



Rewarding Learning

General Certificate of Secondary Education
2014

Geography

Unit 1:
Understanding Our Natural World

Foundation Tier

[GGG11]

TUESDAY 13 MAY, AFTERNOON

Centre Number

71

Candidate Number



TIME

1 hour 30 minutes.

INSTRUCTIONS TO CANDIDATES

Write your Centre Number and Candidate Number in the spaces provided at the top of this page.

Write your answers in the spaces provided in this question paper.

Answer **all three** questions.

You are provided with an O.S. map for use with Question 1.

Do not write your answers on this map.

INFORMATION FOR CANDIDATES

The total mark for this paper is 108.

Figures in brackets printed down the right-hand side of pages indicate the marks awarded to each question or part question.

Quality of written communication will be assessed in Question **3(d)**.

Spelling, punctuation and the accurate use of grammar will be assessed in questions **1(g)** and **2(d)**.

For Examiner's
use only

Question Number	Marks
1	
2	
3	

Total
Marks

Theme A: The Dynamic Landscape

Examiner Only

Marks Remark

1 (a) Study the Ordnance Survey extract of part of the east coast of England. Answer the questions which follow.

(i) State the height of the land shown by the spot height at

Potter Heigham GR 418199. _____ m [1]

(ii) Underline the direction of Eccles on Sea GR 4029 from Winterton-on-Sea GR 4919.

south east north east north west south west [1]

(iii) State the straight line distance from the parking at Winterton-on-Sea GR 498198 to the parking at Sea Palling GR 427274.

_____ km [2]

(iv) Winterton-on-Sea (GR 4919) has a wide sandy beach. Explain how a beach like this was formed.

_____ [4]

- (c) Study **Fig. 2** which is a photograph of the beach at Sea Palling (GR 4227), a popular tourist resort. The rocks in the sea have been put there to stop the beach from being eroded.



© Andrew Stacey

Fig. 2

- (i) Name **one** other method which can be used to protect a beach from erosion and explain how it works.

Method of Coastal Protection _____ [1]

How it works _____

_____ [3]

- (ii) Identify **three** pieces of map evidence, other than the beach, which suggest that Sea Palling (GR 4227) is used by tourists.

_____ [3]

Examiner Only	
Marks	Remark

(iii) Suggest **two** problems that may be caused by visitors to a beach.

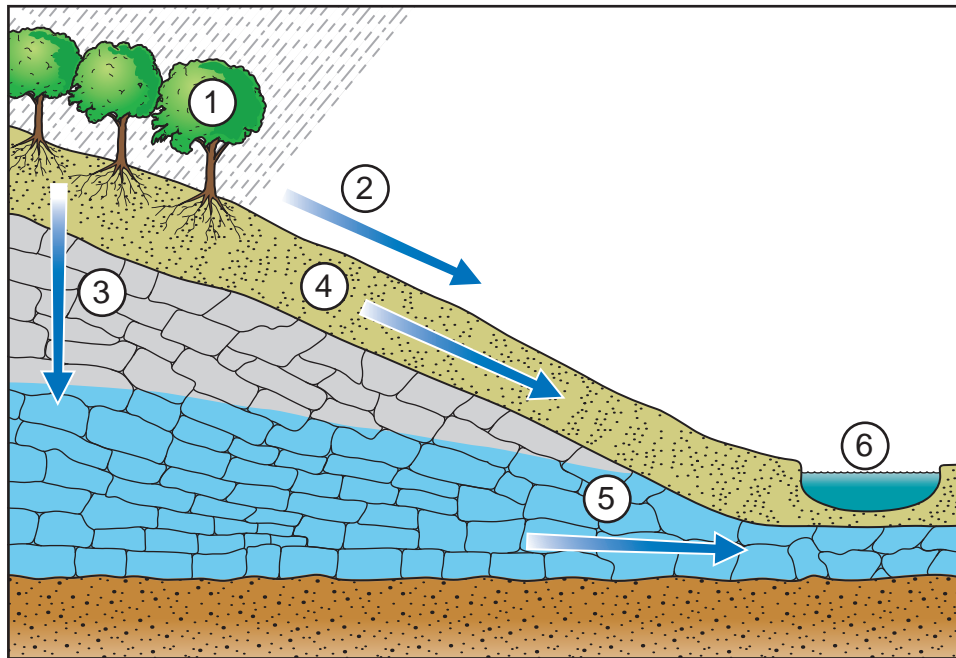
[2]

Examiner Only	
Marks	Remark

(d) Study **Fig. 3** which shows how water moves in a drainage basin. Answer the questions which follow.

