



Rewarding Learning

General Certificate of Secondary Education
2023

Centre Number

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Candidate Number

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Geography

Unit 1

Understanding Our
Natural World



[GGY11]

GGY11

MONDAY 22 MAY, AFTERNOON

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.

You must answer the questions in the spaces provided.

Do not write outside the boxed area on each page or on blank pages.

Complete in black ink only. **Do not write with a gel pen.**

Answer **all four** questions.

INFORMATION FOR CANDIDATES

The total mark for this paper is 100.

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 questions **1(d)**, **2(d)** and **4(f)**.

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32GGY1101

Theme A: River Environments

- 1 (a) A drainage basin has inputs, stores, transfers and outputs.
- (i) Complete **Table 1** by writing an example of an input, transfer and output which operates within the drainage basin.

Table 1

Drainage Basin System	Example
Input	
Output	
Store	Interception
Transfer	

[3]

- (ii) State the meaning of the term **interception**.

[2]



(b) Study **Fig. 1** which shows a waterfall.



Source: © Getty Images

Fig. 1

Underline the correct word in the following statements showing how a waterfall is formed. One has been completed for you.

The river flows over a layer of hard / soft rock.

A waterfall is common in the lower / upper course of a river.

The process of deposition / erosion helps form this feature.

The feature found at the bottom of a waterfall is called a plunge point / plunge pool.

Once a waterfall retreats a gorge / cliff is left behind.

[4]

[Turn over

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32GGY1103

- (c) Study **Fig. 2** which shows the suburb of Fairfield being flooded after the Brisbane River, Australia burst its banks in 2011.



Source: © Getty Images

Fig. 2

- (i) Describe **one** impact a flood event such as this could have on people.

[3]



[6]

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(d) For a named river in the British Isles, describe and explain the physical and human reasons why it flooded.

[illegible]

Extra Space:





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32GGY1107

Theme B: Coastal Environments

- 2 (a) (i) Complete **Table 2** by using a tick (✓) to show **three** statements which are correct about constructive waves.

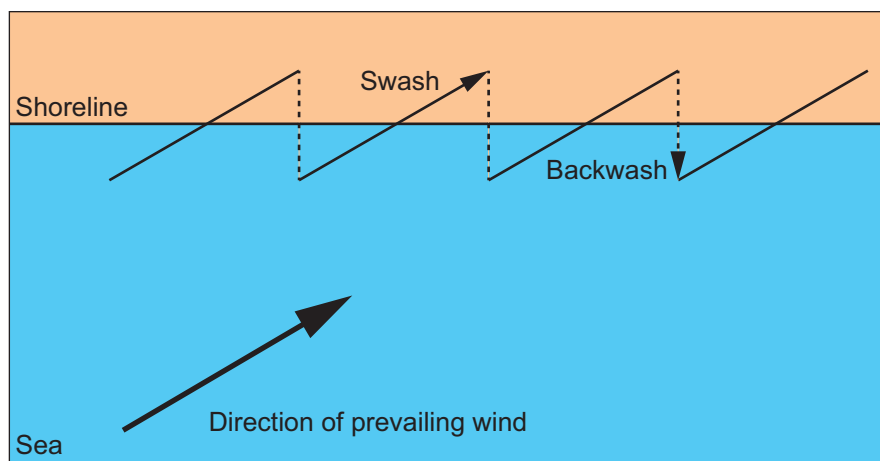
Table 2

Statements about constructive waves	Tick (✓) only three correct statements
They break frequently around 15 times per minute.	
They help build up a beach through deposition.	
They have a powerful swash and weak backwash.	
They have a weak swash and a powerful backwash.	
They have a long wavelength.	

[3]



(ii) Study **Fig. 3** which shows a process that occurs on the coastline.



