GradeMax

Cambridge IGCSE

Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER

GEOGRAPHY **0460/22**

Paper 2 **October/November 2017**

1 hour 30 minutes

Candidates answer on the Question Paper.

Additional Materials: Ruler
Protractor
Plain paper
Calculator

1:25 000 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.

Write your answer to each question in the space provided.
If additional space is required, you should use the lined pages at the end of the booklet. The question number(s) must be clearly shown.

Answer **all** questions.

The Insert contains Photograph A for Question 3.
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.

Definitions
MEDCs – More Economically Developed Countries
LEDCs – Less Economically Developed Countries
NICs – Newly Industrialised Countries

The syllabus is approved for use in England, Wales and Northern Ireland as a Cambridge International Level 1/Level 2 Certificate.

This document consists of **18** printed pages, **2** blank pages and **1** Insert.

DC (ST/SW) 132558/3
© UCLES 2017

CAMBRIDGE International Examinations

[Turn over

GradeMax

1 Study the map extract for Bordalen, Norway. The scale is 1:25 000.

(a) Fig. 1 shows some of the features in the north west of the map extract. Study Fig. 1 and the map extract, and answer the questions below.

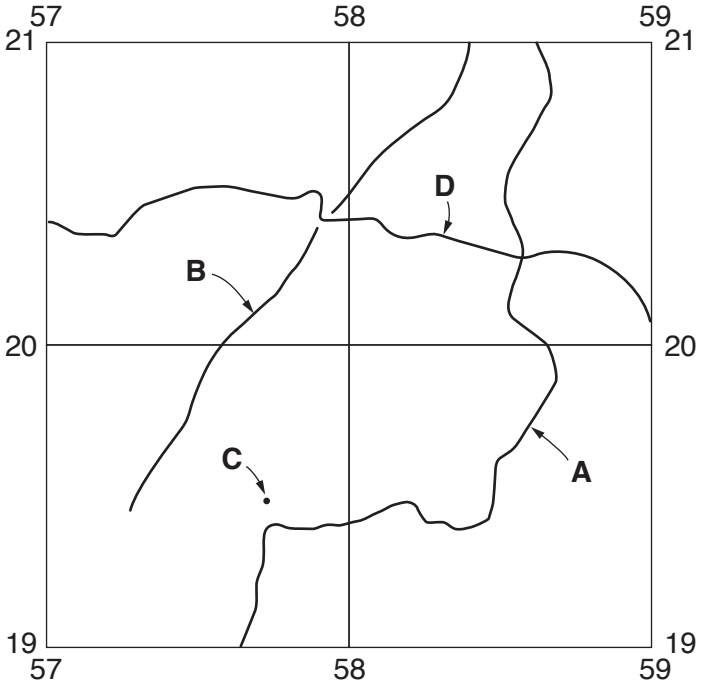


Fig. 1

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

(i) feature **A**;

.....[1]

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

.....[1]

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

..... metres [1]

(iv) the height above sea level of the contour at **D**.

..... metres [1]

© UCLES 2017

(b) Fig. 2 shows the location of two grid squares in the south east of the map extract. These are square 6316 at Færes-fjellet and square 6416 at Grønahorgi. Study the two areas and answer the questions below.

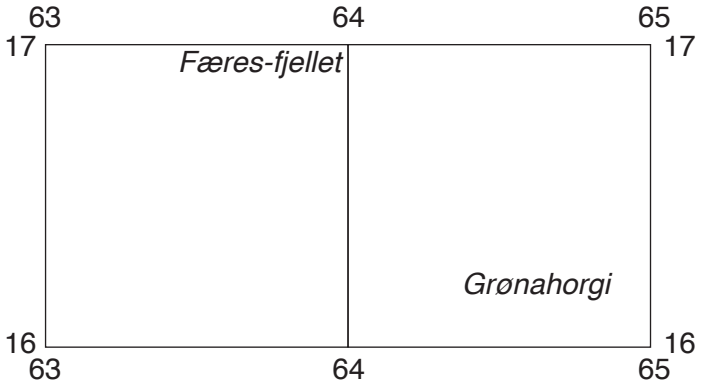


Fig. 2

The table below compares the features of the two areas. Complete the table by putting ticks in the correct **five** boxes. Use only **one** tick for each row.