Examiner Only

Marks Remark



Source: CCEA

Fig. 3

Table 1

Key	
1	
2	Surface runoff
3	
4	Throughflow
5	
6	River

[3]

(i) Complete **Table 1** to provide a key for **Fig. 3**. Choose your answers from the list below.

groundwater flow interception discharge percolation

(ii) State the meaning of the term **drainage basin**.

[2]

(iii) Explain how heavy rain could affect surface runoff.

[2]

Examiner Only	
Marks	Remark

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- (e) Study **Table 2** which shows results from a river field trip. Answer the questions which follow.

Table 2

Distance from Source (km)	Width of River Channel (m)	Depth of River Channel (m)	Cross-Sectional Area (m ²)
0.30	0.66	0.07	0.05
1.30	2.50	0.16	0.39
9.00	8.50	0.29	2.47

- (i) Using **Table 2** describe the changes in the river channel with increasing distance from the source.

_____ [4]

- (ii) Name and explain **one** type of erosion which causes the river channel shape to change along a river.

Type of erosion _____ [1]

Explanation

_____ [3]

Examiner Only	
Marks	Remark

- (f) Study **Fig. 4** which gives information about flood damage to the town of Morpeth, England, in September 2012. Answer the questions which follow.

The town of Morpeth was badly flooded in September 2012 when the River Wansbeck burst its banks.



© The Journal / NCJ Media / Trinity Mirror



© Minister's pledge on Morpeth flood defences work by Ian Robson. Chronicle Live, 27th September 2012

Why it Happened

- Out-of-date flood defences could not stop the River Wansbeck bursting its banks.
- Hundreds of houses built on the floodplain were flooded.
- Over a month's rainfall (80 mm) fell in 48 hours in the worst September storm for 30 years.
- Rainwater quickly filled streams in the Cheviot Hills north of Morpeth. This water then surged into the River Wansbeck flooding the town.

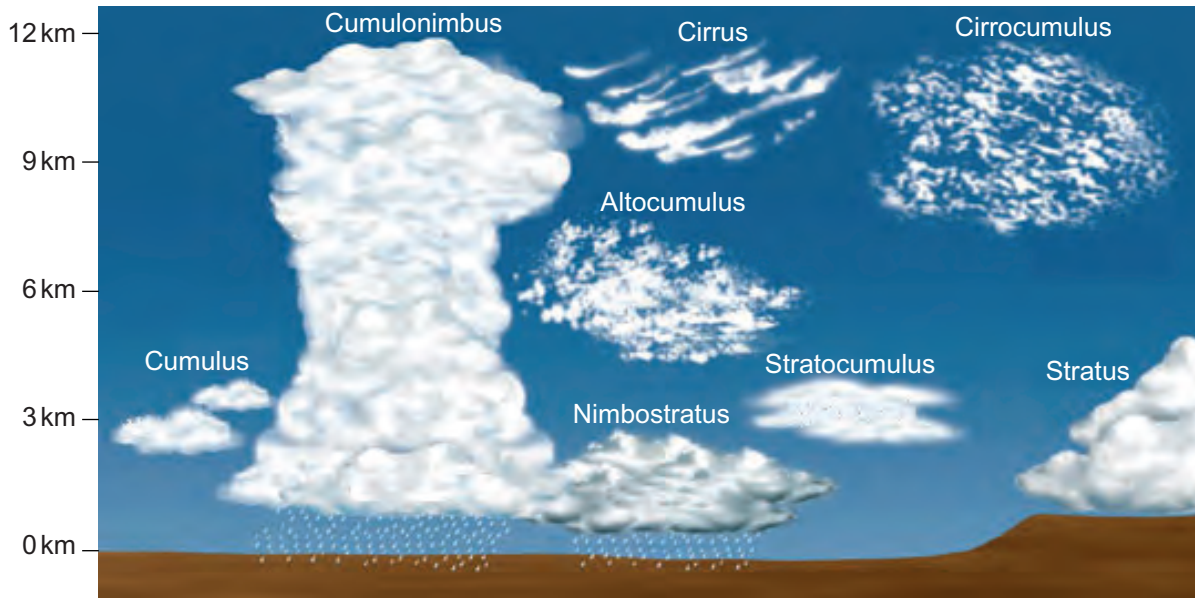
The Human Story

- 100 families fled their homes.
- 40 residents rescued by the emergency services.
- Local shops damaged by flood water and sewage.
- A local B&B was flooded and the owner is worried about the future of the business.

