Write your name here

Surname	Other names

Edexcel GCSE

Centre Number	Candidate Number

Geography A

Unit 2: The Natural Environment

Foundation Tier

Sample Assessment Material **Time: 1 hour**	Paper Reference **5GA2F/01**

You must have:
Resource Booklet (enclosed)

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- In Section **A** answer only **one** question from questions 1, 2, 3 **or** 4.
- In Section **B** answer **either** question 5 **or** 6.
- Answer the questions in the spaces provided – *there may be more space than you need.*

Information

- The total mark for this paper is 53.
- The marks for **each** question are shown in brackets – *use this as a guide as to how much time to spend on each question.*
- Questions labelled with an **asterisk** (*) are ones where the quality of written communication will be assessed.
- The marks available for spelling, punctuation and grammar are clearly indicated.

Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Check your answers if you have time at the end.

Turn over ▶

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2/2/2

S 4 1 8 8 0 A 0 1 3 2

PEARSON

SECTION A – THE PHYSICAL WORLD

Answer only ONE question from Section A.

Indicate which question you are answering by marking a cross in the box ☒. If you change your mind, put a line through the box ☒ and then indicate your new question with a cross ☒.

Topic 1: Coastal landscapes

If you answer Question 1 put a cross in this box ☒ .

1 (a) Study Photograph A in the Resource Booklet.
Also study Figure 1a below which is a field sketch of the photograph.

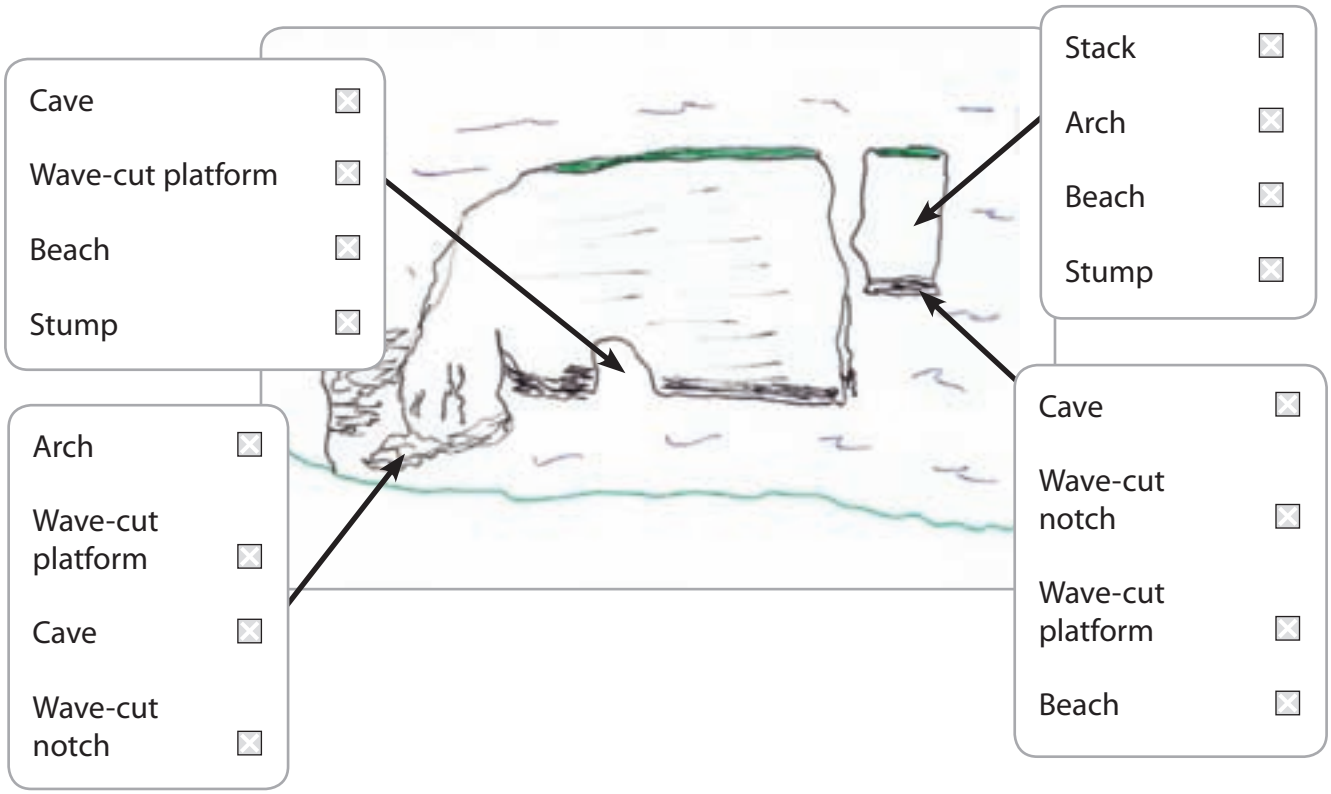


Figure 1a

(i) Identify the landforms in Figure 1a above.

Put a cross in the box next to the correct landform.

(4)

(ii) The paragraph below explains how an arch is formed.

Complete the paragraph by using some of the words in the box.

(5)

cave	**arch**	**friction**	**gravity**
weathering	**hydraulic action**	**erodes**	**abrasion**
	corrosion	**headland**	

The sea attacks the ..... on both sides enlarging cracks in the rocks by the physical processes of ..... and ..... .

After a long period of time a cave is formed in the rock. Eventually the sea breaks through the back wall of the cave to form an arch.

The arch gets larger due to continued erosion and ..... processes.

It eventually collapses due to ..... .

(b) Study Figure 1b in the Resource Booklet.

(i) The cliff at A is retreating at the rate of 3 mm every year. The cliff at B is retreating at the rate of 6 mm a year.

Give **two** reasons for this difference.

(2)

1 .....

2 .....

(ii) Name and describe **one** type of weathering that may cause cliffs to retreat.

(3)

Type of weathering

.....

Description

.....

.....

.....

.....

.....

.....

.....

(iii) Describe **two** effects that coastal erosion has on **people** living in coastal areas.

(4)

1 .....

.....

.....

.....

2 .....

.....

.....

.....

(c) Study Photograph B in the Resource Booklet. It shows groynes on a beach, which are a method of hard engineering.

(i) Describe **one** other method of hard engineering. You may use examples drawn from your own case study of coastal management.

(3)

Named method

.....

Description

.....

.....

.....

.....

.....

.....

(ii) Groynes are constructed to prevent longshore drift.

Describe how groynes prevent the process of longshore drift from taking place.

You may draw a diagram to help your answer.

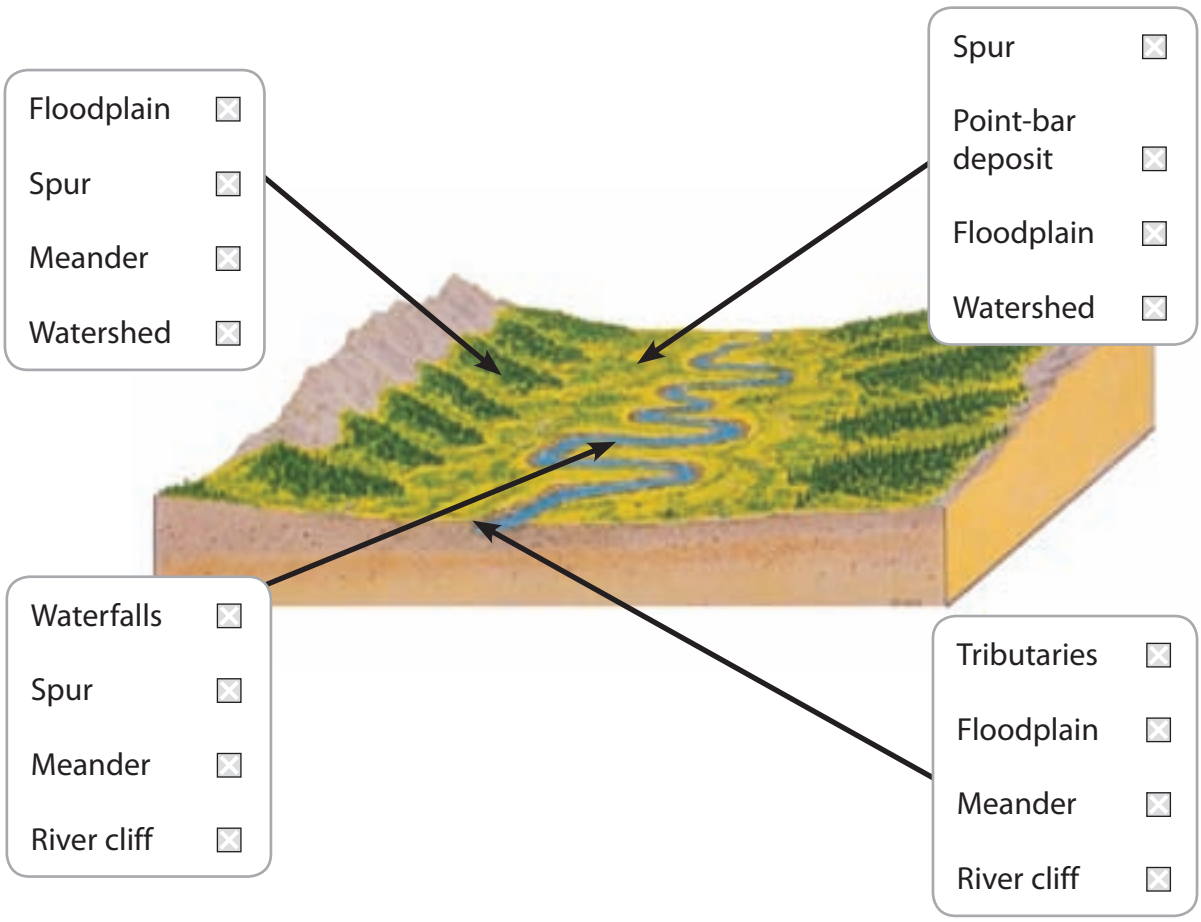
(4)

(Total for Question 1 = 25 marks)

Topic 2: River Landscapes

If you answer Question 2 put a cross in this box ☒ .