	Square 6316 at Færes-fjellet	Square 6416 at Grønahorgi	Both these areas	Neither of these areas
lakes				
forest				
marsh				
glaciers				
land over 1100 m above sea level				

[5]

© UCLES 2017

GradeMax

(c) Fig. 3 is a cross section along northing 20 from 590200 to 620200.

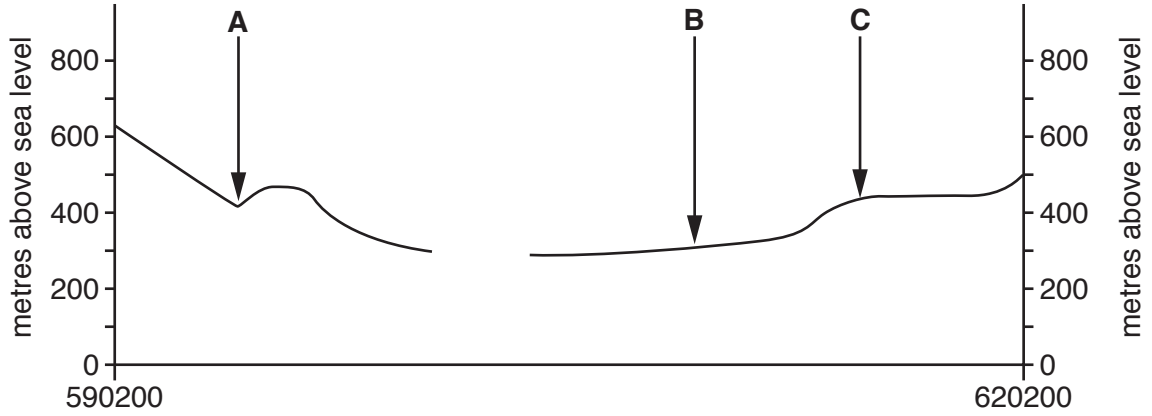


Fig. 3

(i) Name the river at **A**.

..... [1]

(ii) Identify the feature at **B**.

..... [1]

(iii) Identify the type of land use at **C**.

..... [1]

(iv) The cross section shown on Fig. 3 is incomplete. Using information from the map extract, draw a line on Fig. 3 to complete the cross section. [1]

(d) A person walks uphill from the bridge over the main river south of Rjodo (608173) to the trigonometric point at Litraknappen (623167).

(i) In which compass direction does the person travel?

..... [1]

(ii) What distance does the person travel in a straight line?

..... [1]

(iii) How many metres does the person climb? Circle **one** correct answer below.

568 m 668 m 768 m 868 m [1]

© UCLES 2017

GradeMax

(e) Describe the distribution of farms and houses shown on the map.

.....

.....

.....

.....

.....

.....

.....

.....[4]

[Total: 20 marks]

2 Fig. 4 gives information about population change and population migration in four urban areas in the USA between 2010 and 2013. Study Fig. 4 and answer the following questions.

Denver–Aurora–Lakewood		
Population change	Total	154 010
	%	6.1
Net international migration	Total	15 240
	Rate per 1000	5.6
Net internal migration	Total	75 101
	Rate per 1000	27.8

New York–Newark–Jersey City		
Population change	Total	383 084
	%	2.0
Net international migration	Total	399 685
	Rate per 1000	20.0
Net internal migration	Total	–362 359
	Rate per 1000	–18.2



San Francisco–Oakland–Hayward		
Population change	Total	180 895
	%	4.2
Net international migration	Total	75 566
	Rate per 1000	16.3
Net internal migration	Total	35 307
	Rate per 1000	7.8

Chicago–Naperville–Elgin		
Population change	Total	76 184
	%	0.8
Net international migration	Total	74 142
	Rate per 1000	7.8
Net internal migration	Total	–172 378
	Rate per 1000	–18.1

Fig. 4

(a) (i) Which **one** of the four urban areas had the greatest **percentage** change in its population? Tick **one** correct answer below.

