Cambridge IGCSE

CANDIDATE NAME		

CENTRE NUMBER		CANDIDATE NUMBER	

GEOGRAPHY 0460/22

Paper 2 **May/June 2014**

1 hour 30 minutes

Candidates answer on the Question Paper.

Additional Materials: Ruler
Protractor
Plain paper
Calculator

1:50 000 Survey Map Extract is enclosed with this Question Paper.

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name in the spaces provided.
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.

The Insert contains Photograph A for Question 3 and Photograph B for Question 4.
The Survey Map Extract and the Insert are **not** required by the Examiner.
Sketch maps and diagrams should be drawn whenever they serve to illustrate an answer.

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.

1   Study the map extract for Masembura, Zimbabwe. The scale is 1:50 000.

   (a) Fig. 1 shows some of the features next to the Inyauri river in the south part of the map extract. Study Fig. 1, the map extract and the key, and answer the questions below.
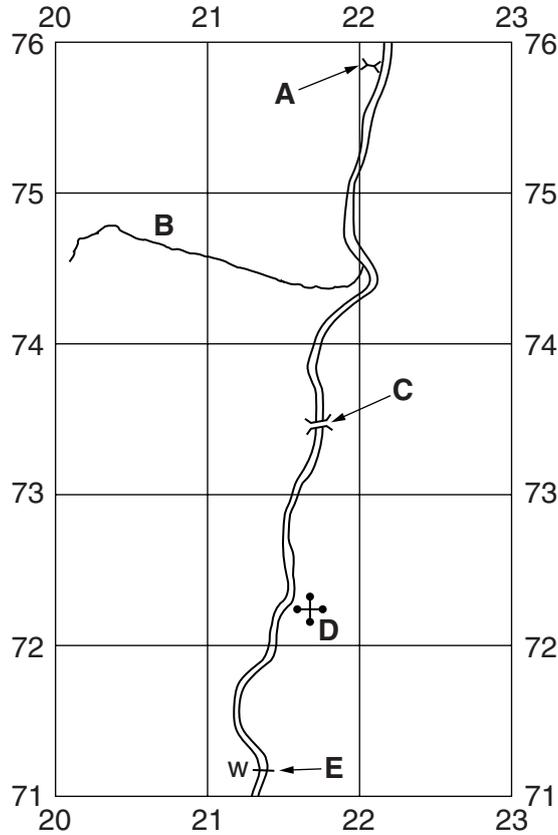
Fig. 1

   Using the map extract, identify the following features shown on Fig. 1:

   (i) feature **A**;

   ....[1]

   (ii) the name of tributary river **B**;

   ....[1]

   (iii) feature **C**;

   ....[1]

   (iv) feature **D**;

   ....[1]

   (v) feature **E**.

   ....[1]

(b) Look at the Inyauri river from the southern edge of the map to where it joins the Pote river. Describe the physical (natural) features of the river.

....

....

....

....

....

....

....

....

....

.... [5]

4

(c) Look at the area shown in Fig. 2.

Fig. 2

Describe the relief of this area.

....

....

....

....

....

....[3]

(d) Find Gudza Hill in the north east of the map extract.

(i) Give the six figure grid reference for the trigonometrical station on Gudza Hill.

………………………………………. [1]

(ii) What is the bearing, from grid north, **to** the road junction in Manhenga Township **from** the trigonometrical station? Tick **one** correct answer below.

	Tick (✓)
56°	
136°	
216°	
236°	

[1]

(e) Look at the settlement around Dengu School in the north east of the map.

(i) Name the type of settlement pattern. Tick **one** correct answer below.

	Tick (✓)
linear	
nucleated	
dispersed	

[1]

(ii) Suggest **one** reason why this settlement pattern has developed here.

....

....

