Rewarding Learning

71

Candidate Number

General Certificate of Secondary Education
2012

Geography

Unit 1:
Understanding Our Natural World

Foundation Tier

[GGG11]

THURSDAY 14 JUNE, MORNING

GGG11

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 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(h)(ii)**, **2(e)** and **3(f)**.

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 Poole and Swanage, England and answer the questions which follow.

(i) State the height of the land at its highest point in grid square 0177.

_____ metres [1]

(ii) State the straight line distance from the Visitor Centre at Swanage, (GR 036787) to the hotel at the end of the spit (GR 038871).

_____ km [2]

(iii) Underline the direction of Old Harry (GR 0582) from the World Heritage Site at Swanage (GR 0378).

north west **north east** **south west** **south east** [1]

(iv) What method is used to protect the beach from longshore drift north of Swanage (GR 0379)?

_____ [1]

(v) State the meaning of the term **longshore drift**.

_____

_____

_____ [2]

(vi) Many holidaymakers visit this area. Match the following attractions to their locations. One has been completed for you.

0387	Durlston Country Park
9979	Nature reserve
0288	Walks
0277	Viewpoint
0187	Museum

[4]

(b) Old Harry (GR 0582) is an example of a stack. Study **Fig. 1** which shows the formation of a stack. Answer the question which follows.

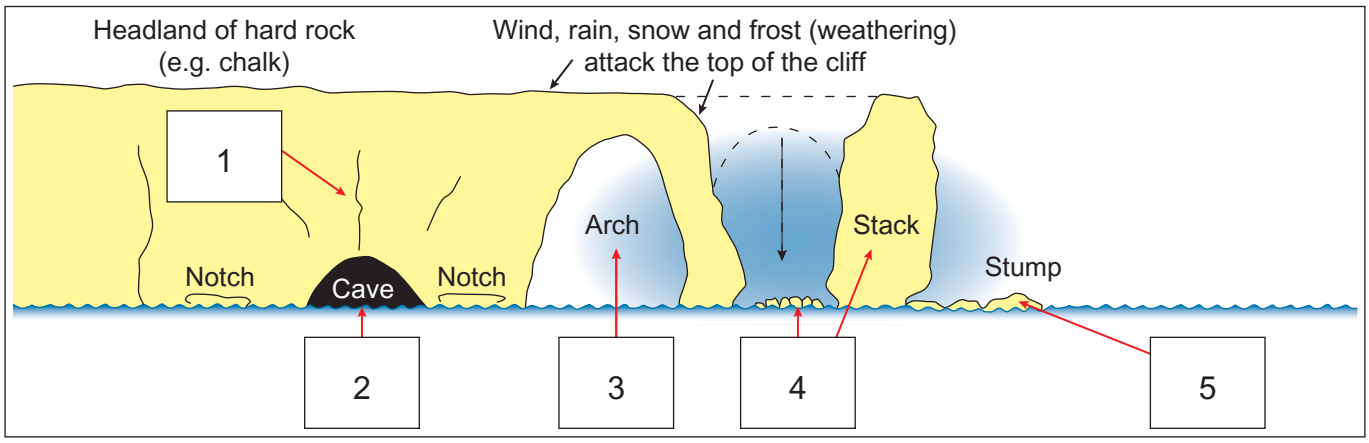

Fig. 1

Complete **Table 1** by matching the correct statement to the number in **Fig. 1**. This will explain the formation of a stack. One has been completed for you.

Table 1

Statement	Number in Fig. 1
If the cave is eroded right through the headland an arch is formed.	
The weather and sea attack the stack until only a stump is left.	5
Cracks show weaknesses in rock.	
The arch will eventually collapse as it is widened by the sea leaving a stack.	
As the crack is eroded further a cave is formed.	

[4]

Examiner Only	
Marks	Remark

(c) Study **Fig. 2** which shows how some people use the coast. Answer the questions which follow.

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Fig. 2

(i) State **one** human activity shown at the coast in **Fig. 2**.