2 (a) Study Figure 2a below. It shows a section of a river valley.



(Source: Rosgen, www.fgmorph.com)

Figure 2a

(i) Identify the landforms in Figure 2a above.

Put a cross in the box next to the correct landform.

(4)

(ii) The paragraph below explains how a waterfall is formed.

Complete the paragraph using some of the words in the box.

(5)

weaker	**abrasion**	**stronger**	**waterfall**
downstream	**hydraulic action**	**attrition**	**plunge**
	upstream	**undercutting**	

When a river passes over bands of weaker and stronger rock it erodes the ..... rock more rapidly by the processes of hydraulic action and ..... . This causes .....of the weaker rock creating a waterfall. At the base of the waterfall a ..... pool is formed and as the processes continue the waterfall retreats in an ..... direction.

(b) Study Photograph C in the Resource Booklet. It shows an area in Alicante, Spain that has been flooded.

(i) State **two immediate** effects of this flood event on the **people** of Alicante.

(2)

1 .....

2 .....

(ii) State **two long-term** effects of this flood event on the **people** of Alicante.

(2)

1 .....

2 .....

(iii) Describe **one human** cause that can increase the number of floods in an area.

(3)

Named cause

Description

(c) Study Photograph D in the Resource Booklet. It is an aerial photograph of the confluence of the Ohio River and the Mississippi River.

Levees are constructed to protect areas from flooding.

(i) What are levees?

You may draw a diagram to help your answer.

(2)

(ii) Describe **one** other technique of hard engineering used to manage rivers such as the Mississippi.

(3)

Named technique

Description

(d) Study Figure 2b in the Resource Booklet. It is a flood risk map for Salisbury in Wiltshire.

Describe how a population may be protected from flooding. You may use evidence from your own case-study of river management.

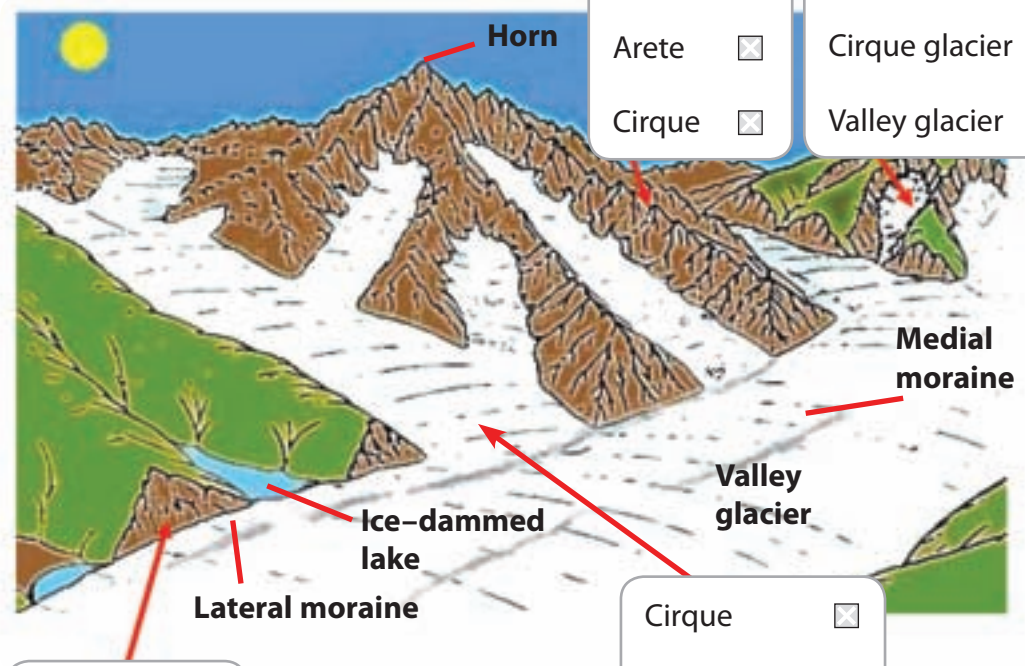
(4)

(Total for Question 2 = 25 marks)

Topic 3: Glaciated Landscapes

If you answer Question 3 put a cross in this box ☒ .

3 (a) Study Figure 3a below. It shows a glaciated upland landscape.



Horn ☒
Spur ☒
Arete ☒
Cirque ☒

Arete ☒
Moraine ☒
Cirque glacier ☒
Valley glacier ☒

Truncated spur ☒
Spur ☒
Ridge ☒
Moraine ☒

Cirque ☒
Truncated spur ☒
Tributary glacier ☒
Hanging valley ☒

(Source: www.physicalgeography.net)

Figure 3a

(i) Identify the landforms in Figure 3a above.

Put a cross in the box next to the correct landform.

(4)

(ii) The paragraph below explains how glaciers erode.

Complete the paragraph below using some of the words in the box.

(5)

abrasion	**interlocking**	**plucking**
gravity	**attrition**	**U-shaped**	**V-shaped**
deposition	**truncated**	**friction**

One way a glacier erodes is by ..... . This is when ice melts then re-freezes into cracks in the rock face. This breaks off pieces of rock as the glacier moves down the valley due to ..... . The glacier then uses this rock like sandpaper to erode the valley. This is the process known as ..... . As the glacier moves down the valley it cuts through the ..... spurs forming a ..... valley.

(iii) Figure 3a shows lateral and medial moraines.

Describe the appearance of moraines.

(2)

(b) (i) Using Figure 3b in the Resource Booklet, describe the **three** ways shown at **A**, **B** and **C** in which glaciated landscapes can be used by people.

(6)

A

B

C

(ii) Study Photograph E in the Resource Booklet. There are several ways of reducing the risk of avalanches.

Describe the **two** methods shown on Photograph E.

(4)

1 .....

.....

.....

2 .....

.....

.....

3 .....

.....

.....

(c) Study Figure 3c in the Resource Booklet. It shows the number of deaths caused by avalanches in three countries.

Explain why the number of deaths has changed over the period shown. You should use data in your answer.

(4)

.....

.....

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.....

(Total for Question 3 = 25 marks)

Topic 4: Tectonic Landscapes

If you answer Question 4 put a cross in this box ☒ .

4 (a) Study Figure 4a below. It shows a plate boundary.

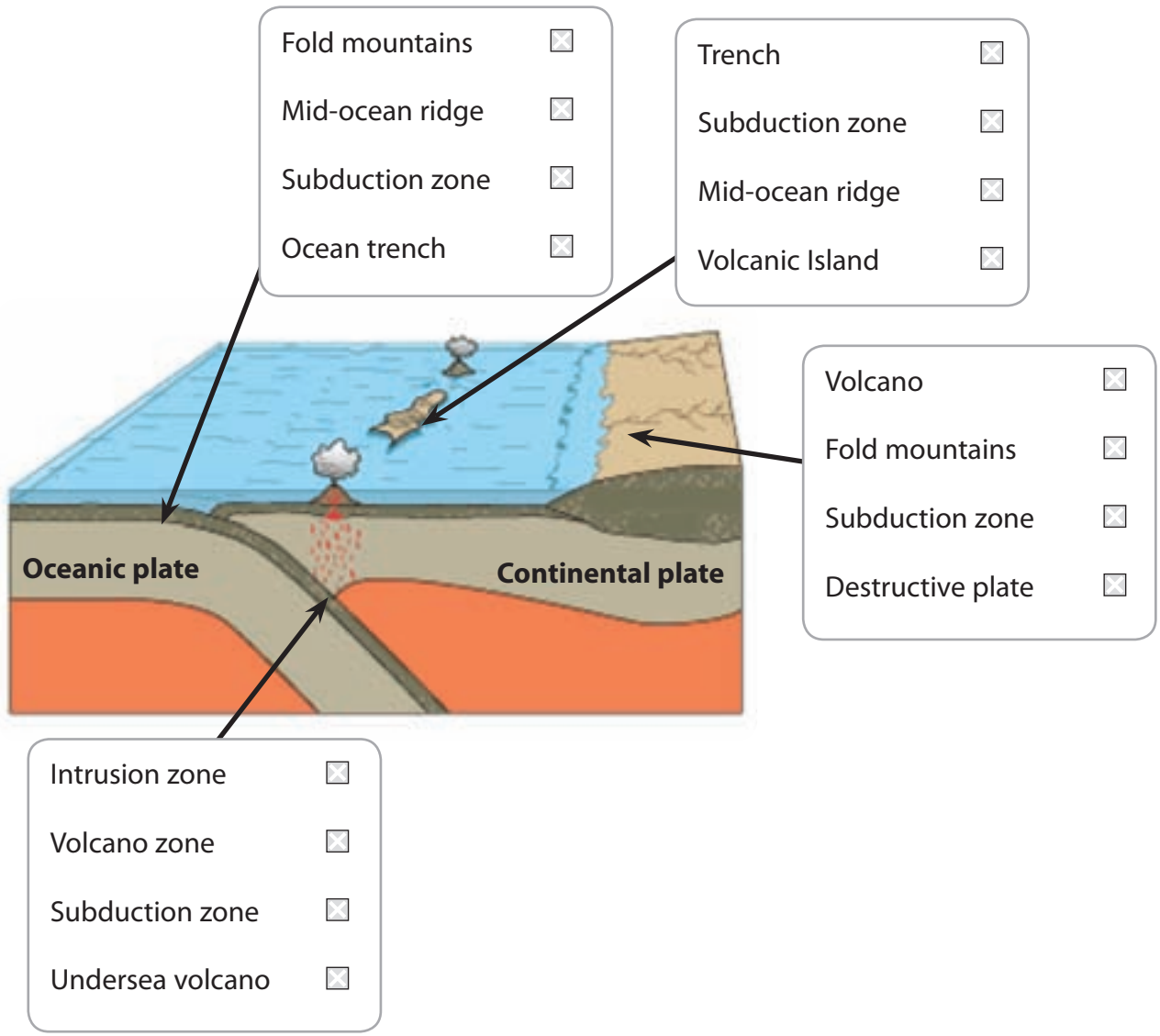

Figure 4a

(i) Identify the landforms in Figure 4a above.