....[1]

(f) Fig. 3 is a cross section from Jeta Hill at 190745 to Haya Hill at 240745.
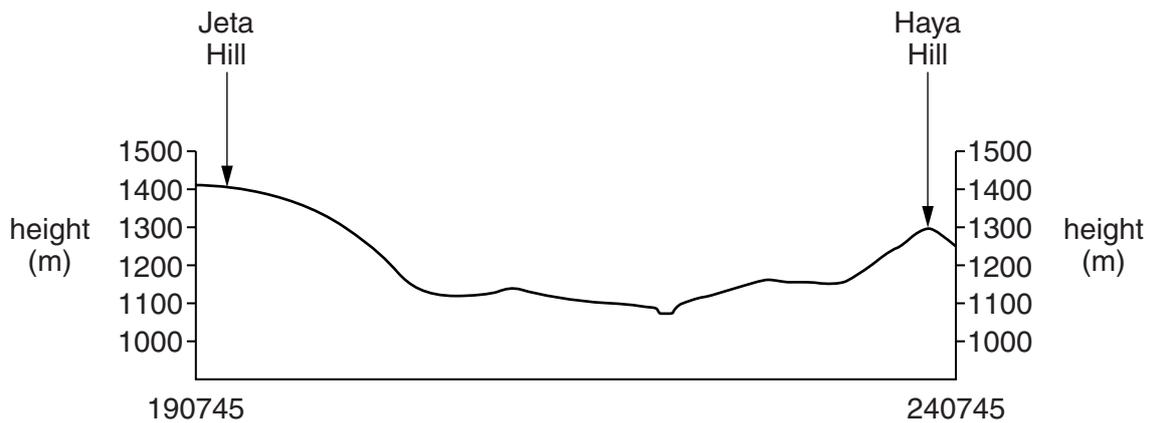

Fig. 3

On Fig. 3, using labelled arrows, mark the positions of:

(i) the Inyauri river; [1]

(ii) the gravel or earth road; [1]

(iii) an area of smooth rock. [1]

[Total: 20 marks]

2 An earthquake occurred off the coast of Japan on March 11, 2011, which left over 20 000 people dead or missing. Fig. 4 shows the location of the earthquake epicentre and selected towns and cities. Table 1 gives further information about the earthquake.

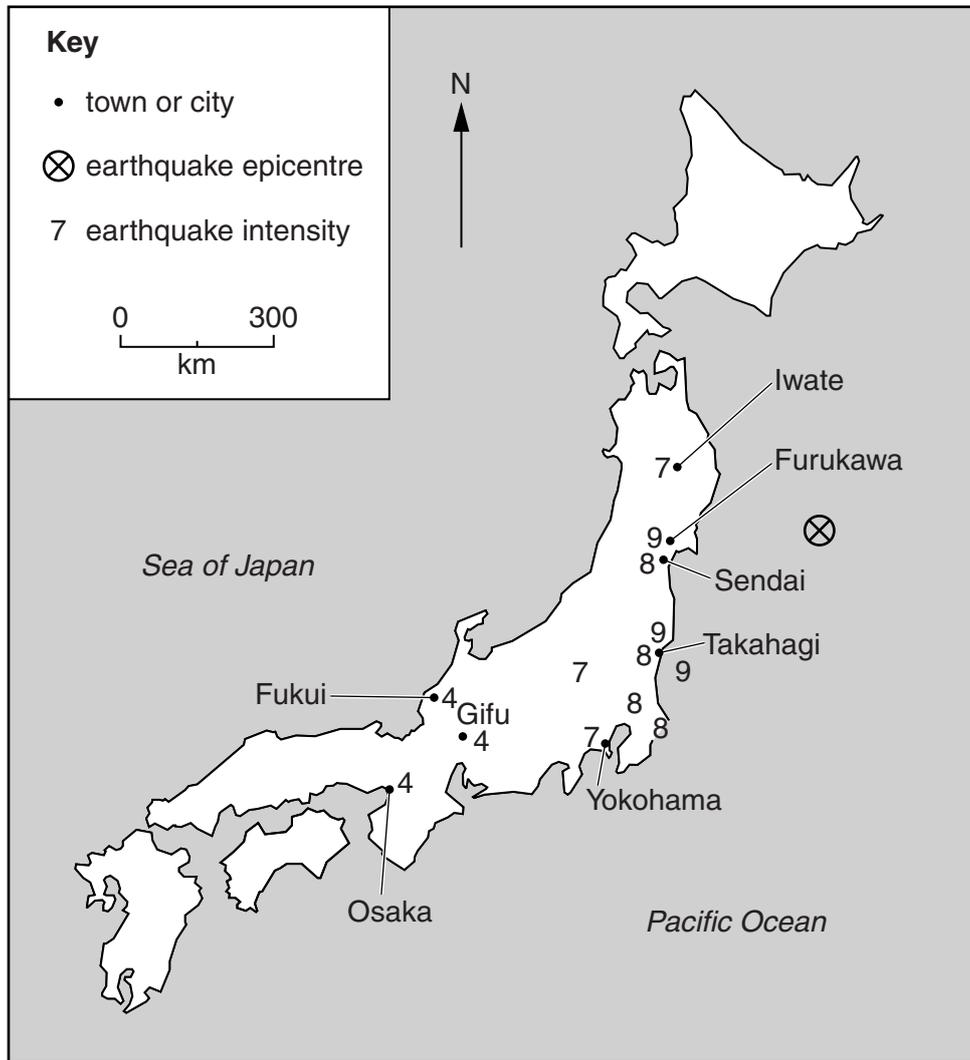Study Fig. 4 and Table 1 and answer the questions on the opposite page.