_____ [1]

(ii) Describe the conflicting nature of **one** human activity in a coastal area. Refer to a place in your answer.

_____

_____

_____

_____

_____ [3]

Examiner Only	
Marks	Remark

(d) Attempts have been made to protect some coastal areas from erosion. Select **one** method from the list below and explain how it works.

sea wall **gabions** **beach nourishment**

Method _____

How it works _____

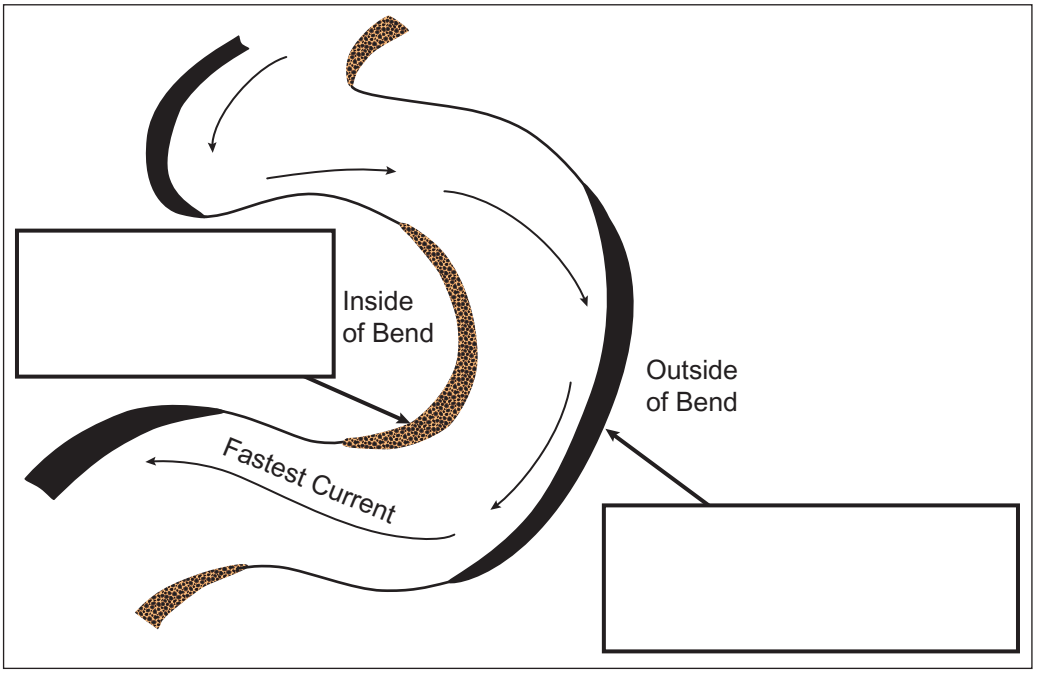
_____

_____

_____

_____ [3]

(e) Study **Fig. 3** below which shows a river feature. Answer the questions which follow.



Source: Principal Examiner

Fig. 3

(i) Name the feature shown in **Fig. 3**. Underline your answer in the list below.

Meander **Delta** **Waterfall** [1]

(ii) Complete **Fig. 3** by writing **deposition** and **erosion** in the correct boxes. [2]

Examiner Only

Marks	Remark

(iii) Two of the processes carried out by a river are erosion and transportation. Complete the following sentences about these river processes. Choose your answers from the list below.

dissolves **hydraulic action** **traction** **breaks**

abrasion **vertical** **load**

1. _____ is caused by rock fragments hitting against the bed and banks.

2. Solution is the process by which river water reacts chemically with the rocks and _____ them.

3. The river's _____ is the solid material carried by the river.

4. Large rocks are rolled along the river bed by the process of _____.

5. _____ erosion is when the river erodes downwards into its bed. [5]

(iv) State the meaning of the term **deposition**.