The Geographer Online <http://www.thegeographeronline.net/coasts.html>
© Creative Commons <https://creativecommons.org/licenses/by-nc-sa/4.0/>

Fig. 3

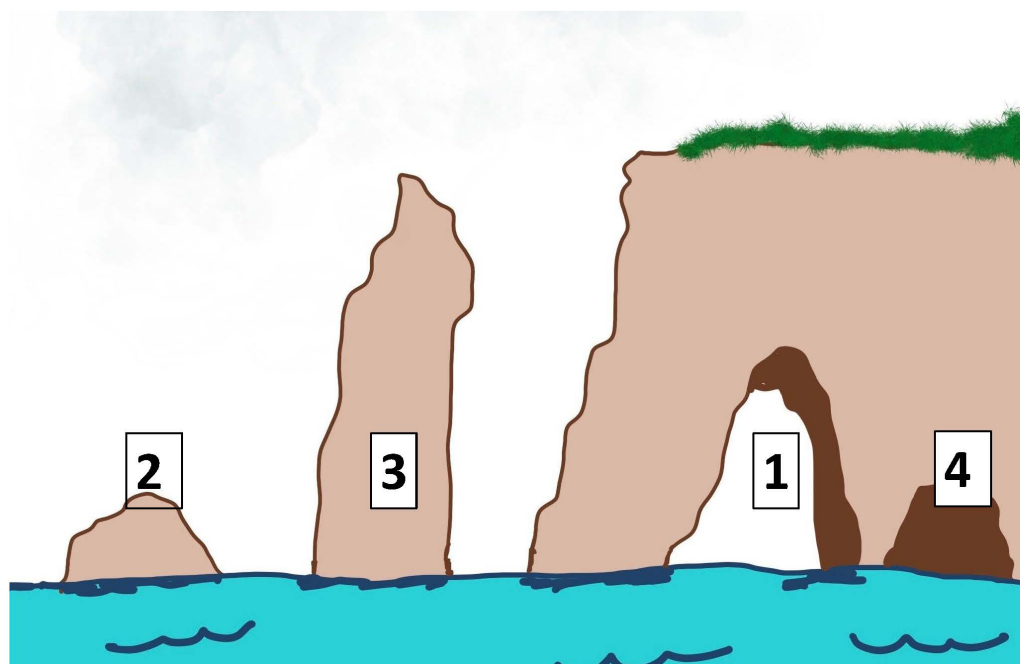
Name and describe the process which is shown in **Fig. 3**.

[2]

[Turn over



- (b) Study **Fig. 4** which shows landforms found in a coastal environment. Answer the questions which follow.



© CCEA

Fig. 4

- (i) Complete **Table 3** by writing in the name of the coastal feature which is found at each number. One has been completed for you.

Table 3

Number	Coastal feature
1	
2	
3	
4	CAVE

[3]





(ii) Explain how a sea cave forms.

[3]

[Turn over

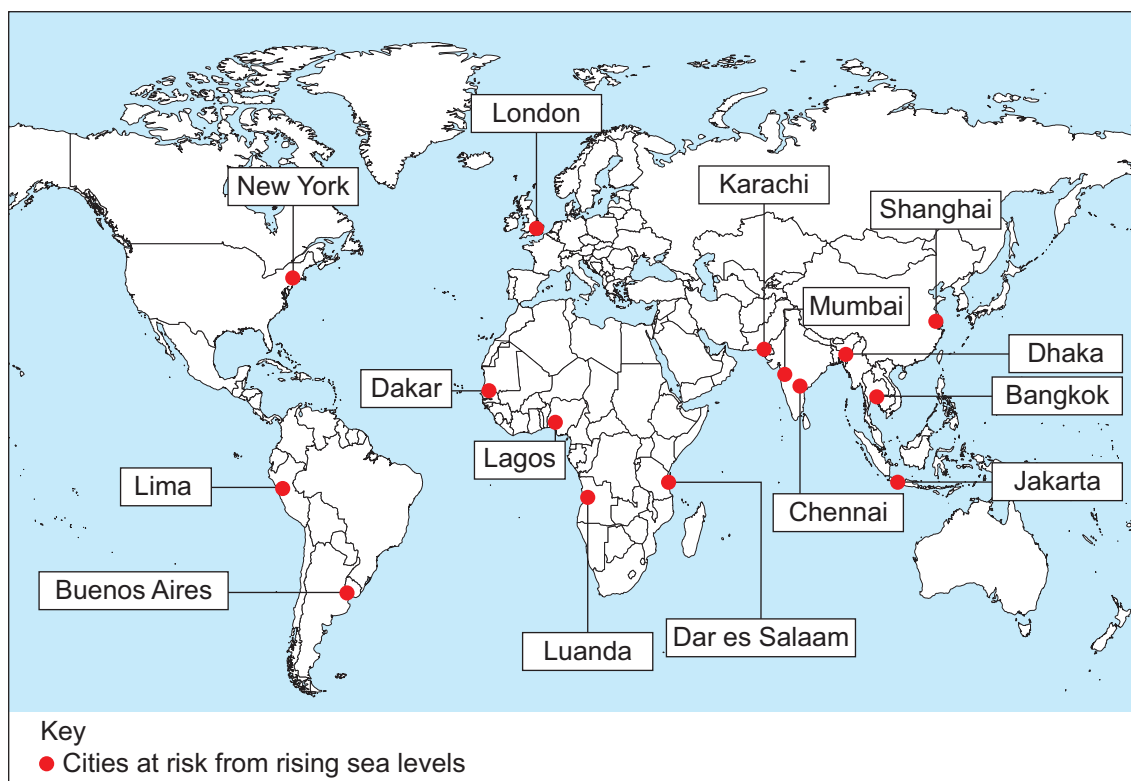
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(c) Coastal defences are needed to combat the threat of rising sea levels.