Put a cross in the box next to the correct landform.

(4)

(ii) The paragraph below explains why earthquakes occur.

Complete the paragraph by using some of the words in the box.

(5)

plate	**pressure**	**mantle**	
30 seconds	**country**	**heat**	**severe**
crust	**30 minutes**	**Richter**	

Earthquakes are movements in the Earth's ..... . They can take place anywhere on the surface of the Earth but are most common close to ..... boundaries. At these places ..... builds up until a sudden release takes place releasing huge forces. This force is measured on the ..... scale and is very powerful although the shaking rarely lasts for more than ..... .

(iii) The boundary illustrated in Figure 4a is a destructive plate boundary.

Describe **two** other types of plate boundary.

(4)

1. Named type of plate boundary

.....

Description

.....

.....

.....

.....

2. Named type of plate boundary

Description

(b) Study Figure 4b in the Resource Booklet. It is a map showing the global distribution of volcanoes.

(i) Name **two** volcanoes located in Europe.

(2)

(ii) Describe the global distribution of volcanoes shown.

(2)

(c) Study Photograph F in the Resource Booklet. It shows an area that has been affected by a volcanic eruption in a low-income country (LIC).

Identify **two** short-term effects and **two** long-term effects of such an event on people.

(4)

Short-term effects

Long-term effects

(d) Study Photograph G in the Resource Booklet. It shows a disaster survival kit.

Describe how the contents of such kits help people survive the first few days after an earthquake or volcanic eruption.

(4)

(Total for Question 4 = 25 marks)

TOTAL FOR SECTION A = 25 MARKS

SECTION B – ENVIRONMENTAL ISSUES

Answer either Question 5 OR Question 6.

Topic 5: A Wasteful World

If you answer question 5 put a cross in this box ☒ .

Spelling, punctuation and grammar will be assessed in *(e).

5 (a) Study Photographs H and I in the Resource Booklet.

Complete the paragraph below using some of the words from the list.

(5)

renewable	**wind**	**wood**	**ozone destruction**
	non-renewable	**oxygen**	**fossil fuel**
carbon dioxide	**climate change**	**coal**	**greenhouse gases**

Photograph H shows a traditional ..... fired power station that uses a ..... energy source. These produce greenhouse gases such as ..... which contribute towards ..... .

Photograph I shows one of the most popular ways of generating electricity today using a ..... power source that emits no greenhouse gases.

(b) The following questions are multiple choice. Read the questions carefully and then put a cross in the box of the answer that you select**.**
There is only one correct answer to each question.

(i) Another system of electricity generation that uses a renewable energy source is

(1)

☒ **A** nuclear power

☒ **B** wave power

☒ **C** oil-fired power stations

☒ **D** gas-fired power stations

(ii) The main **disadvantage** of wind power for the UK is that

(1)

☒ **A** it is more expensive than other systems of electricity generation

☒ **B** it is more expensive to maintain than other systems of electricity generation

☒ **C** not every day is windy so other systems are needed too

☒ **D** the UK has some places without any wind

(iii) Which of the following is a **greenhouse** gas?

(1)

☒ **A** Nitrogen

☒ **B** Methane

☒ **C** Ozone

☒ **D** Oxygen

(iv) As a country becomes more developed the amount of household waste

(1)

☒ **A** increases rapidly because more goods are bought

☒ **B** reduces because of recycling

☒ **C** reduces because of greater awareness about the environment

☒ **D** increases because people become selfish

(v) The carbon footprint of a person is best defined as

(1)

☒ **A** the average amount of carbon dioxide used up by the population

☒ **B** a measure of the impact human activities have on the environment

☒ **C** the amount of carbon burnt when fossil fuels are used

☒ **D** the greenhouse gases produced by motor vehicles

(c) Study Figure 5a below. It shows different types of domestic waste in 2005.

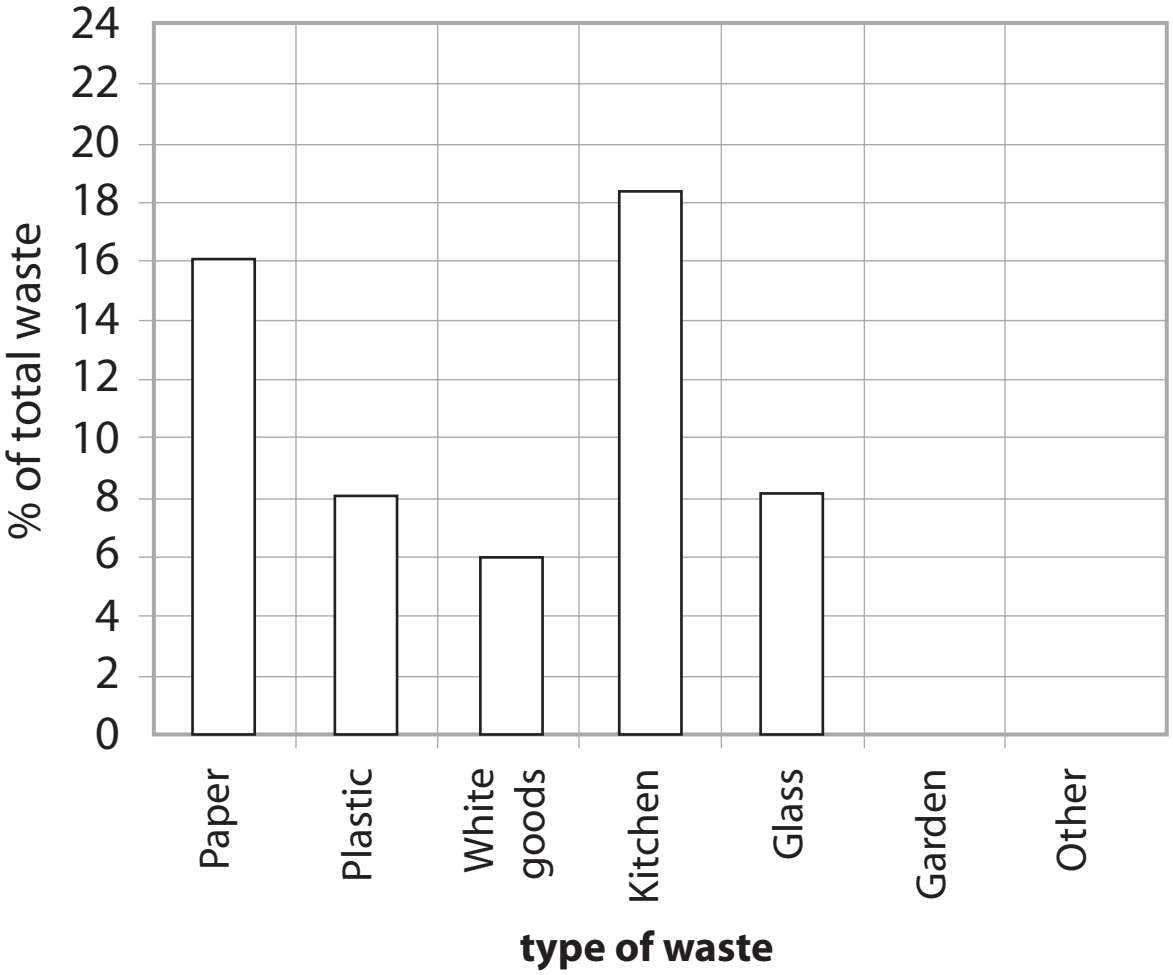

Figure 5a

(i) Complete the graph for garden and other waste.

Use the figures in the table below.

(2)

Type of waste	% of total waste
Garden	24
Other	20

(ii) Study Figure 5a again.

Choose whether the country shown is an HIC or an LIC. Then give reasons for your choice.

(3)

Choice

Reasons

(d) Study Figure 5b in the Resource Booklet. It shows the Eastcroft District Heating Scheme in Nottingham.

Describe the main advantages and disadvantages of the scheme.

(4)

Advantages

Disadvantages

*(e) Countries dispose of their waste in many different ways.

For **one** country you have studied, describe the methods being used to dispose of its waste.

(6)

Spelling, punctuation and grammar.

(3)

Chosen country

.....

Description

.....

.....

.....

.....

.....

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(Total for Question 5 = 28 marks)

Topic 6: A Watery World

If you answer question 6 put a cross in this box ☒ .

Spelling, punctuation and grammar will be assessed in *(e).

6 (a) Study Photographs J and K in the Resource Booklet.

Complete the paragraph below using some of the words from the list.

(5)

clothes	**agricultural**	**industrial**	**crops**
domestic	**populations**	**plants**	
supply	**powder**		

In low-income-countries there are many different uses of water. They include

..... uses such as washing ..... and personal

consumption as well as ..... and industrial uses. With growing

..... demand is rising and placing pressure on the

..... especially in regions that are arid.

(b) The following questions are multiple choice. Read the questions carefully and then put a cross in the box of the answer that you select**.**

There is only one correct answer to each question.