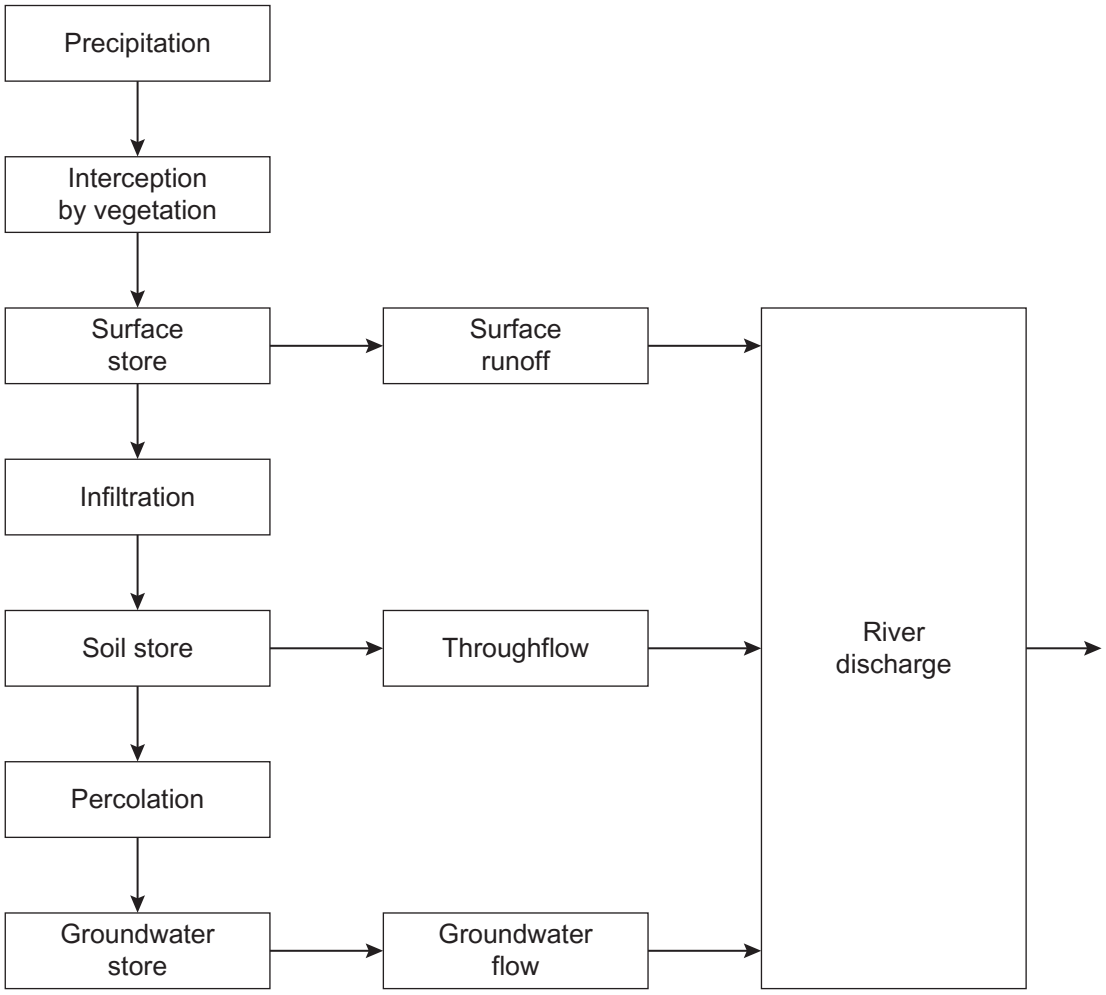
_____

_____

_____ [2]

Examiner Only	
Marks	Remark

(f) Study **Fig. 4** which shows part of the water cycle. Answer the questions which follow.



Source: Principal Examiner

Fig. 4

(i) Using **Fig. 4**, complete **Table 2** by giving **one** example of each aspect of the drainage basin. One has been completed for you.

Table 2

Input	Store	Flow	Output
			River Discharge

[3]

Examiner Only

Marks	Remark

Examiner Only	
Marks	Remark

(ii) Explain **one** effect on the drainage basin cycle if the vegetation was removed.