Study **Fig. 5** which shows the largest cities in each continent at risk from rising sea levels by 2050. Answer the questions which follow.



© 2024 C40 Cities Climate Leadership Group, Inc. All rights reserved.

Fig. 5

(i) Using **Fig. 5**, complete **Table 4** by naming one city in each continent listed. One example has been completed for you.

Table 4

Continent	Name of one city in Fig. 5 threatened by rising sea levels
Asia	Dhaka
Europe	
South America	

[2]



- (ii) Using the data presented in **Table 5**, complete **Fig. 6** to show the number of cities in **South America** threatened by rising sea levels.

Table 5

Continent	Number of large cities threatened by rising sea levels
Asia	7
Africa	4
South America	2
North America	1
Europe	1

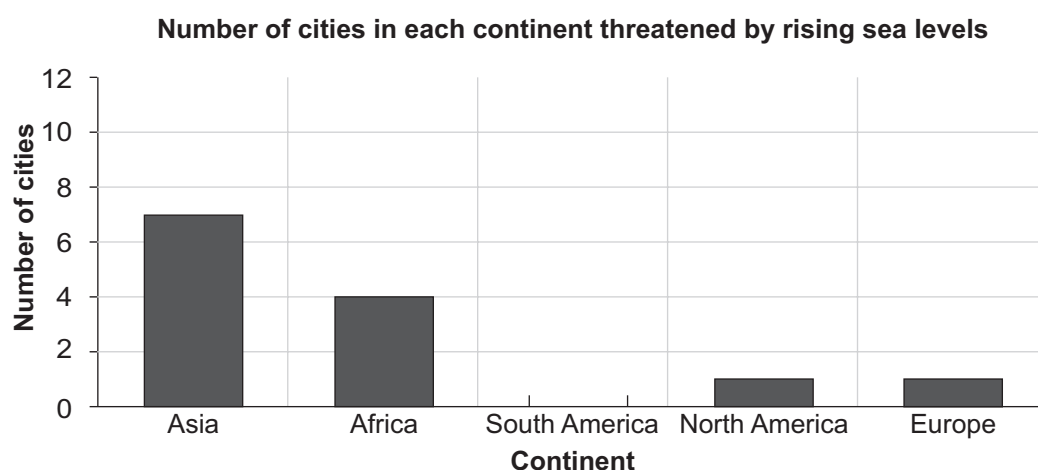


Fig. 6

[2]

- (iii) Suggest **one** other reason (apart from rising sea levels or residential reasons) why coastal defences are needed.

[2]

[Turn over



(d) Evaluate the sustainability of the coastal management strategy used to protect a named area of coastline in the British Isles.

[8]

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32GGY1115

Theme C: Our Changing Weather and Climate

- 3 (a) Complete **Table 6** below which provides information about three weather recording instruments.