(i) In high-income countries a major way in which water is wasted is

(1)

- ☒ **A** irrigating agricultural crops
- ☒ **B** using it in manufacturing processes
- ☒ **C** loss through broken pipes
- ☒ **D** polluting it with household waste

(ii) In low-income countries the major problem of water supply is that

(1)

- ☒ **A** all the water is expensive
- ☒ **B** water is only available when it rains
- ☒ **C** there are no wells
- ☒ **D** clean piped water is not always available

(iii) Which of the following is the **best** word to describe the store of water underground?

(1)

- ☒ **A** spring water
- ☒ **B** well water
- ☒ **C** the aquifer
- ☒ **D** the underground reservoir

(iv) Disputes between countries over water resources most commonly occur when the countries

(1)

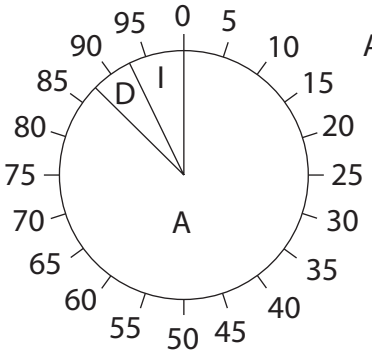
- ☒ **A** are traditional enemies
- ☒ **B** share a common water source, such as a river
- ☒ **C** are both low-income countries
- ☒ **D** are developing very fast

(v) Which of the following continents has the highest consumption of water per person?

(1)

- ☒ **A** South America
- ☒ **B** Africa
- ☒ **C** North America
- ☒ **D** Europe

(c) Study Figure 6a. It shows the amount of water used in two continents, Europe and Africa.



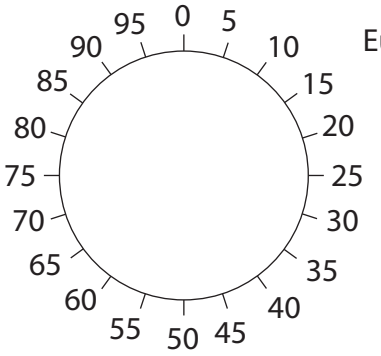
Africa

Key

A Agriculture

D Domestic

I Industry



Europe

Type of water usage	Amount of water used in Europe %
Agriculture	30
Domestic	15
Industry	55

Figure 6a

(i) Complete the pie chart for Europe.

Use the figures in the table.

(2)

(ii) Describe the differences in water consumption on the two continents.

(3)

(d) Study Figure 6b in the Resource Booklet, which shows the annual rainfall in the Murray-Darling River Basin Australia since 1900.

Annual rainfall could be described as reliable or unreliable. Make a judgement about the reliability of rainfall in the Murray-Darling River Basin and justify your answer.

(4)

Reliable or unreliable

Justification

*(e) Many water management schemes have been built around the world.

For **one** water management scheme you have studied, describe the impact that it has had on the area that it serves.

(6)

Spelling, punctuation and grammar.

(3)

Chosen water management scheme

Description

(Total for Question 6 = 28 marks)

TOTAL FOR SECTION B = 28 MARKS
TOTAL FOR PAPER = 53 MARKS

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Edexcel GCSE

Geography A

Unit 2: The Natural Environment

Paper 2F and 2H

Sample Assessment Material
Resource Booklet

Paper Reference
5GA2F/01
5GA2H/01

Do not return the Resource Booklet with the question paper.

Instructions

This resource booklet contains diagrams, photographs and images needed for use with the Unit 2: The Natural Environment examination. This resource booklet is for use with both foundation and higher tiers.

Turn over ▶

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S 4 1 8 8 0 A

PEARSON

SECTION A – THE PHYSICAL WORLD

Topic 1: Coastal Landscapes

(Source: S Warren)

Photograph A

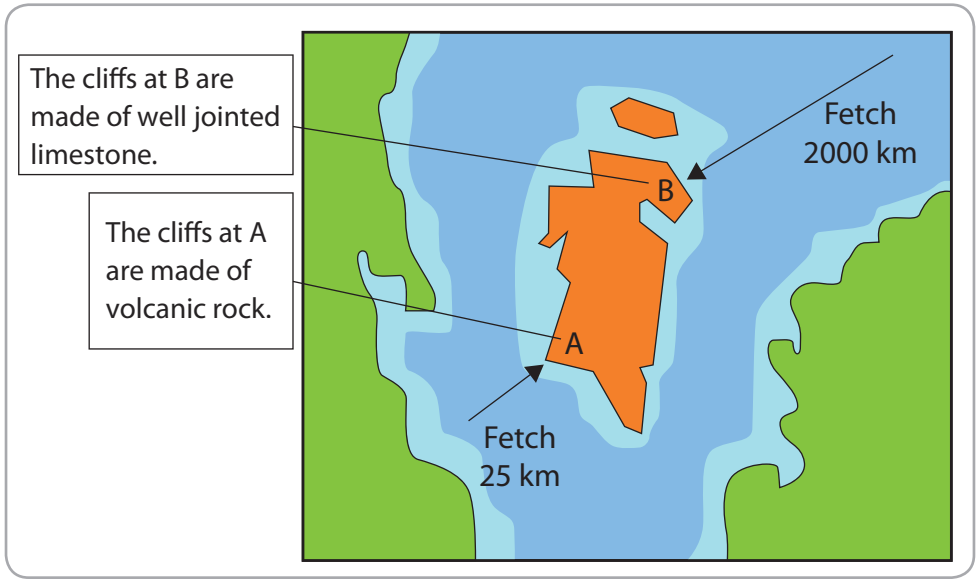


Figure 1b

(Source: M Harcourt)

Photograph B

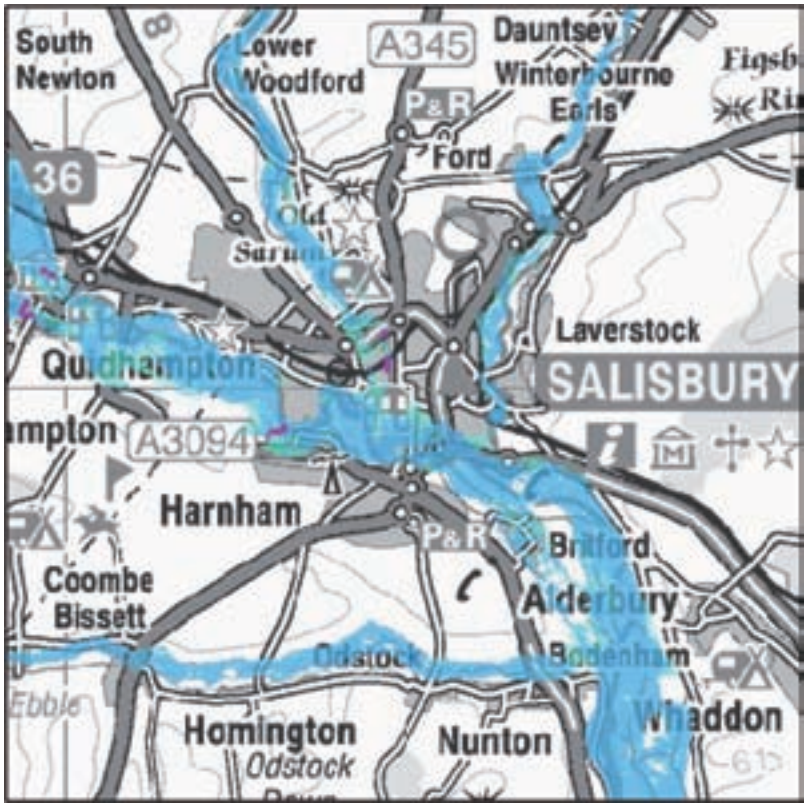
Topic 2: River Landscapes

(Source: Wikipedia)

Photograph C

(Source: NASA)

Photograph D



(Source: © Crown Copyright – 'Reproduced under the terms of the click-use licence C2006010031.')

Figure 2b

Topic 3: Glaciated Landscapes

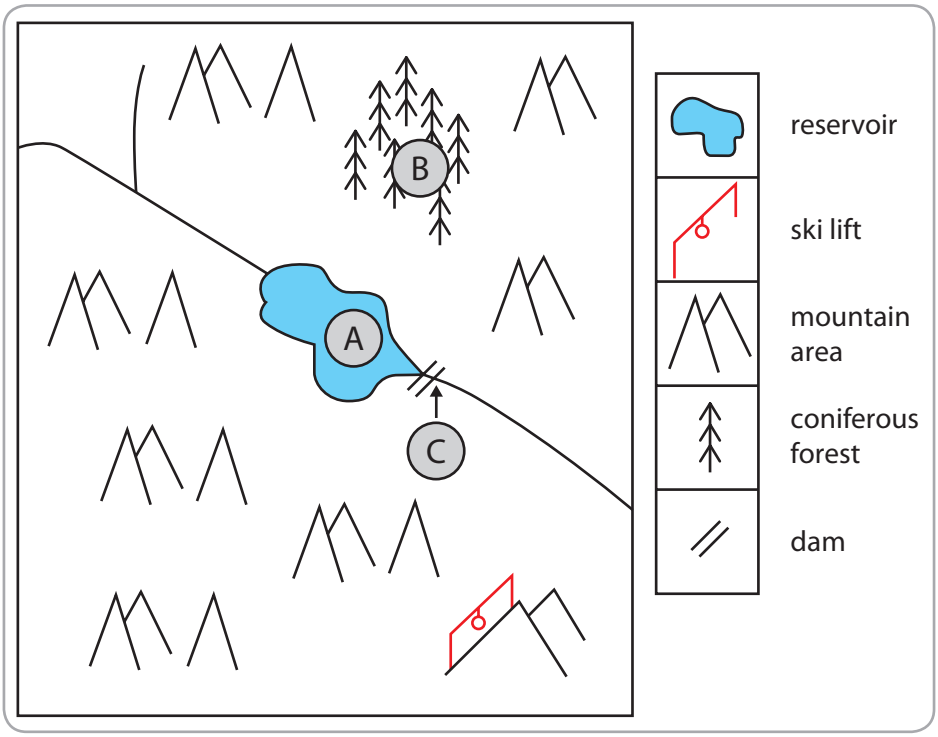


Figure 3b

(Source: Wikipedia)