Key

• town or city

⊗ earthquake epicentre

7 earthquake intensity

0   300
km

N

Iwate

Furukawa

7

9
8   Sendai

Sea of Japan

9
8   Takahagi
7   9

Fukui • 4
Gifu
• 4

8
• 4

7   8

Yokohama

Osaka   Pacific Ocean

Fig. 4

Table 1

Town/city	Population (thousands)	Earthquake intensity (strength)	Affected by tsunami*?
Furukawa	76	9	yes
Takahagi	34	9	yes
Sendai	1038	8	yes
Yokohama	3574	7	no
Iwate	18	7	no
Osaka	2671	4	no
Gifu	412	4	no
Fukui	267	4	no

*a tsunami is a powerful wave of water caused by an earthquake

(a) What is meant by the term *epicentre*?

....

.... [1]

(b) The intensity of earthquake waves is described on a scale of 1 to 12, where 1 is weak and 12 is strong.

(i) On Fig. 4, draw a line between the places with intensity 7 and the places with intensity 8. [2]

(ii) Using Fig. 4, describe the pattern of intensity of the March 2011 earthquake.

....

....

....

.... [2]

(c) (i) Using information from Fig. 4 and Table 1, explain why there were many deaths in Sendai.

....

....

....

.... [2]

(ii) Using information from Fig. 4, suggest why the coastal cities of Osaka and Yokohama were not affected by the tsunami.

....

.... [1]

[Total: 8 marks]

3   (a) Study Photograph A (Insert), which shows an area in south west Africa. Describe the relief
        and vegetation shown in the photograph.

        Relief...

        ....

        ....

        ....

        ....

        ....

        ....

        ....

        Vegetation...

        ....

        ....

        ....

        ....

        ....

        .... [6]

(b) Table 2 shows the climate of the area shown in Photograph A.

Table 2

Month	J	F	M	A	M	J	J	A	S	O	N	D
Average temperature (°C)	26	27	26	22	18	15	13	16	20	23	24	26
Average number of days with rain	1	1	1	0	0	0	0	0	0	0	0	0

Explain **two** ways in which the vegetation shown in Photograph A might be adapted to the climate shown in Table 2.

1..

....

2..

.... [2]

[Total: 8 marks]

BLANK PAGE

4   Photograph B (Insert) shows two coastal landforms, **X** and **Y**, in the West Indies.

(a) Describe both landforms.