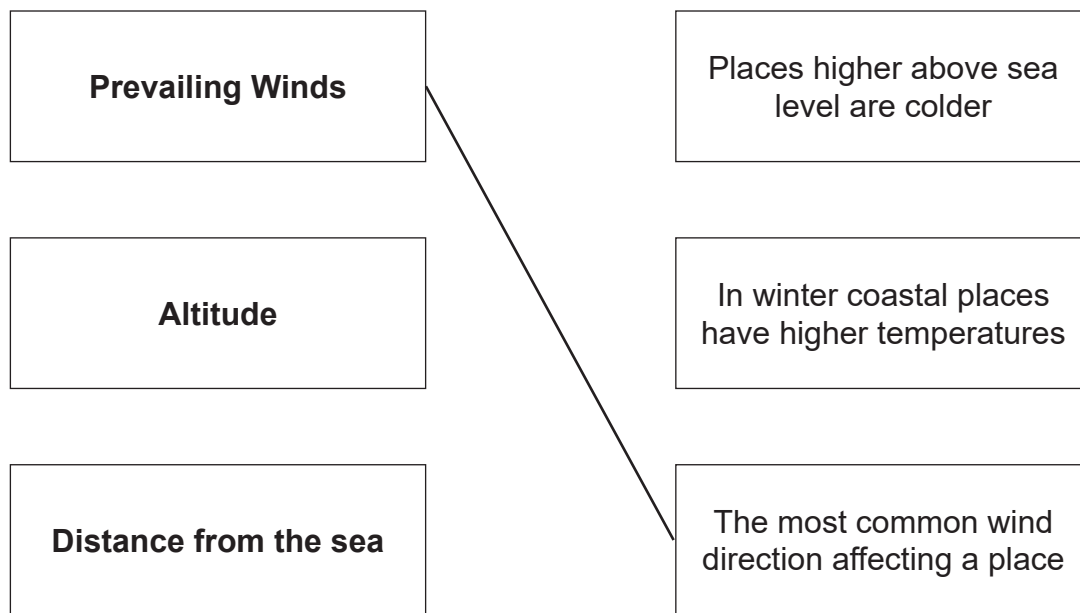
Table 6

Weather instrument	Name of instrument	Weather element recorded
 © Getty Images	Anemometer	
 © Getty Images		Air Pressure
 © Getty Images		Precipitation eg. rain/snow

[3]



- (b) (i) Complete **Fig. 7** by drawing a line to join each factor that can affect climate with its correct description. One has been completed for you.



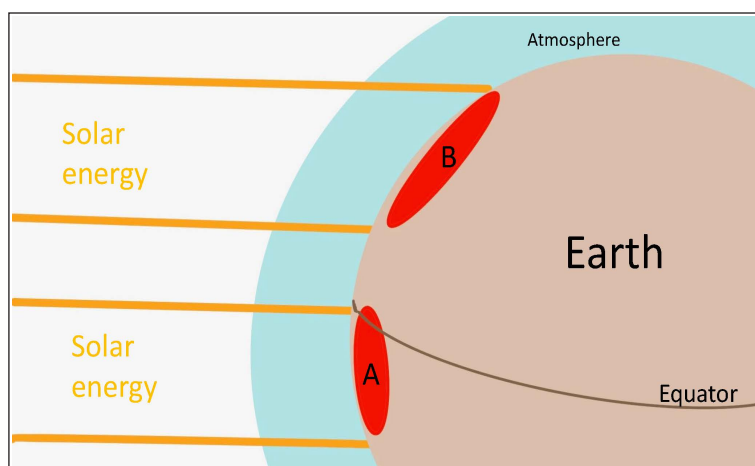
[2]

Fig. 7

[Turn over



- (ii) Study **Fig. 8** which shows how latitude affects temperatures. Answer the question which follows.



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Fig. 8

Using **Fig. 8** to help you, explain why temperatures fall with distance from the equator.