Fig. 4

Theme B: Our Changing Weather and Climate

- 2 (a) Study Fig. 5 which shows different cloud types. Answer the questions which follow.



Source: <http://www.crh.noaa.gov/images/lmk/CloudChart.jpg>

Fig. 5

- (i) Underline the correct word to complete the sentences below. One has been completed for you.

Cumulonimbus/Cirrus clouds bring heavy rain.

Cumulonimbus/Cirrus clouds are thin and wispy in appearance.

Cumulus clouds can reach up to 4/12 km in height.

Cumulonimbus clouds are found at the **warm/cold** front of a depression. [3]

- (ii) State the unit of measurement used to measure cloud cover.
 _____ [1]

Examiner Only	
Marks	Remark

(iii) Complete **Table 3** by placing the statements in the correct order (1–5) to explain how cumulonimbus clouds bring rain. One has been completed for you.

Table 3

Statement	Correct order
As the warm air rises it cools.	
Water droplets join together to form raindrops.	
Warm tropical air and cold polar air meet in the Atlantic Ocean.	1
Condensation can now occur.	
The warm air rises above the cold air.	

[4]

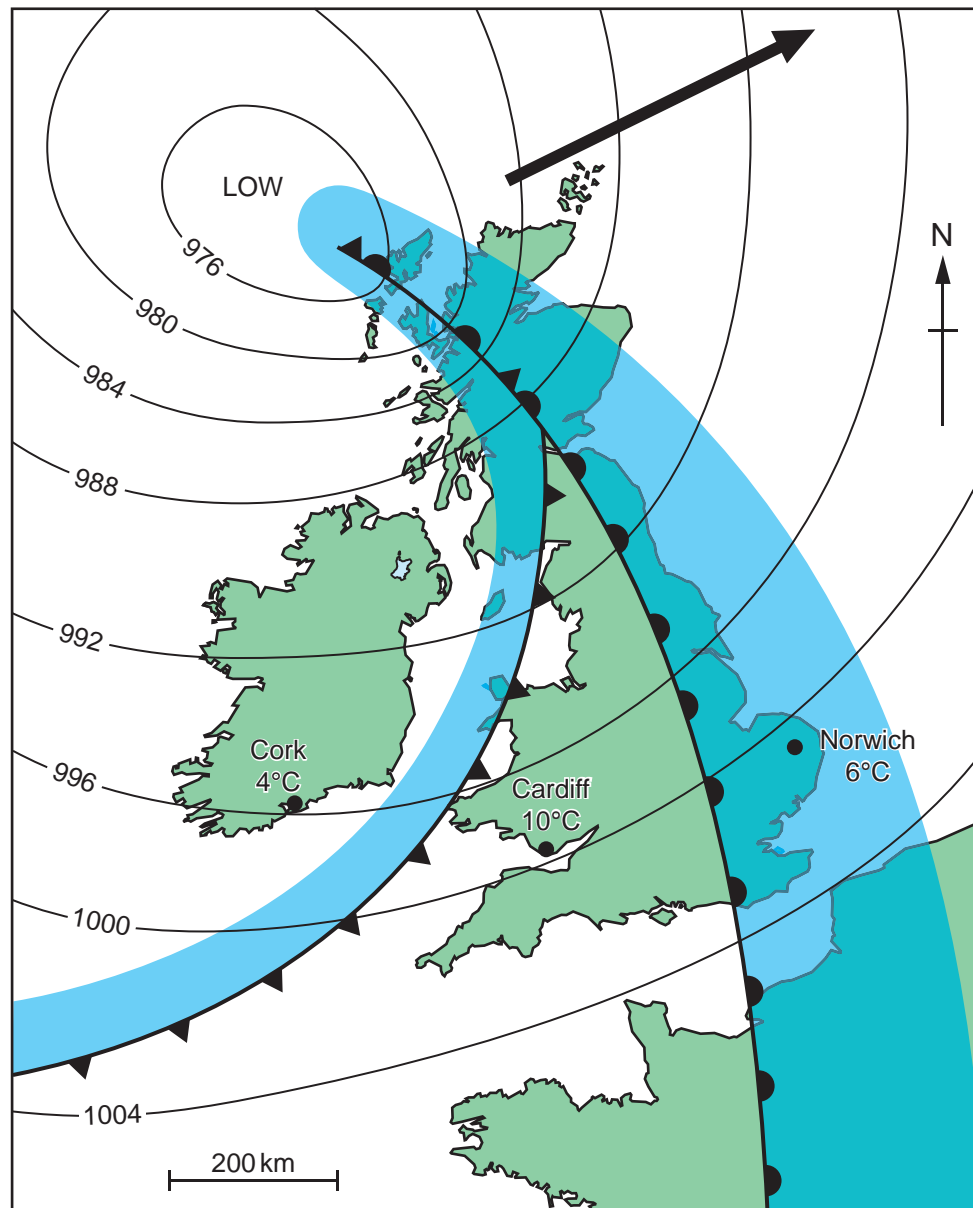
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Marks	Remark