Urban area	Tick (✓)
Chicago–Naperville–Elgin	
Denver–Aurora–Lakewood	
New York–Newark–Jersey City	
San Francisco–Oakland–Hayward	

[1]

© UCLES 2017

GradeMax

(ii) Which **one** of the four urban areas had the greatest change in its **total** population? Tick **one** correct answer below.

Urban area	Tick (✓)
Chicago–Naperville–Elgin	
Denver–Aurora–Lakewood	
New York–Newark–Jersey City	
San Francisco–Oakland–Hayward	

[1]

(iii) Which **one** of the four urban areas had the greatest gain in population because of migration to and from other countries? Tick **one** correct answer below.

Urban area	Tick (✓)
Chicago–Naperville–Elgin	
Denver–Aurora–Lakewood	
New York–Newark–Jersey City	
San Francisco–Oakland–Hayward	

[1]

(iv) Which **one** of the four urban areas had the greatest gain in population because of migration to and from other parts of the USA? Tick **one** correct answer below.

Urban area	Tick (✓)
Chicago–Naperville–Elgin	
Denver–Aurora–Lakewood	
New York–Newark–Jersey City	
San Francisco–Oakland–Hayward	

[1]

(b) Compare the net internal migration of the two urban areas in the east with that of the two urban areas in the west.

.....

.....

.....

.....[2]

© UCLES 2017

[Turn over

GradeMax

(c) Look at the figures for Chicago-Naperville-Elgin.

(i) The area has lost population because of migration. What type of migration has caused this?

.....[1]

(ii) Give **one** cause of the overall population increase.

.....[1]

[Total: 8 marks]

© UCLES 2017

3 Photograph A (Insert) shows a mountain landscape.

Describe the river valleys shown in the photograph. Refer to:

- the shape of the cross profiles;
- the long profiles;
- any other features of the landscape.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....[8]

[Total: 8 marks]

GradeMax

4 Fig. 5 shows the climate of a place in Africa.

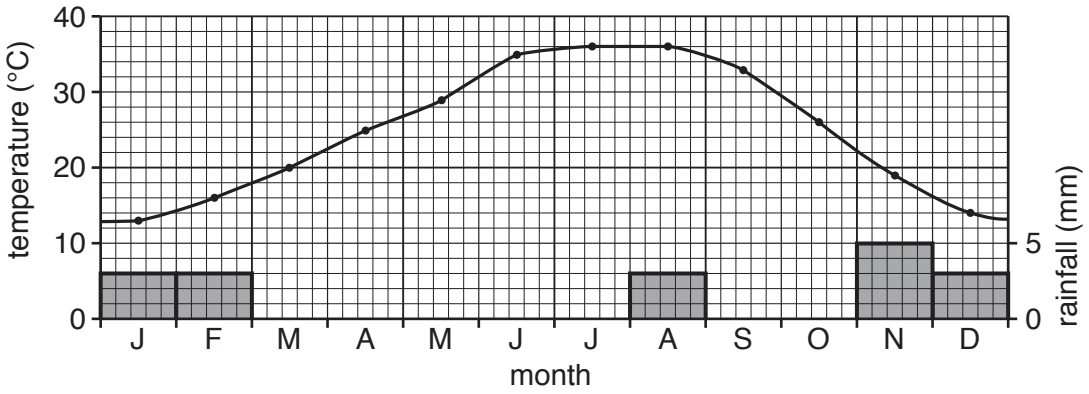


Fig. 5

(a) For the climate shown in Fig. 5 state the:

(i) January temperature;

..... °C [1]

(ii) annual temperature range.

..... °C [1]

(b) What is the annual rainfall at the place shown in Fig. 5? Circle **one** correct answer below.