Photograph E

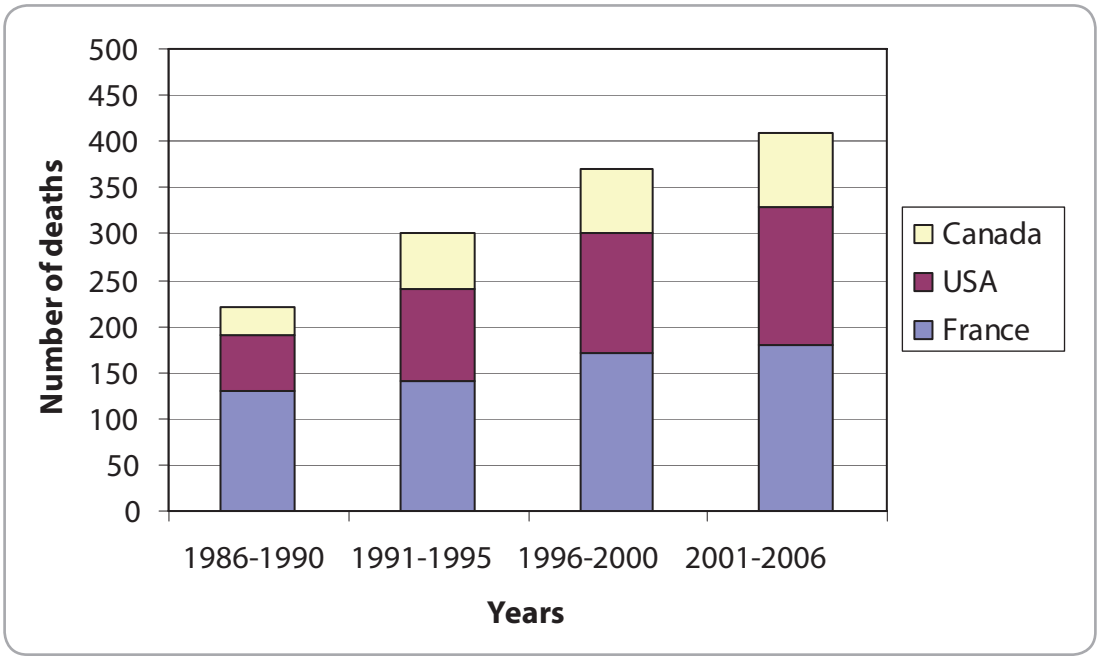

500
450
400
350
300
250
200
150
100
50
0
Number of deaths
1986-1990
1991-1995
1996-2000
2001-2006
Years
Canada
USA
France

Figure 3c

Topic 4: Tectonic Landscapes

(Source: University of Idaho)

Figure 4b

(Source: courtesy of the U.S. Geological Survey)

Photograph F

(Source: LMD Disaster Survival Kits)

Photograph G

SECTION B – ENVIRONMENTAL ISSUES

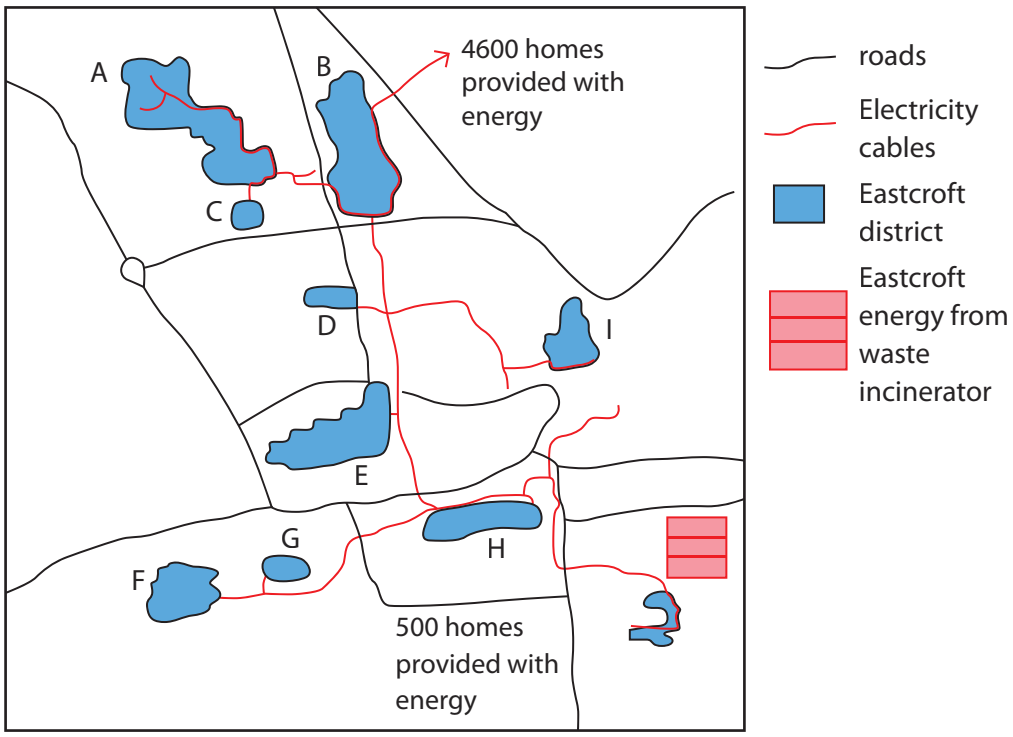
Topic 5: A Wasteful World

(Source: M Harcourt)

Photograph H

(Source: S Warren)

Photograph I



Key

A – Nottingham Trent University

B – Victoria shopping centre

C – Theatre Royal

D – Old Market Square shops

E – Broadmarsh shopping centre

F – Inland Revenue

G – Magistrates' court

H – Capital One offices

I – Ice stadium

The incinerator produces electricity from waste. It burns 100 000 tonnes of domestic waste a year with plans to expand to 250 000 tonnes. During the process gases are released into the air, but it does mean that less waste is going into landfill sites. Nottingham is one the worst performing local authorities in terms of recycling and locals claim that Eastcroft frequently breaks the rules over emissions of toxic gases.

Figure 5b

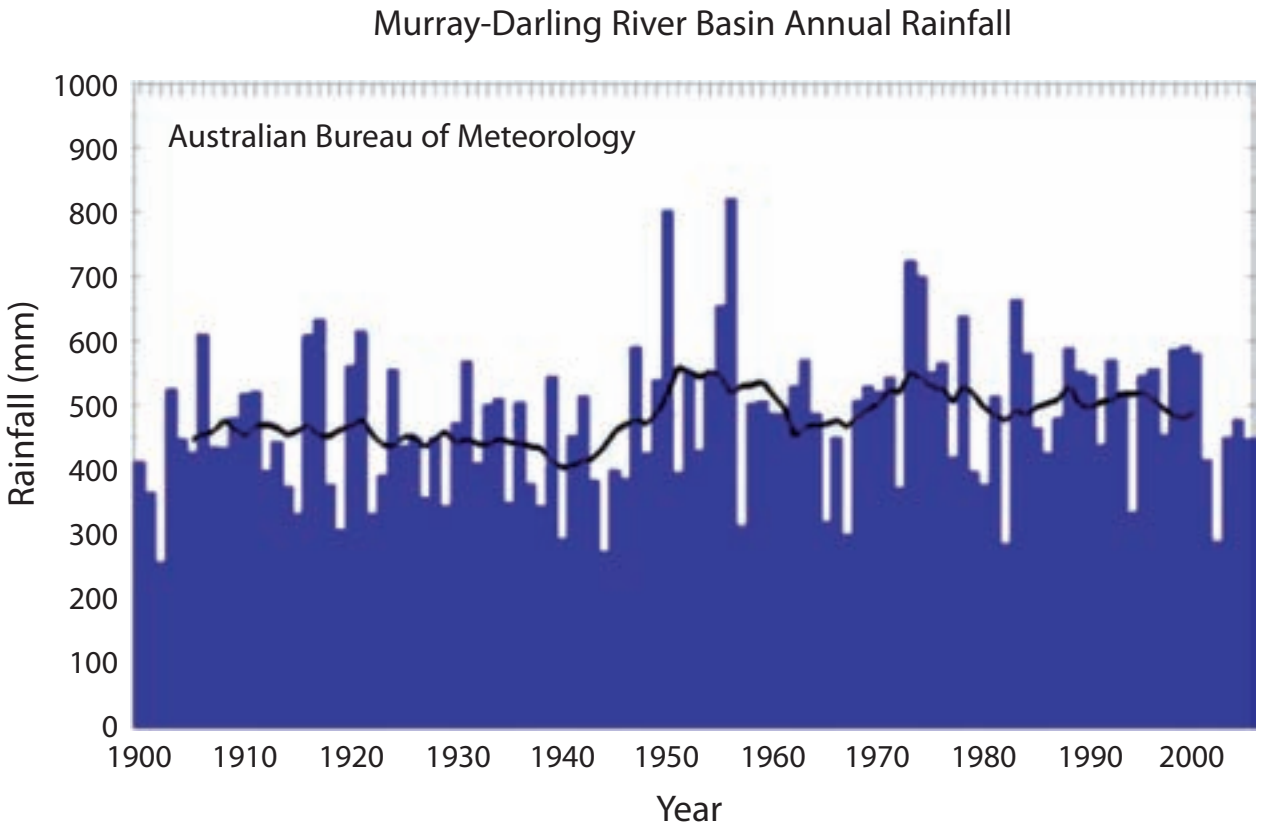
Topic 6: A Watery World

(Source: Wikipedia)

Photograph J

(Source: Wikipedia)

Photograph K



(Source: www.onlineopinion.com.au)

Figure 6b

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Mark Scheme

Sample Assessment Material

GCSE Geography A (5GA2F)
Unit 2: The Natural Environment

Edexcel and BTEC Qualifications
Edexcel and BTEC qualifications come from Pearson, the world's leading learning company. We provide a wide range of qualifications including academic, vocational, occupational and specific programmes for employers. For further information, please call our GCE line on 0844 576 0025, our GCSE team on 0844 576 0027, or visit our qualifications website at www.edexcel.com. For information about our BTEC qualifications, please call 0844 576 0026, or visit our website at www.btec.co.uk.