_____

_____

_____

_____

_____ [3]

(g) Study **Fig. 5** which shows a drainage basin which experienced flooding in Co. Tyrone. Answer the questions which follow.

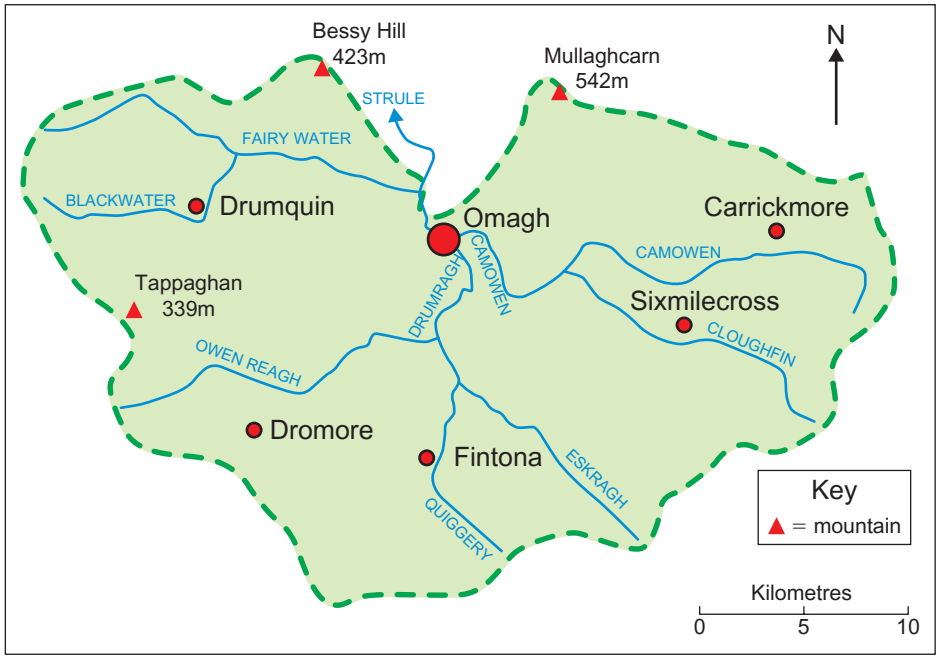


Fig. 5

(i) State the name of the highest mountain in the drainage basin as shown in **Fig. 5** .

_____ [1]

(ii) Using **Fig. 5**, state the name of the two rivers which join at Omagh to form the River Strule.

_____ [1]

_____ [1]

(iii) State fully **one** possible human cause of flooding.

_____

_____

_____

_____

_____ [3]

(h) Study **Fig. 6** and **Fig. 7** which show different ways to prevent flooding. Answer the questions which follow.

Dam

© iStockphoto / Thinkstock

Fig. 6

Afforestation

© The Poplartree Company

Fig. 7

(i) Indicate the type of engineering shown in both **Fig. 6** and **Fig. 7** by writing either **Hard** or **Soft** engineering.

Dam _____ engineering

Afforestation _____ engineering [2]

Examiner Only

Marks	Remark

(ii) Using a case study of a river from outside the British Isles, describe **one** river engineering strategy used.

River _____ [1]

Method

_____

_____

_____

_____

_____ [3]

Examiner Only	
Marks	Remark

Theme B: Our Changing Weather and Climate

2 **(a)** Study **Fig. 8** which shows a weather system over the British Isles on a day in July 2009. Answer the following questions.