Landform **X**

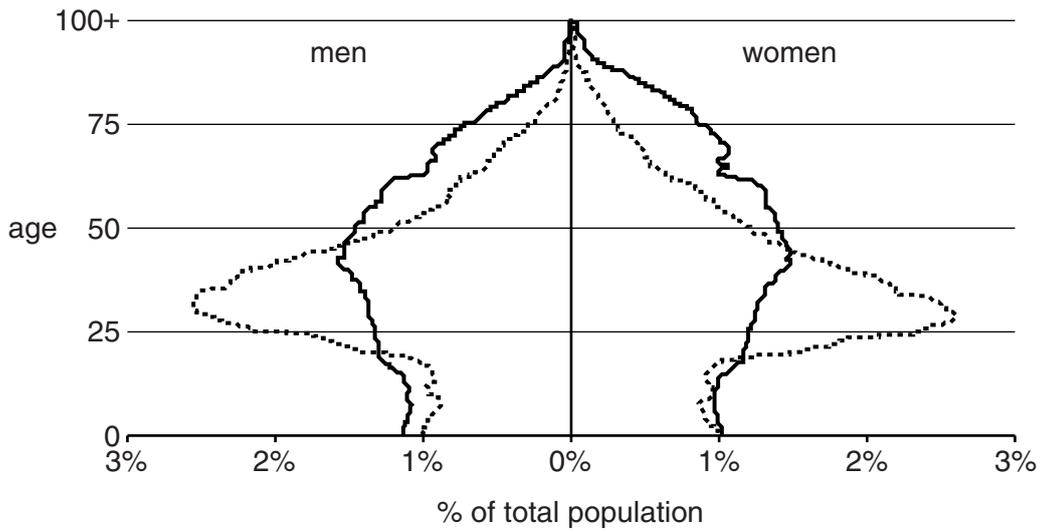...

....

....

....

....

....

....

Landform **Y**

....

....

....

....

....

....

.... [5]

(b) Explain how landform **Y** was formed.

....

....

....

....

....

....

.... [3]

[Total: 8 marks]

                                                                       [Turn over

5 (a) Fig. 5 shows the total population and the foreign born population of the European Union.

Key

——————— total population

·············· foreign born population
(people living outside the country
where they were born)

Fig. 5

(i) Using Fig. 5, describe the differences between the total population of the European Union and the foreign born population.

....

....

....

....[2]

(ii) Suggest **one** reason for the differences you have described.

....

....[1]

(b) Table 3 gives information about the population of Belgium, one of the countries in the European Union.

Table 3

Year	2004	2005	2006	2007	2008
Emigration (thousands)	84	87	88	91	100
Immigration (thousands)	117	133	138	146	164
Total population (thousands)	10 396	10 446	10 511	10 585	10 667

(i) Using Table 3, describe how the total population of Belgium changed between 2004 and 2008.

....

....[1]

(ii) Compare the emigration and immigration figures in Table 3 and describe the effect of the difference between the two on the total population.

....

....

....[2]

(iii) Is migration the only factor affecting the change in the total population? Use the information in Table 3 to explain your answer.

....

....

....

....

....[2]

[Total: 8 marks]