If you have any subject specific questions about this specification that require the help of a subject specialist, you may find our Ask The Expert email service helpful.

Ask The Expert can be accessed online at the following link:

http://www.edexcel.com/Aboutus/contact-us/

Alternatively, you can speak directly to the subject team at Pearson about Edexcel qualifications. Their contact details can be found on this link:

www.edexcel.com/teachingservices

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General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

Placing a mark within a level mark band

- The instructions below tell you how to reward responses within a level. Follow these unless there is an instruction given within a level. However, where a level has specific guidance about how to place an answer within a level**, always** follow that guidance.

- **2 mark bands**
  Start with the presumption that the mark will be the higher of the two.
  An answer which is poorly supported gets the lower mark.

- **3 mark bands**
  Start with a presumption that the mark will be the middle of the three.
  An answer which is poorly supported gets the lower mark.
  An answer which is well supported gets the higher mark.

- **4 mark bands**
  Start with a presumption that the mark will be the upper middle mark of the four.
  An answer which is poorly supported gets a lower mark.
  An answer which is well supported and shows depth or breadth of coverage gets the higher mark.

- Mark schemes will indicate within the table where, and which strands of QWC, are being assessed. The strands are as follows:

  i) ensure that text is legible and that spelling, punctuation and grammar are accurate so that meaning is clear

  ii) select and use a form and style of writing appropriate to purpose and to complex subject matter

  iii) organise information clearly and coherently, using specialist vocabulary when appropriate.

Spelling, Punctuation and Grammar Marking Guidance

- The spelling, punctuation and grammar assessment criteria are common to GCSE English Literature, GCSE History, GCSE Geography and GCSE Religious Studies.

- All candidates, whichever subject they are being assessed on, must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.

- Spelling, punctuation and grammar marking criteria should be applied positively. Candidates must be rewarded for what they have demonstrated rather than penalised for errors.

- Examiners should mark according to the marking criteria. All marks on the marking criteria should be used appropriately.

- All the marks on the marking criteria are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the marking criteria.

- Examiners should be prepared to award zero marks if the candidate's response is not worthy of credit according to the marking criteria.

- When examiners are in doubt regarding the application of the marking criteria to a candidate's response, the team leader must be consulted.

- Crossed out work should be marked unless the candidate has replaced it with an alternative response.

- Handwriting may make it difficult to see if spelling, punctuation and grammar are correct. Examiners must make every effort to assess spelling, punctuation and grammar fairly and if they genuinely cannot make an assessment, the team leader must be consulted.

- Specialist terms do not always require the use of complex terminology but the vocabulary used should appropriate to the subject and the question.

- Work by candidates with an amanuensis, scribe or typed script should be assessed for spelling, punctuation and grammar.

- Examiners are advised to consider the marking criteria in the following way:
  - How well does the response communicate the meaning?
  - What range of specialist terms is used?
  - How accurate is the spelling, punctuation and grammar?

Sample Mark Scheme

Unit 2F: The Natural Environment

Question Number	Answer	Mark
1(a)(i)	Clockwise from the top right-hand corner Stack Wave-cut notch Cave Wave-cut platform (4 x 1)	**4**

Question Number	Answer	Mark
1(a)(ii)	Headland Abrasion/hydraulic action Hydraulic action/abrasion Weathering Gravity (5 x 1)	**5**

Question Number	Answer	Mark
1(b)(i)	Rock is softer at B/harder at A (or less/more jointed) (1). Distance/wave energy greater (1). (2 x 1)	**2**

Question Number	Answer	Mark
1(b)(ii)	Most likely frost weathering, any legitimate process (1). What it does (1), eg water gets into cracks, freezes, expands. How it makes the cliffs retreat (1), eg rocks fall by gravity. (3 x 1)	**3**

Question Number	Answer	Mark
1(b)(iii)	Loss of jobs (1) so loss of income (1). Personal risk (1) limiting use of beach (1). Loss of property/land (1) leading to loss of income/wealth (1). Insurance issues (1) because costs might rise or insurance become impossible to get (1). Loss of businesses (1) because of beach being inaccessible (1). lost income to town from revenue collected from commercial rates (1) so services get worse (1). 1 mark for legitimate effect named and 1 mark for further description, eg loss of income (1) because the beach is closed (1). (2 x 2)	**4**

Question Number	Answer	Mark
1(c)(i)	Could be seawall/gabions/revetments/rip-rap allow any legitimate (1). What they are, eg sea wall at back of beach/below cliffs (1). What they do, eg absorb/reflect wave energy (1). (3 x 1)	**3**

Question Number	Answer	Mark
1(c)(ii)	LSD: Swash comes up beach at angle (1), particles moved up at that angle(1), backwash takes particles down beach at right angles (1) thus particles move along beach (1). Maximum 2 marks. Groynes are built at right angles (1) to trap moving sediment (1). Added detail from case study eg where placed/cost etc (1). Maximum 2 marks. Diagram alone will do if labelled. (2 + 2)	**4**

Question Number	Answer	Mark
2(a)(i)	Clockwise from the top right-hand corner Floodplain River cliff Meander Spur (4 x 1)	**4**

Question Number	Answer	Mark
2(a)(ii)	Weaker Abrasion Undercutting Plunge Upstream (5 x 1)	**5**

Question Number	Answer	Mark
2(b)(i)	Immediate effects: loss of property/possessions (1) inability to get to work/school (1) disruption to services eg water etc (1) flooding of houses/damage (1). (2 x 1)	**2**

Question Number	Answer	Mark
2(b)(ii)	Long term: structural damage to property (1) costs of cleaning up (1) higher taxes to pay for damage/defences (1) insurance costs (1) lost jobs because of damage (1). (2 x 1)	**2**

Question Number	Answer	Mark
2(b)(iii)	Most likely to be urbanisation (1), but allow any legitimate example such as river management (1), deforestation (1), overgrazing. 1 mark for named cause. Descriptive comment, eg tarmac (1), buildings (1). Effect, eg so more runoff to rivers (1) so higher discharge (1). Maximum 2 marks for description and effect. (1 + 2)	**3**

Question Number	Answer	Mark
2(c)(i)	Raised banks (1), along rivers (1), increases channel capacity (1). (2 x 1)	**2**

Question Number	Answer	Mark
2(c)(ii)	Named technique: Might be channelisation, dams, spillways/floodways, meander breaching, wing dykes, allow any legitimate example (1). Description: What they look like/how they are built (1), what they do (1). (1 + 2)	**3**

Question Number	Answer	Mark
2(d)	Suitable responses include: Planning laws that restrict development on the floodplain(1), flood defence systems that divert water or hold it back (1), warning systems that allow evacuation or protection of property (1), emergency procedures that provide help to people (1). Use of local case-study data/detail to illustrate any point (1).	**4**

Question Number	Answer	Mark
3(a)(i)	Clockwise from top right-hand corner Arete Cirque glacier Tributary glacier Truncated spur (4 x 1)	**4**

Question Number	Answer	Mark
3(a)(ii)	Plucking Gravity Abrasion Interlocking U-shaped valley (5 x 1)	**5**

Question Number	Answer	Mark
3(a)(iii)	Moraines tend to linear/lines (1), ridges at valley sides or in the middle or across valley (1), terminal (1), made up of unsorted (1), unstratified (1), angular (1), glacial debris (1). (2 x 1)	**2**

Question Number	Answer	Mark
3(b)(i)	A = Reservoir for water (1), water supply (1), leisure activities (1). B = Forests for wood supply (1), leisure activity (1), avalanche protection (1). C = Dams creating lake (1), generate electricity (1), controlling river discharge (1). 2 marks for each way. (3 x 2)	**6**

Question Number	Answer	Mark
3(b)(ii)	Planting trees (1) breaks/diverts snow (1). Maximum 2 marks. Barriers built along contours in open ground (1) breaks/diverts/traps snow (1). Maximum 2 marks. (2 + 2)	**4**

Question Number	Answer	Mark
3(c)	Suitable responses include: More skiers (1) creates more noise/disruption (1), more snow (1) making slopes unstable (1), climate change (1) making warm winds more frequent (1), ineffective defences (1) related to cost issues (1), more off-piste skiing (1) provoking avalanches (1). Any relevant data from case study or resource to support any point (1).	**4**

Question Number	Answer	Mark
4(a)(i)	Clockwise from top right-hand corner Volcanic Island Fold mountains Subduction zone Ocean trench (4 x 1)	**4**

Question Number	Answer	Mark
4(a)(ii)	Crust Plate Pressure Richter 30 seconds (5 x 1)	**5**