[4]





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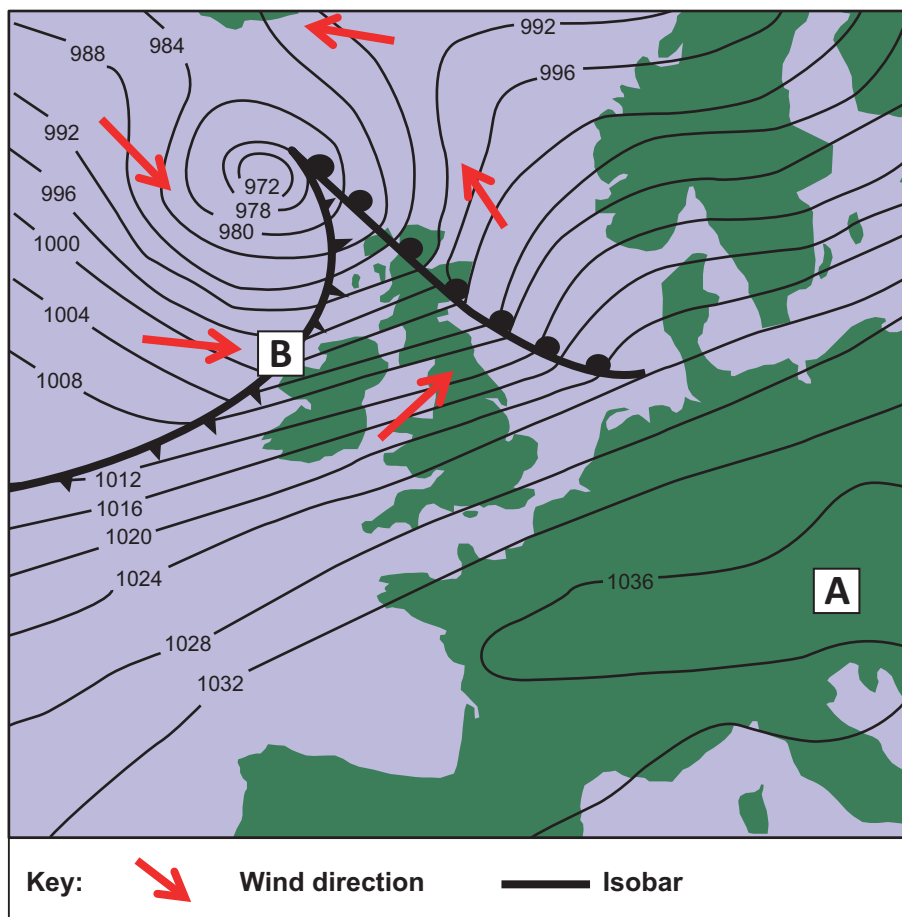
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32GGY1119

(c) Study **Fig. 9** which shows a synoptic chart of North West Europe in winter. Answer the questions which follow.



Kayarchy © 2009-2024 N Waller

Fig. 9

(i) Using **Fig. 9**, underline the correct answer to complete the sentences below.

- The pressure at A is **high** / low
- The lowest pressure is in **Southern England** / North West of Scotland
- Area B is **at the warm front** / at the cold front

[3]



[2]

[6]



- (d) Study **Fig. 10** which shows the track of Hurricane Sally, an example of an extreme weather event outside the British Isles. Answer the questions which follow.



Source: Principal Examiner

Fig. 10

- (i) Underline the direction in which Hurricane Sally was travelling over the Gulf of Mexico. Choose your answer from the list below.

North East

North West

East

[1]



(ii) Name the city which lies closest to the path of Hurricane Sally.

_____ [1]

(iii) With reference to your case study of an extreme weather event outside the British Isles, describe **one** impact it had on people.