12 mm 17 mm 34 mm 60 mm [1]

© UCLES 2017

GradeMax

(c) Fig. 6 shows the location of three places in Africa, **X**, **Y** and **Z**.

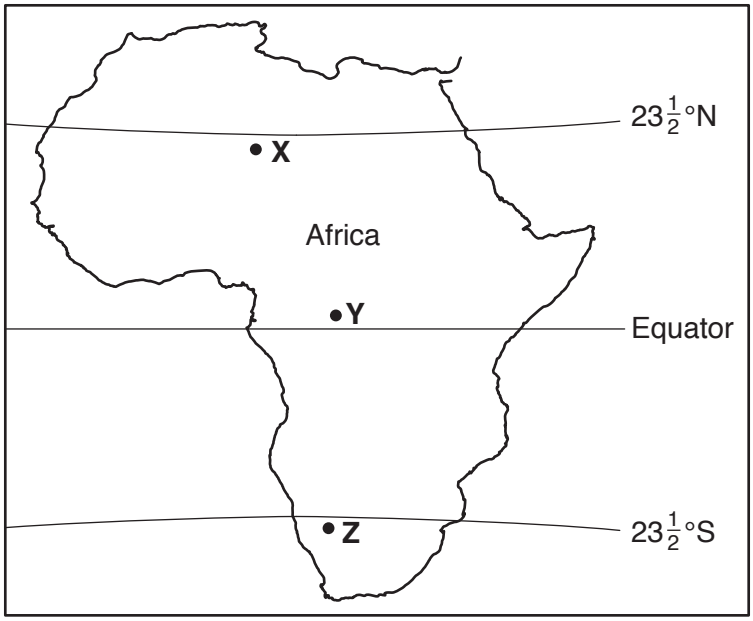


Fig. 6

Which location, **X**, **Y** or **Z**, has the climate shown in Fig. 5?

..... [1]

(d) Give **two** reasons why summer (July) is hotter than winter (January) at the place shown in Fig. 5.

1 .....

.....

2 .....

.....[2]

(e) Suggest **two** reasons for the very low rainfall at the place shown in Fig. 5.

1 .....

.....

2 .....

.....[2]

[Total: 8 marks]

© UCLES 2017

[Turn over

GradeMax

5 Fig. 7 shows the rivers and drainage basins of Kazakhstan. Kazakhstan is completely surrounded by other countries.



Fig. 7

(a) (i) What is meant by the following terms:

drainage basin;

.....

.....

watershed?

.....

.....[2]

(ii) Identify **two** rivers shown on Fig. 7 which have their sources outside Kazakhstan and their mouths within Kazakhstan.

1 .....

2 ..... [2]

(iii) Identify the river shown on Fig. 7 which is entirely within Kazakhstan.

..... [1]

© UCLES 2017

(b) Fig. 8 gives information about six of the rivers shown on Fig. 7.

River	River discharge* (km^3/year)		
	Total	Flow from other countries	Minimum flow in dry years
Syrdarya	13.3	10	4.2
Ili	28.77	12.37	17.8
Shu	3.23	2.03	2.7
Irtysh	34.03	9.53	19.7
Tobol	2.1	0.6	0.3
Ural	13.9	8.6	3.0

*River discharge is the amount of water flowing in a river at a certain time.

Fig. 8

Using evidence from Figs. 7 and 8, suggest why the Irtysh river might provide the most reliable water supply for Kazakhstan.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....[3]

[Total: 8 marks]