Question Number	Answer	Mark
4(a)(iii)	Constructive (1) Plates moving apart (1), often in mid-ocean (1). 1 mark for name and 1 mark for any legitimate descriptive comment. Conservative (1) Plates moving laterally/alongside one another (1), associated with earthquakes (1). 1 mark for name and 1 mark for any legitimate extension. (2 + 2)	**4**

Question Number	Answer	Mark
4(b)(i)	Vesuvius, Stromboli, Etna, Laki, Surtsey (2 x 1)	**2**

Question Number	Answer	Mark
4(b)(ii)	Uneven (1), occur at plate boundaries (1), linear (1), close to continental margins (1), destructive margins (1), some in mid-ocean (1). (2 x 1)	**2**

Question Number	Answer	Mark
4(c)	Short-term effects: Loss of life (1), injury to individuals (1), loss of property (1), loss of crops (1), no services/water (1). Maximum 2 marks. Long-term effects: Rebuilding costs (1), infrastructure repair costs (1), loss of harvest (1), insurance costs (1), loss of potential for growth/development (1). Maximum 2 marks. (2 + 2)	**4**

Question Number	Answer	Mark
4(d)	Commonly include material to help you survive the first few days, such as rations (1), because food not available (1), water (1) because water supply disrupted (1), sleeping bag (1) because houses damaged/no power for heating, flares (1) to attract rescuers (1), radio (1) to find out likelihood of rescue/other threats. 1 mark for a named item found in the disaster survival kit. 1 mark for a further explanation of why the item is in the kit. (2 x 2)	**4**

Question Number	Answer	Mark
5(a)	Coal Non-renewable Carbon dioxide Climate change Renewable (5 x 1)	**5**

Question Number	Answer	Mark
5(b)(i)	B wave power	**1**

Question Number	Answer	Mark
5(b)(ii)	C not every day is windy so other systems are needed too	**1**

Question Number	Answer	Mark
5(b)(iii)	B Methane	**1**

Question Number	Answer	Mark
5(b)(iv)	A increases rapidly because more goods are bought	**1**

Question Number	Answer	Mark
5(b)(v)	B a measure of the impact human activities have on the environment	**1**

Question Number	Answer	Mark
5(c)(i)	On graph Correctly drawn graph. One mark for each correctly drawn column. (2 x 1)	**2**

Question Number	Answer	Mark
5(c)(ii)	HIC (1) Reasons: Too much waste overall, ie HICs are more wasteful (1), especially kitchen waste (1), white goods not common in poorer LICs (1). Any data to support above (1). 1 mark for choice, 2 marks for reasons. (1 + 2)	**3**

Question Number	Answer	Mark
5(d)	Advantages: Saves on landfill costs (1), cheap fuel provided because low cost of provision (1), saves using other fuels which helps conserve scarce resources (1), cheap electricity provided (1). Disadvantages: Polluting for locals because of fumes from burning (1), lots of road traffic to incinerator which also adds to air pollution as well as congestion (1), smelly and unpleasant for local environment(1). Maximum 3 marks for advantages or disadvantages. Must have both sides for 4 marks.	**4**

Question Number	Indicative content	
5(e) **QWC** **i-ii-iii**	Depends on case study but might include: landfill incineration recycling dumping offshore exporting illegal fly tipping. Expect case study evidence to offer some data and locations.	
Level	Mark	Descriptor
Level 0	0	No acceptable response.
Level 1	1-2	Very limited description, one or two methods only stated. Country identified but no local detail/data. Basic use of geographical terminology.
Level 2	3-4	Two or more methods described. Some limited local data/detail to support. Clearly communicated, but with limited use of geographical terminology.
Level 3	5-6	A range of methods described. Excellent detail/data to aid description. Well communicated with good use of geographical terminology.
SPaG Level 0	0	Errors severely hinder the meaning of the response or candidates do not spell, punctuate or use the rules of grammar within the context of the demands of the question.
SPaG Level 1	1	*Threshold performance* Candidates spell, punctuate and use the rules of grammar with reasonable accuracy in the context of the demands of the question. Any errors do not hinder meaning in the response. Where required, they use a limited range of specialist terms appropriately.
SPaG Level 2	2	*Intermediate performance* Candidates spell, punctuate and use the rules of grammar with considerable accuracy and general control of meaning in the context of the demands of the question. Where required, they use a good range of specialist terms with facility.
SPaG Level 3	3	*High performance* Candidates spell, punctuate and use the rules of grammar with consistent accuracy and effective control of meaning in the context of the demands of the question. Where required, they use a wide range of specialist terms adeptly and with precision.

Question Number	Answer	Mark
6(a)	Domestic Clothes Agricultural Populations Supply (5 x 1)	**5**

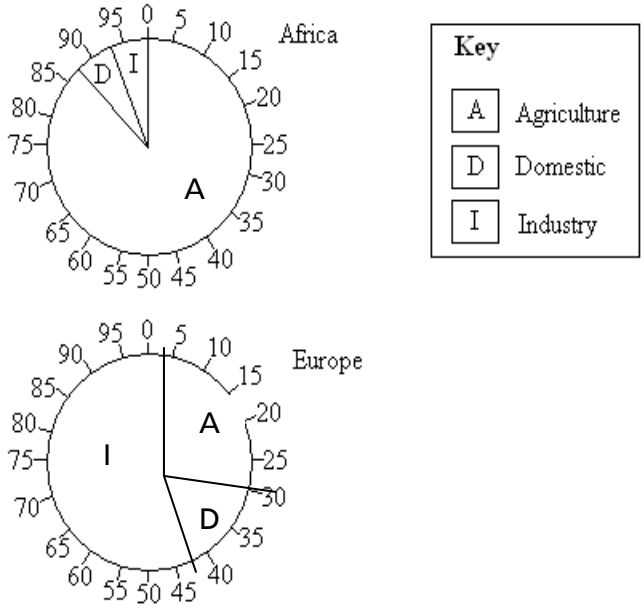
Question Number	Answer	Mark
6(b)(i)	C loss through broken pipes	**1**

Question Number	Answer	Mark
6(b)(ii)	D clean piped water is not always available	**1**

Question Number	Answer	Mark
6(b)(iii)	C the aquifer	**1**

Question Number	Answer	Mark
6(b)(iv)	B share a common water source, such as a river	**1**

Question Number	Answer	Mark
6(b)(v)	C North America	**1**

Question Number	Answer	Mark
6(c)(i)	On paper  2 marks for 2 sections correctly drawn as above. Note that if 2 are correctly drawn then so is the third.	**2**

Question Number	Answer	Mark
6(c)(ii)	Agriculture much more significant in Africa than Europe (1), domestic small(est) in both (1), industry more significant in Europe (1). Data to support any one point (1). (3 x 1)	**3**

Question Number	Answer	Mark
6(d)	Unreliable (1) Justification: Average = varies around 400-500mm (1) Max as high as 800mm (1) Min as low as 250mm (1) Thus range of 550 (1) Variation is not a trend its unpredictable (1) 3 marks for any 3 of above justification points. (1 + 3)	**4**

Question Number	Indicative content	
6(e) **QWC** **i–ii–ii**	Water management schemes such as: might be dam/river control/ international council for settling disputes any scale from local to national/international benefits may fall unevenly – some winners/losers impacts might be positive or negative possible impacts include better/worse access to fresh water, power supply, better/worse flood control, better transport/impeded transport.	
Level	Mark	Descriptor
Level 0	0	No acceptable response.
Level 1	1-2	Very little description. One or two impacts stated eg flood control. Locational evidence limited to named country/countries. Basic use of geographical terminology.
Level 2	3-4	Some sound description. Two or more impacts stated, at least one with some detail. Some localised locational detail or data. Sound use of geographical terminology.
Level 3	5-6	Good description of range of impacts. Full locational detail/data to support the description. Well communicated with good use of geographical terminology.
SPaG Level 0	0	Errors severely hinder the meaning of the response or candidates do not spell, punctuate or use the rules of grammar within the context of the demands of the question.
SPaG Level 1	1	*Threshold performance* Candidates spell, punctuate and use the rules of grammar with reasonable accuracy in the context of the demands of the question. Any errors do not hinder meaning in the response. Where required, they use a limited range of specialist terms appropriately.
SPaG Level 2	2	*Intermediate performance* Candidates spell, punctuate and use the rules of grammar with considerable accuracy and general control of meaning in the context of the demands of the question. Where required, they use a good range of specialist terms with facility.

SPaG Level 3	3	*High performance* Candidates spell, punctuate and use the rules of grammar with consistent accuracy and effective control of meaning in the context of the demands of the question. Where required, they use a wide range of specialist terms adeptly and with precision.

Write your name here

Surname	Other names

Centre Number | Candidate Number

Edexcel GCSE

Geography A

Unit 2: The Natural Environment

Higher Tier

Sample Assessment Material
Time: 1 hour

Paper Reference
5GA2H/01

You must have:
Resource Booklet (enclosed)

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- In Section **A** answer only **one** question from questions 1, 2, 3 **or** 4.
- In Section **B** answer **either** question 5 **or** 6.
- Answer the questions in the spaces provided
  – *there may be more space than you need.*

Information

- The total mark for this paper is 53.
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*
- Questions labelled with an **asterisk** (*) are ones where the quality of written communication will be assessed.
- The marks available for spelling, punctuation and grammar are clearly indicated.

Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Check your answers if you have time at the end.

Turn over ▶

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2/2/2

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SECTION A – THE PHYSICAL WORLD

Answer only ONE question from Section A.

Indicate which question you are answering by marking a cross in the box ☒. If you change your mind, put a line through the box ☒ and then indicate your new question with a cross ☒.

Topic 1: Coastal landscapes

If you answer Question 1 put a cross in this box ☐ .

1 (a) Study Photograph A in the Resource Booklet.

Also study Figure 1a below which is a field sketch of the photograph.