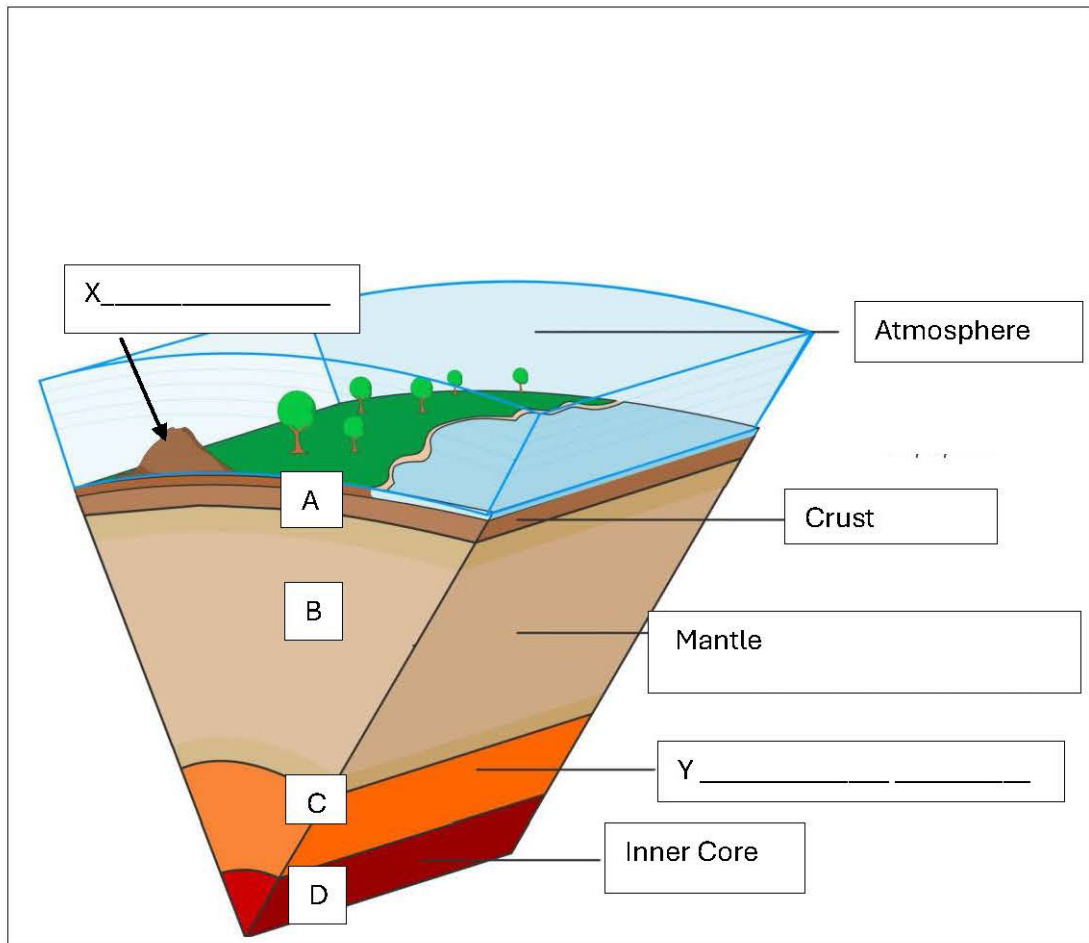
Extreme Weather Event _____

_____ [3]



Theme D: The Restless Earth

- 4 (a) Study **Fig. 11** which shows the structure of the earth. Answer the questions which follow.



© Getty Images

Fig. 11

- (i) Circle the letter in the list below which is the region of the earth's structure in which convection currents are located.

A

B

C

D

[1]

- (ii) Add the correct labels at **X** and **Y** to complete **Fig. 11**.

[2]





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32GGY1125

- (b) Study **Fig. 12** which shows a map of the Western part of North America and a cross section at this destructive plate margin. Answer the questions which follow.