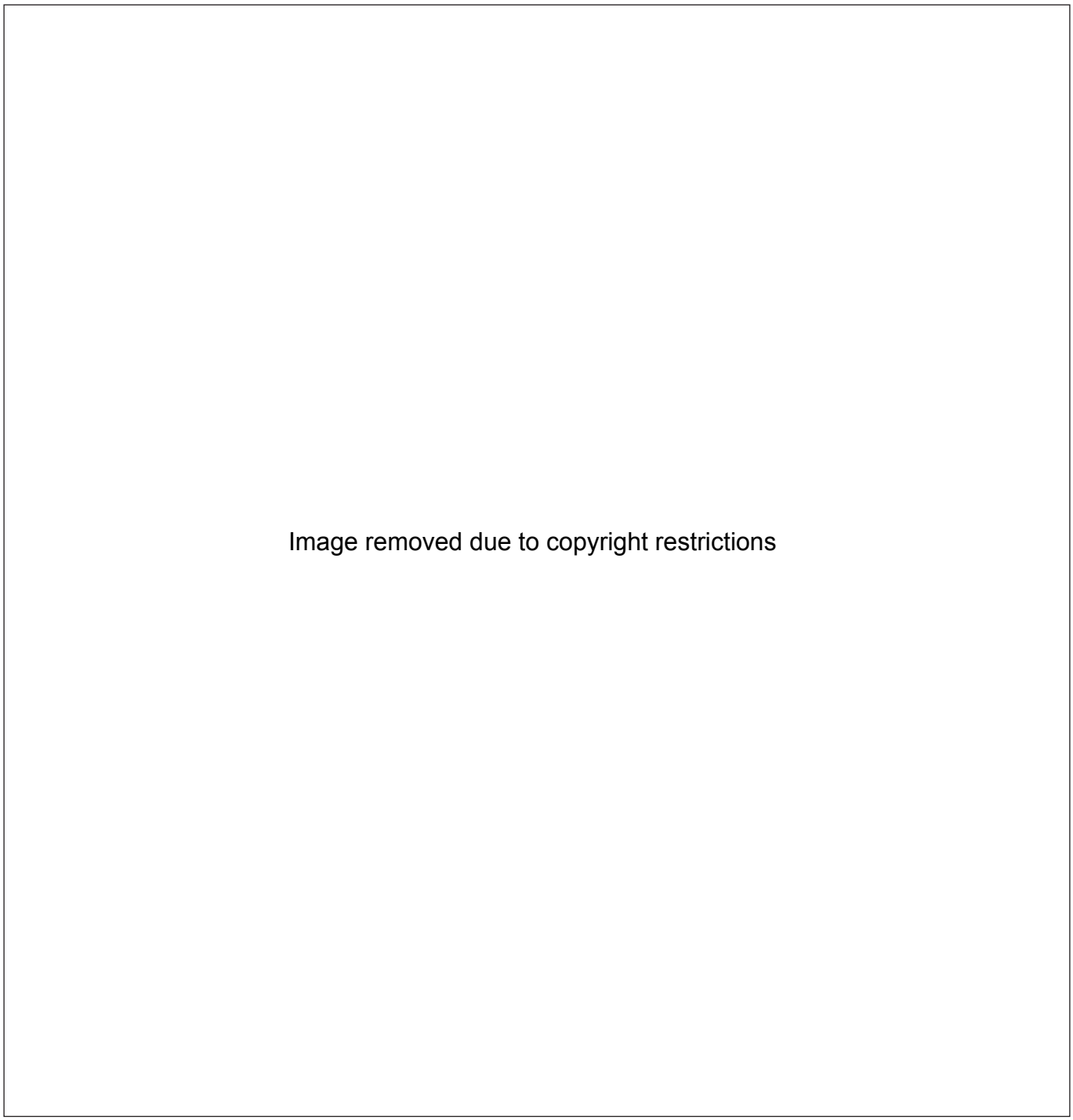


Fig. 8

(i) Complete each of the following to describe this weather map.

Pressure at X _____ mb

Wind direction at Weymouth _____

Cloud cover at Weymouth _____ oktas [3]

Examiner Only	
Marks	Remark

Examiner Only	
Marks	Remark

(ii) The weather system in **Fig. 8** is an anticyclone. Explain how this weather system caused hot, sunny weather which allowed people to enjoy the beach in Weymouth on this summer day as shown in **Fig. 9**.

Source: Alistair Coleman / Duckorange

Fig. 9

_____

_____

_____

_____

_____ [3]

(b) (i) Complete **Table 3** by naming **two** instruments used to measure the following elements of the weather.