6   Fig. 6 shows the location of coal deposits and the capital city Ulaanbaatar, in Mongolia, central Asia.
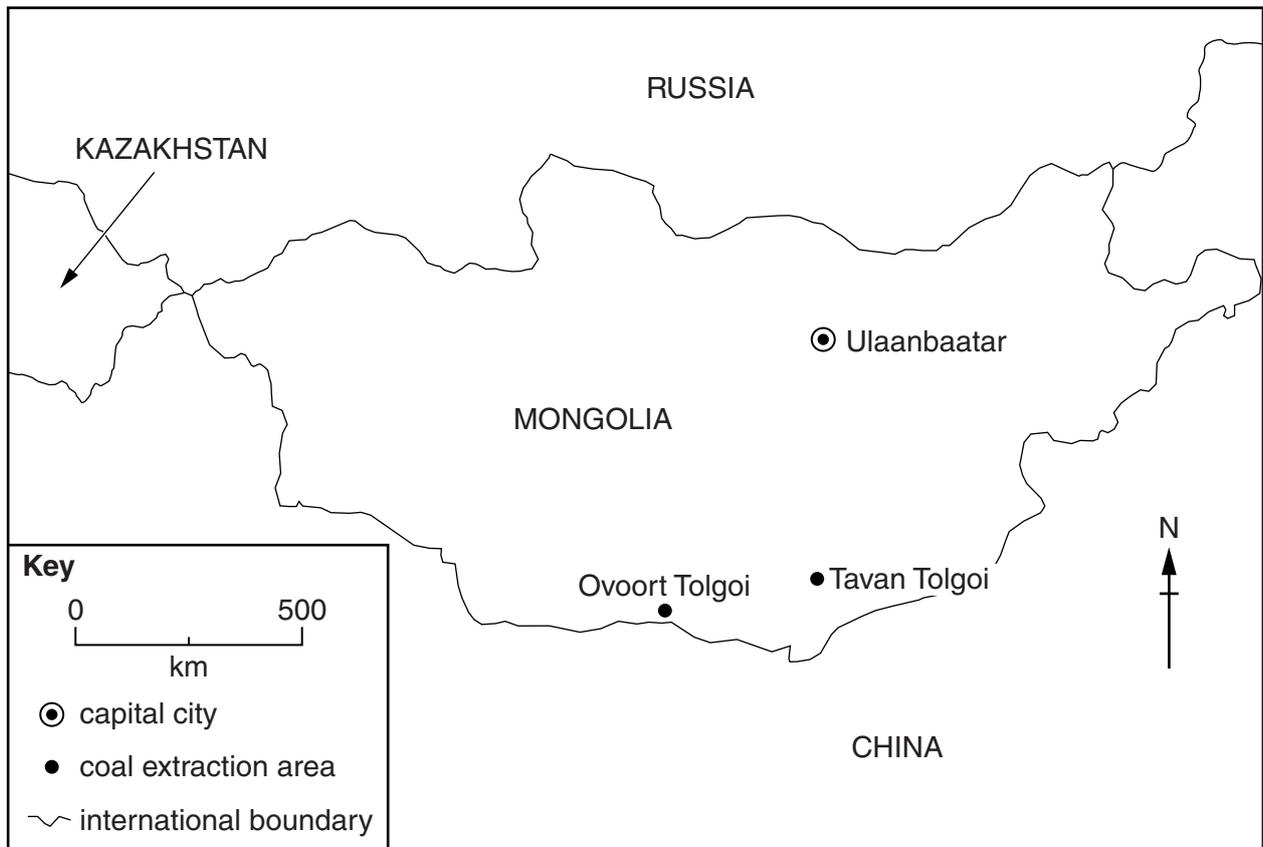
Fig. 6

(a) (i)   What is the compass direction of Ovoort Tolgoi from Ulaanbaatar? Circle **one** correct answer below.

      north east   north west   south east   south west   [1]

   (ii)   What is the distance from Ulaanbaatar to Tavan Tolgoi? Circle **one** correct answer below.

      450km   550km   650km   750km   [1]

(b) Table 4 below gives information about Mongolia and the neighbouring countries.

Table 4

Country	Area (million km^2)	Population (millions)
Mongolia	1.5	2.7
Kazakhstan	2.7	16.7
Russia	17	144
China	9.5	1286

Using information from Fig. 6 and Table 4 **only**, explain why China is expected to be the main market for Mongolia's coal.

....

....

....

....[2]

(c) Fig. 7 gives information about coal in Mongolia.

Coal in Mongolia

Mongolia has very large coal deposits, like at the Tavan Tolgoi opencast mine, thought to be the biggest deposit of coal in the world. Other very large mines such as Ovoort Tolgoi are likely to be developed in the future. The mining of this coal is likely to change Mongolia, with large investments and profits being generated. It has been estimated that Mongolia's economy will triple in size by 2020, helping to develop roads, schools and hospitals.

Until recently, this area of southern Mongolia was one of the world's last great wildernesses, a cold desert that is home to animals such as the gazelle and onager. There are concerns that mining may damage grasslands and building roads and electricity grids may disrupt the migration patterns of birds and animals.

Although mining investment will almost certainly benefit Mongolia as a whole, the nomads who live in the Gobi desert may suffer. There are concerns that the huge mines might consume vital water supplies and throw clouds of choking dust into the air. "Every day, they use 2000 off-road 100 tonne trucks." said Enkhbat, chair of the Mongolian Green party. "There is so much dust in the sky that it looks like a war is taking place. The government needs a major plan to protect the environment and respect local communities."

Fig. 7

Coal mining will bring advantages and disadvantages to Mongolia. Using information from Fig. 7, explain what these might be.

Advantages ....

....

....

....

....

Disadvantages ....

....

....

....

....[4]

[Total: 8 marks]