© UCLES 2017

6 Fig. 9 shows annual average solar radiation in South Africa.

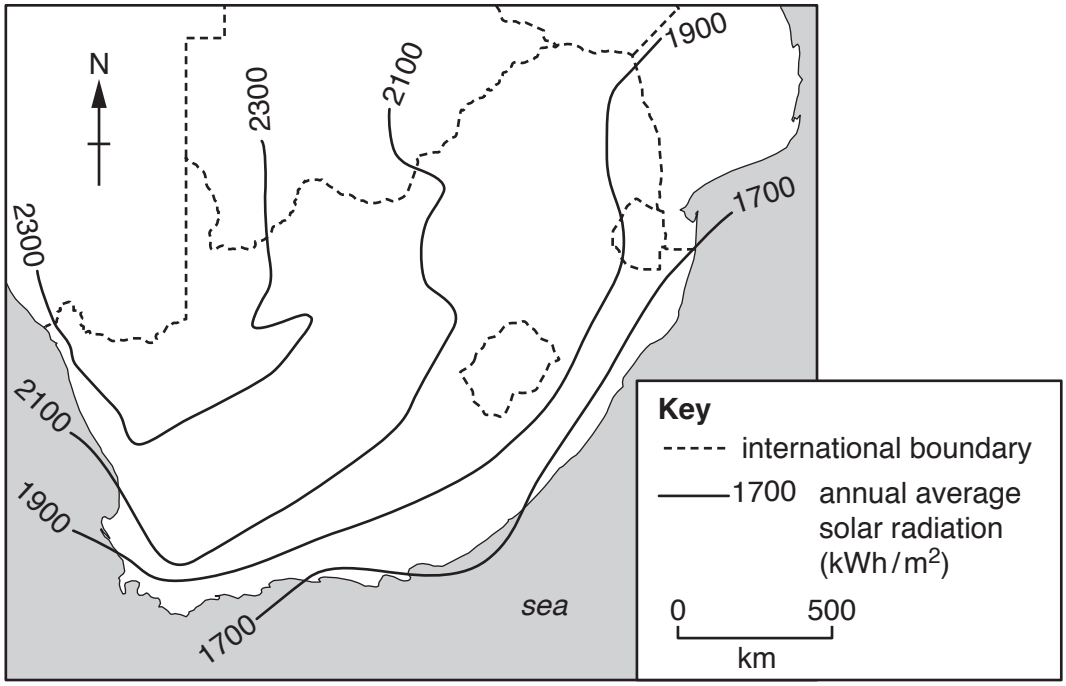


Fig. 9

(a) Using Fig. 9, describe the distribution of solar radiation in South Africa.

.....

.....

.....

.....

.....

.....

.....[3]

(b) Fig. 10 shows the distribution of solar radiation in Germany.

