply	Description	Percentage of the world population using this type of supply
Safely managed	Drinking water that is clean and from an improved water source that is located in or near people's homes	71
Basic	Drinking water from an improved source, provided collection time is not more than 30 minutes (including queuing)	17
Limited	Drinking water from an improved source for which collection time is more than 30 minutes (including queuing)	4
Unimproved	Drinking water from an unprotected well or spring	6
Surface water	Drinking water directly from a river, lake, stream or canal	2

Improved sources include: piped water, boreholes, protected wells, protected springs and packaged or delivered water.

(a) If the world population is 7 600 000 000, calculate how many people in the world drink surface water.

..... [1]

(b) Suggest **one** type of graph which could be used to present the statistics in Table 6.1.

..... [1]

(c) Using evidence from Table 6.1 and your own knowledge, answer the questions below.

(i) Explain the disadvantages of using **unimproved** and **surface water supplies**.

.....

.....

.....

.....

..... [2]

(ii) Explain the disadvantages of using **basic** and **limited water supplies**.

.....

.....

.....

.....

..... [2]

(iii) Suggest why it is difficult to provide the improved water sources shown in Table 6.1.

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..... [2]

[Total: 8]

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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