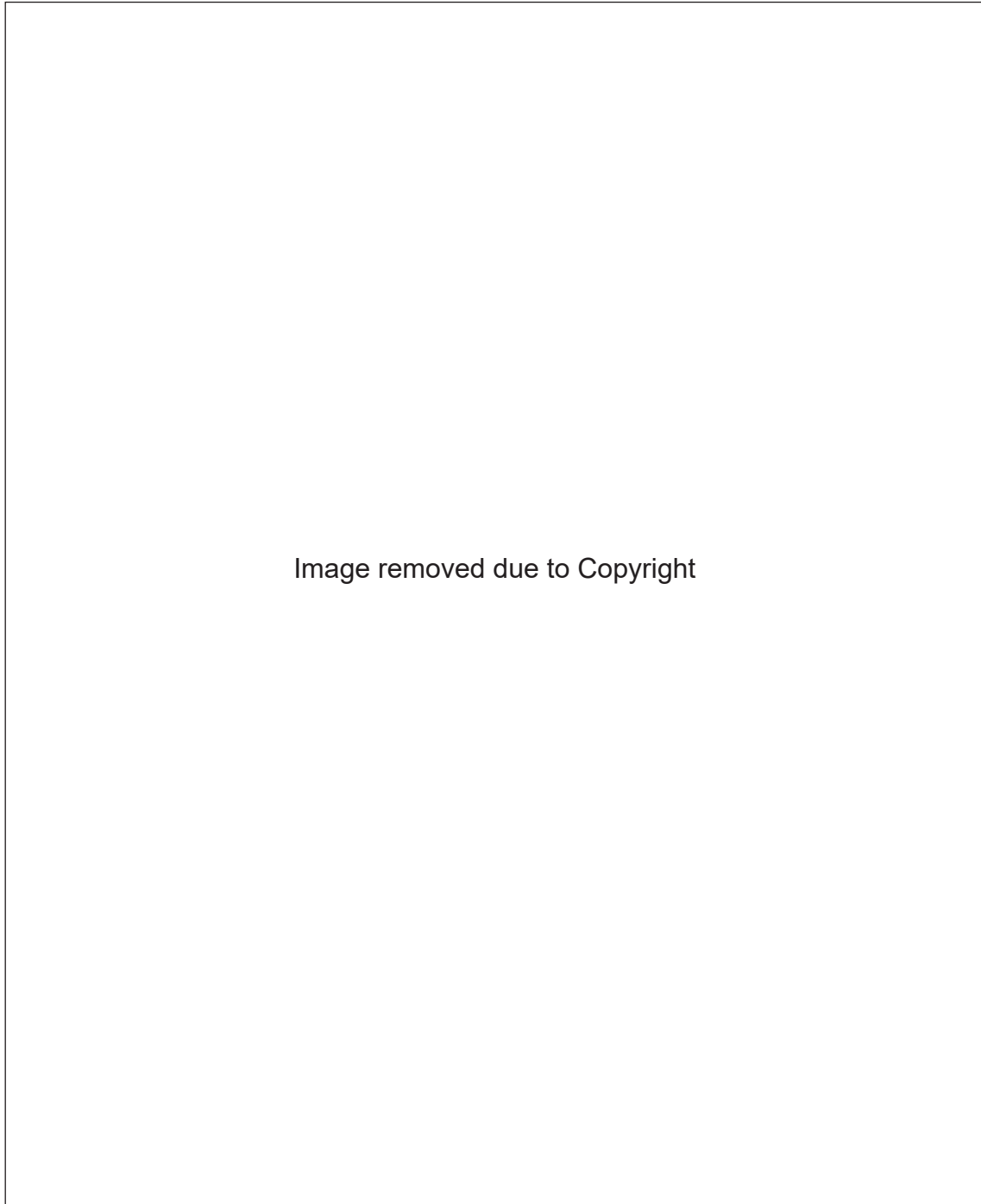


Fig. 12



(i) Name the fold mountain range formed at this destructive plate margin.

_____ [1]

(ii) Name **one** feature which is formed in the sea at a subduction zone.

_____ [1]

(iii) Explain why volcanoes erupt along a destructive plate margin such as this.

_____ [4]

(c) Discuss **one** potential global impact on the environment of a named supervolcano eruption which you have studied.

Name of supervolcano eruption _____

_____ [3]

[Turn over

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32GGY1127

(d) Select the correct term from the list below to complete the sentences about earthquakes.

Seismograph Tsunami Epicentre Richter Focus Mercalli

- The _____ is the point in the crust where an earthquake occurs.
- A _____ is the instrument used to measure the strength of an earthquake.
- _____ is the scale used to measure the magnitude of an earthquake.
- The _____ is the place on the earth's surface vertically above the point where an earthquake occurs.

[4]

(e) Liquefaction is one physical consequence of an earthquake. State the meaning of the term **liquefaction**.

[2]



-

[illegible]

[7]

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Question Number	Marks
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Total Marks	
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Examiner Number

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