(iii) Suggest **one** reason why a wind vane needs to be located in a high place.

[2]

Examiner Only	
Marks	Remark

(c) Study Fig. 7 which shows a weather system over the British Isles. Answer the questions which follow.



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Published by Nelson Thornes, 2000. Page 206 ISBN: 978-0748-75175-4


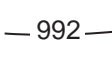




- | | | | |
|---|---|---|--|
|  | Direction of movement of weather system |  | Isobar showing air pressure in millibars |
|  | Warm front |  | Area of rainfall |
|  | Cold front | | |
|  | Occluded front | | |

Fig. 7

(d) Deforestation of the rainforest is one cause of climate change.



© ANTONIO SCORZA / AFP / Getty Images

Explain how reducing deforestation of the rainforest can help deal with climate change. You should refer to a place in your answer.

[5]

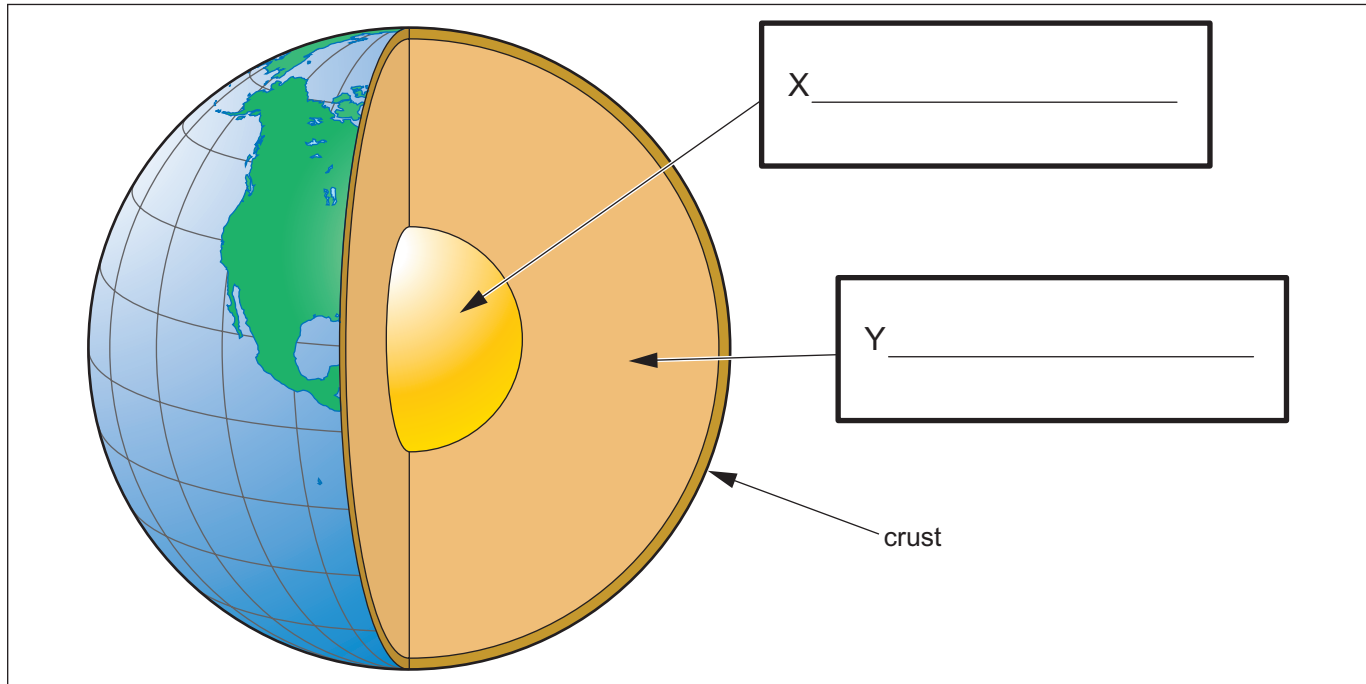
Spelling, punctuation and accurate use of grammar [4]