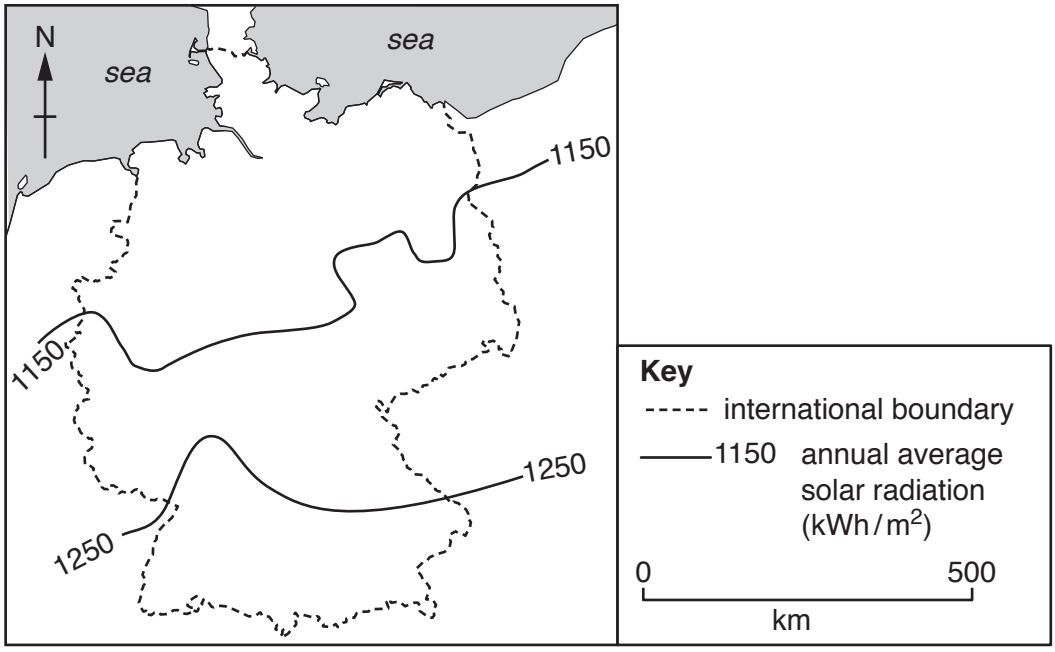


Fig. 10

Using Figs. 9 and 10, describe the difference in the amounts of solar radiation received in South Africa and Germany.

.....

.....

.....

.....

.....[2]

© UCLES 2017

GradeMax

(c) Fig. 11 shows the location of the main cities in South Africa.

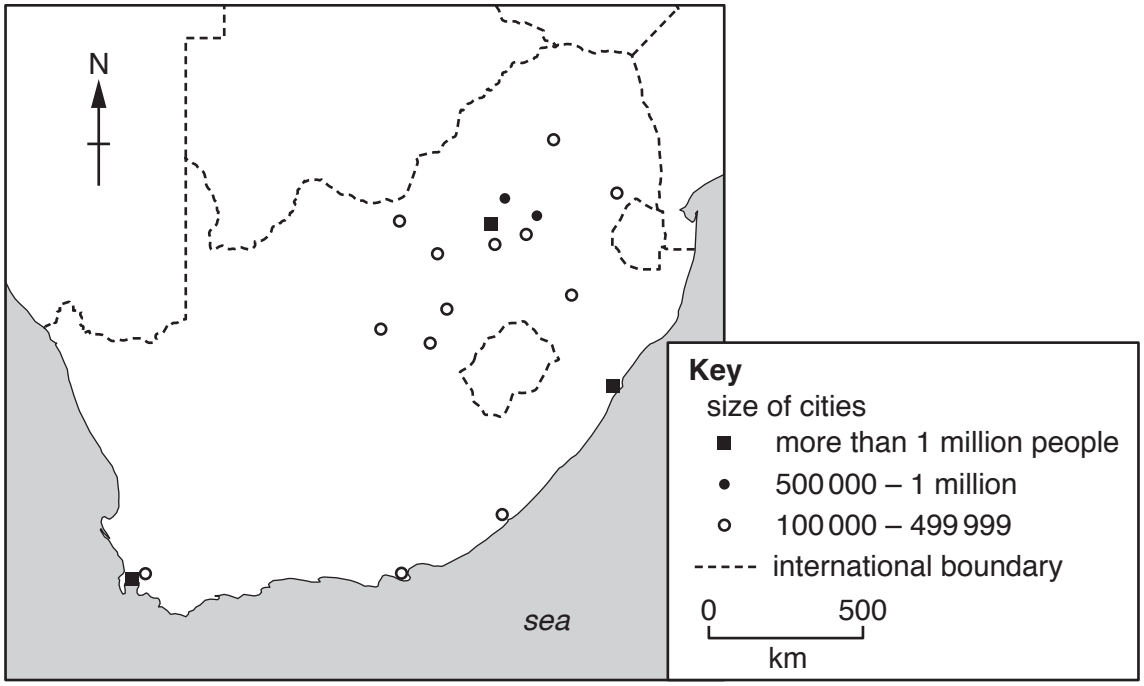


Fig. 11

"South Africa has greater potential for using solar power than Germany."
How far do you agree? Give evidence from Figs. 9, 10 and 11 to support your answer.

.....

.....

.....

.....

.....

.....

.....

.....[3]

[Total: 8 marks]

© UCLES 2017

GradeMax

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.

GradeMax

© UCLES 2017

GradeMax

BLANK PAGE

© UCLES 2017

GradeMax

BLANK PAGE

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (UCLES) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.

To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced online in the Cambridge International Examinations Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download at www.cie.org.uk after the live examination series.

Cambridge International Examinations is part of the Cambridge Assessment Group. Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge.

© UCLES 2017