Table 3

Element	Instrument
Rainfall	Rain gauge
Temperature	
Pressure	

[2]

(ii) Weather stations on land collect data which is used to create a weather forecast. Name **two** other sources of data which can be used to create a weather forecast.

1. _____

2. _____ [2]

(c) Depressions are weather systems which can have both positive and negative effects on the people and economy of places. Complete **Table 4** below to show whether the effects listed are positive or negative. One has been completed for you.

Table 4

Positive	Effects of Depressions	Negative
	Cold front brings long period of heavy rain which stops a cycle race	
	Strong winds mean the Belfast – Stranraer ferry cannot sail	→
	Light summer rainfall helps wheat crop to grow	
	Rain at the warm front in summer avoids a hosepipe ban in Southern England	

[3]

(d) Study **Fig. 10** which shows two causes of climate change. Answer the question which follows.

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A

© Digital Vision / Thinkstock

B

Fig. 10

Identify the causes of climate change shown in **Fig. 10**.

A _____

B _____ [2]

Examiner Only

Marks	Remark

(e) Name a country you have studied and describe **two** possible effects (one positive and one negative) of climate change on this country.

Name of country _____ [1]

Positive effect

_____

_____

_____

_____

_____ [3]

Negative effect

_____

_____

_____

_____

_____ [3]

(f) It is difficult to deal with climate change. Describe **one** sustainable solution to the problem of climate change.

_____

_____

_____

_____

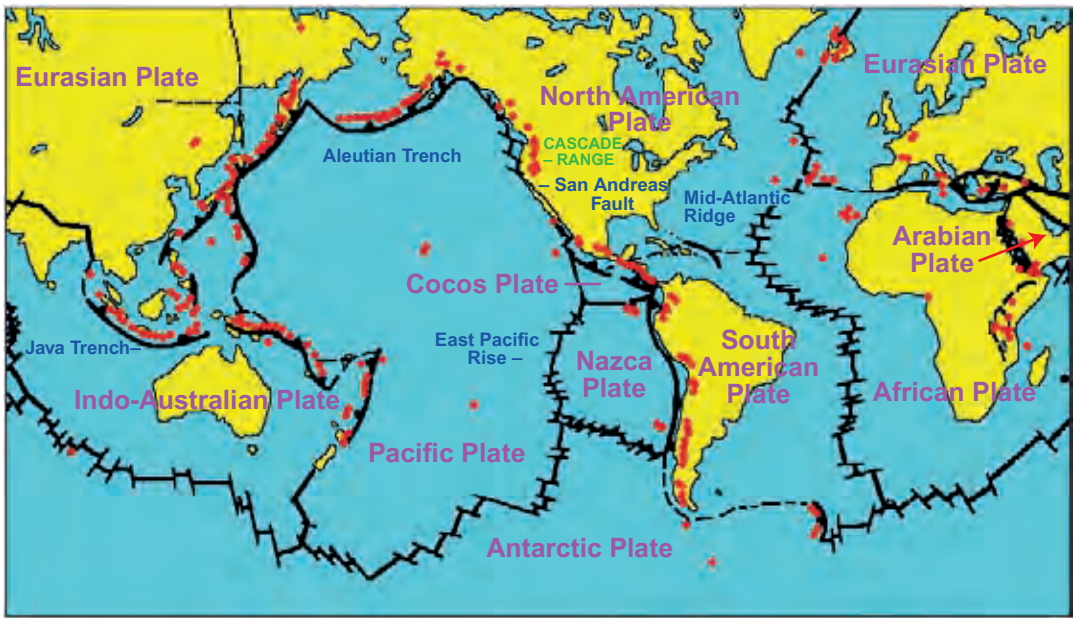
_____ [3]

Examiner Only	
Marks	Remark

Examiner Only

Marks	Remark

3 **(a)** Study **Fig. 11** which shows crustal plates and the world distribution of volcanoes. Answer the question which follows.