Examiner Only	
Marks	Remark

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(Questions continue overleaf)

Theme C: The Restless Earth

3 (a) Study **Fig. 9** which shows the structure of the Earth. Answer the questions which follow.



© NASA/JPL-Université Paris Diderot - Institute de Physique du Globe de Paris

Fig. 9

(i) Label X and Y on **Fig. 9** to name the two layers.

[2]

Examiner Only	
Marks	Remark

(ii) Complete the sentences below to explain how plates are able to move. Choose your answers from the list below.

convection magma downwards
plates sinks rises

1. The plates of the crust rest on molten _____ in the mantle.
2. _____ currents move molten magma and drag the _____ apart.
3. Magma _____ in the gap to create new crust.
4. Where these currents sink they drag the plates _____ into the mantle so that the rocks of the crust are destroyed. [5]

Examiner Only	
Marks	Remark

(b) Study Fig. 10 which shows a destructive plate boundary. Answer the questions which follow.

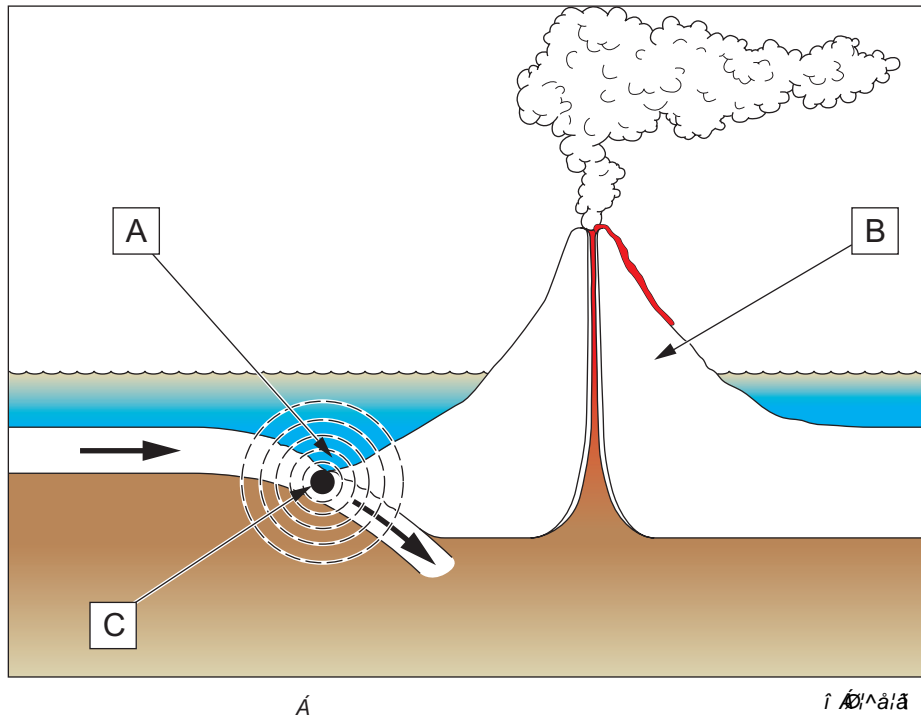


Fig. 10

(i) Identify the following features labelled A, B and C on Fig. 10. Choose your answers from the list below.

Volcano Ocean Trench Mantle Earthquake focus

Label	Feature
A	
B	
C	

[3]

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Marks	Remark

(d) Fig. 11 shows an area of basalt columns.



© Joe Gough / iStock / Thinkstock

Fig. 11

Name an area of basalt columns you have studied and explain their formation.

[5]

THIS IS THE END OF THE QUESTION PAPER

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Marks	Remark

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