Source: USGS, Topinka, USGS/CVO, 1997, Modified from Tilling, Heliker and Wright, 1987 and Hamilton, 1976.

Fig. 11

Describe the world distribution of volcanoes shown on the map. Refer to named places in your answer.

_____

_____

_____

_____

_____

_____ [4]

[Turn over

Examiner Only	
Marks	Remark

(b) Study **Fig. 12** which shows Slemish Mountain which is a volcanic plug. Answer the question which follows.

© iStockphoto / Thinkstock

Fig. 12

Explain how a volcanic plug such as Slemish Mountain was formed.

_____

_____

_____

_____

_____ [3]

(c) **(i)** Complete **Table 5** below to show **one** other example of an igneous and a sedimentary rock.

Table 5

Igneous	Sedimentary
Granite	Sandstone

[2]

Examiner Only	
Marks	Remark

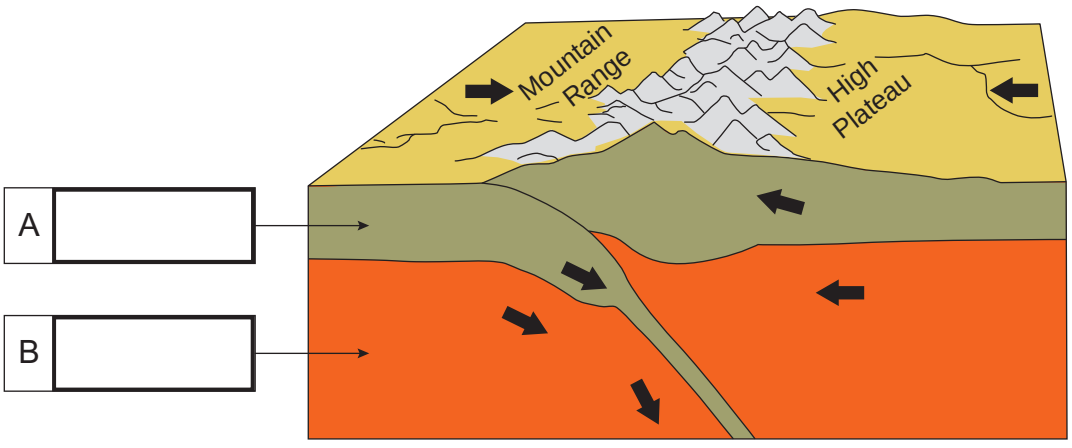
(ii) Sedimentary rocks are formed over a long period of time. Complete **Table 6** by placing the statements into the correct order to show how sedimentary rocks have been formed. One has been completed for you.

Table 6

Statement	Order
Sediments are laid down on the sea bed.	2
The layers of sediment are compressed.	
Erosion of land creates small fragments of rock or sediments which are carried into the sea.	
The sediments build up in layers over a long period of time to form sedimentary rock.	
Compression of the layers squeezes out air and water.	

[4]

(d) Study **Fig. 13** which shows a collision plate boundary. Answer the question which follows.



Source: United States Geological Survey.

Fig. 13

Add labels at A and B on **Fig. 13** to indicate the following:

Mantle Crust [2]

Examiner Only	
Marks	Remark

(e) Attempts have been made to manage the impacts of earthquakes. Complete **Table 7** by sorting the following methods of managing earthquakes into short term and long term actions by drawing arrows to the correct box. Two have been completed for you.

Table 7

Short Term Actions	Action to manage an Earthquake	Long Term Actions
	set up tents to shelter earthquake victims	
	build far away from landfill or soft ground →	
	set up a tsunami warning system	
←	provide clean drinking water	
	practise earthquake drills	
	have strict building codes to strengthen buildings	

[4]

(f) Earthquakes may occur far from plate boundaries. Name an earthquake in the British Isles which you have studied. Outline the cause of this earthquake and describe and explain fully **one** impact this earthquake had.

Name of Earthquake _____ [1]

Cause

_____

_____

_____ [2]

Impact

_____

_____

_____

_____

_____ [3]

THIS IS THE END OF THE QUESTION PAPER

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