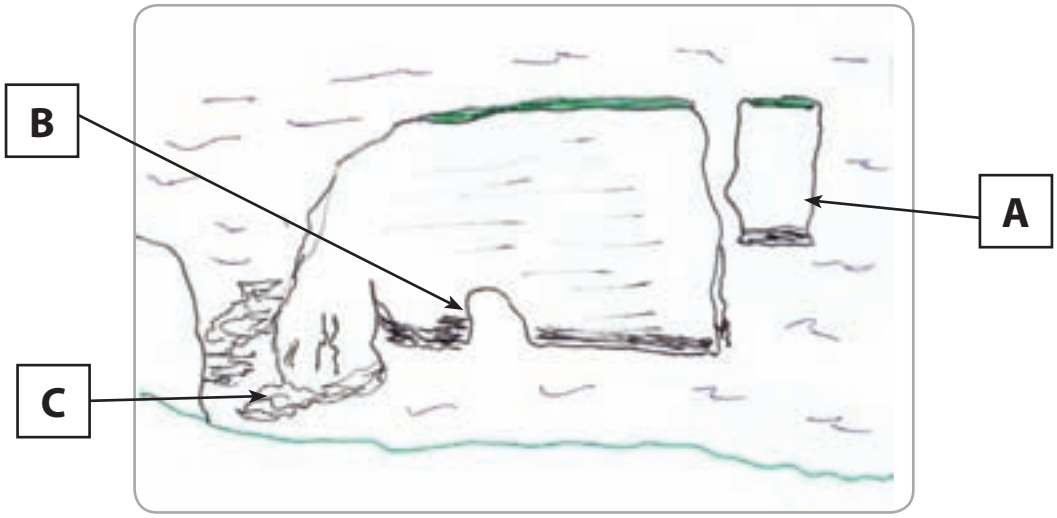

Figure 1a

(i) Describe landforms **A** and **B** shown on Figure 1a and Photograph A.

(4)

A .....

.....

.....

B .....

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(ii) Landform **C** shown on Figure 1a is a wave-cut platform.

Explain how it was formed.

You may use a diagram to help your answer.

(4)

(b) Study Figure 1b in the Resource Booklet.

(i) Explain how rock type and the fetch of waves influence the rate of erosion of cliffs.

(4)

Rock type .....

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Fetch .....

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(ii) Describe how mass movement causes cliffs to retreat.

(3)

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(iii) Explain how cliff erosion can affect the **economy** of the local area.

(4)

*(c) Study Photograph B in the Resource Booklet. It shows groynes on a beach, which are a method of hard engineering.

For a coastal area that you have studied explain the varied methods used to manage the coastline.

(6)

Named Coastal Area .....

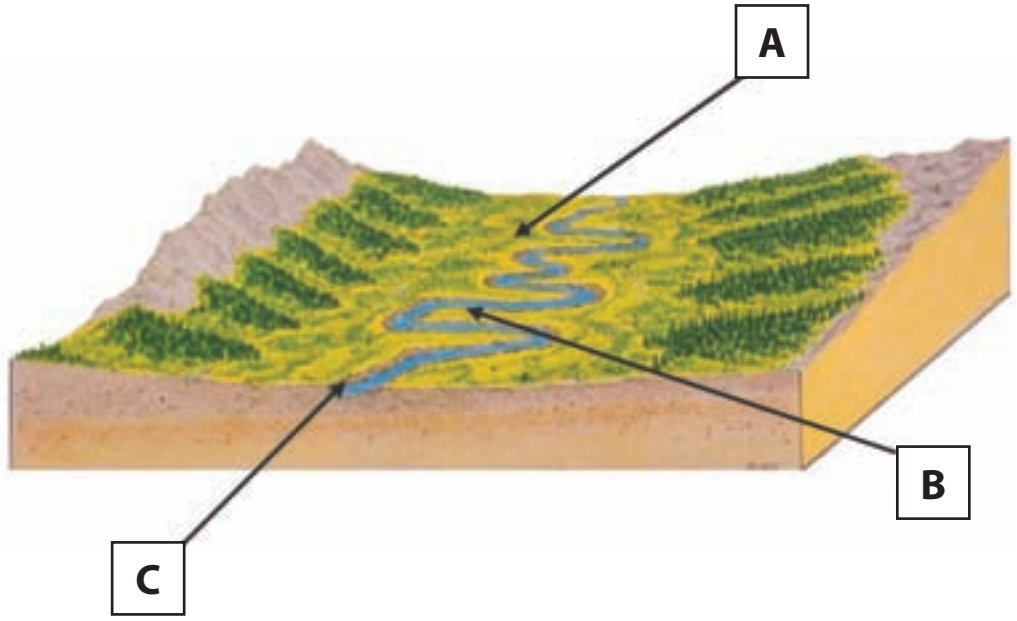
Explanation .....

(Total for Question 1 = 25 marks)

Topic 2: River Landscapes

If you answer Question 2 put a cross in this box ☒ .

2 (a) Study Figure 2a below. It shows a section of a river valley.



(Source: Rosgen, www.fgmorph.com)

Figure 2a

(i) Describe the landforms **A** and **B** shown on Figure 2a.

(4)

A .....

.....

.....

.....

B .....

.....

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(ii) Landform **C** shown on Figure 2a is a river-cliff.

Explain how it was formed.

You may use a diagram to help your answer.

(4)

(b) Study Photograph C in the Resource Booklet. It shows an area in Alicante, Spain that has been flooded.

(i) Describe the effects of floods such as this on the economy of the area.

(4)

(ii) Explain how human actions may have increased the risk of flooding in areas such as this.

(3)

(c) Study Photograph D in the Resource Booklet. It is an aerial photograph of the confluence of the Ohio River and the Mississippi River.

Levees are constructed to protect areas from flooding.

Suggest why levees sometimes fail to prevent flooding. You may draw a diagram to help your answer.

(4)

*(d) Study Figure 2b in the Resource Booklet. It is a flood risk map for Salisbury in Wiltshire.

For a river that you have studied explain why some areas are more at risk of flooding than others.

(6)

Named River .....

Explanation .....

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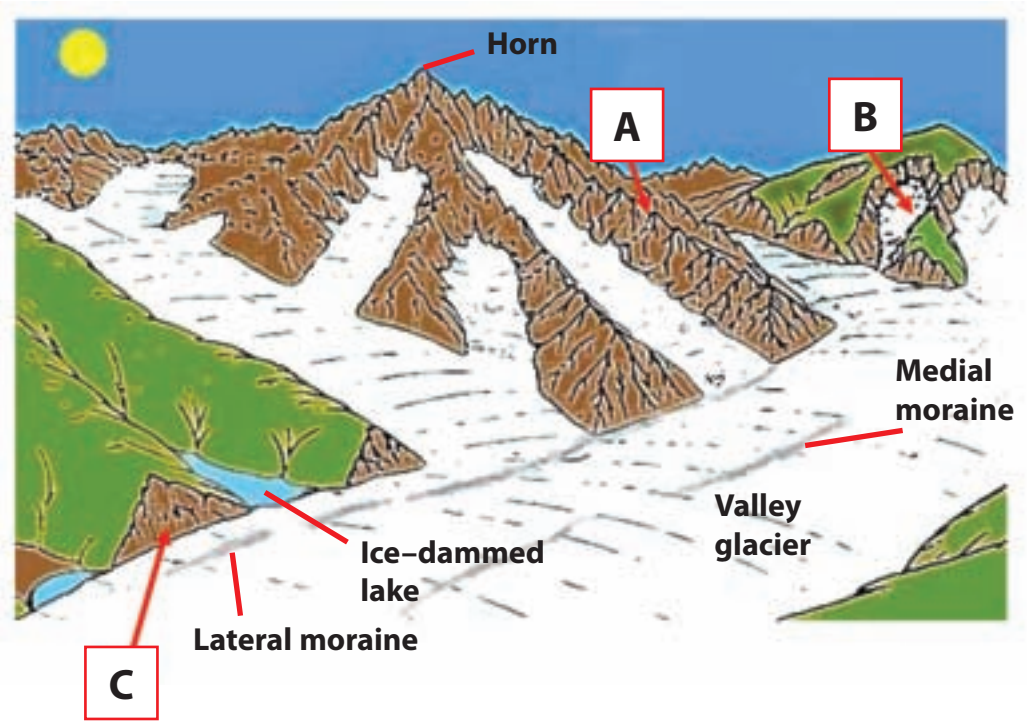
(Total for Question 2 = 25 marks)

Topic 3: Glaciated Landscapes

If you answer Question 3 put a cross in this box ☒ .

3 (a) Study Figure 3a below. It shows a glaciated upland landscape.



(Source: www.physicalgeography.net)

Figure 3a

(i) Describe the landforms **A** and **B** shown on Figure 3a.

(4)

A .....

.....

.....

.....

B .....

.....

.....

.....

(ii) Landform **C** shown on Figure 3a is a truncated spur.

Explain how it was formed.

You may use a diagram to help your answer.

(4)

(iii) Figure 3a shows lateral and medial moraines.
Explain how they are formed.

(4)

(iv) Explain the formation of a ribbon lake.

(3)

(b) Figure 3b in the Resource Booklet shows several ways in which glaciated landscapes can be used by people.

There is often conflict between these uses.

Explain **two** possible conflicts arising from the uses shown on Figure 3b.

(4)

1 .....

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2 .....

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*(c) Study Photograph E and Figure 3c in the Resource Booklet.

For an area you have studied explain the causes and effects of avalanches.

(6)

(Total for Question 3 = 25 marks)

Topic 4: Tectonic Landscape

If you answer Question 4 put a cross in this box ☒ .

4 (a) Study Figure 4a below. It shows a plate boundary.

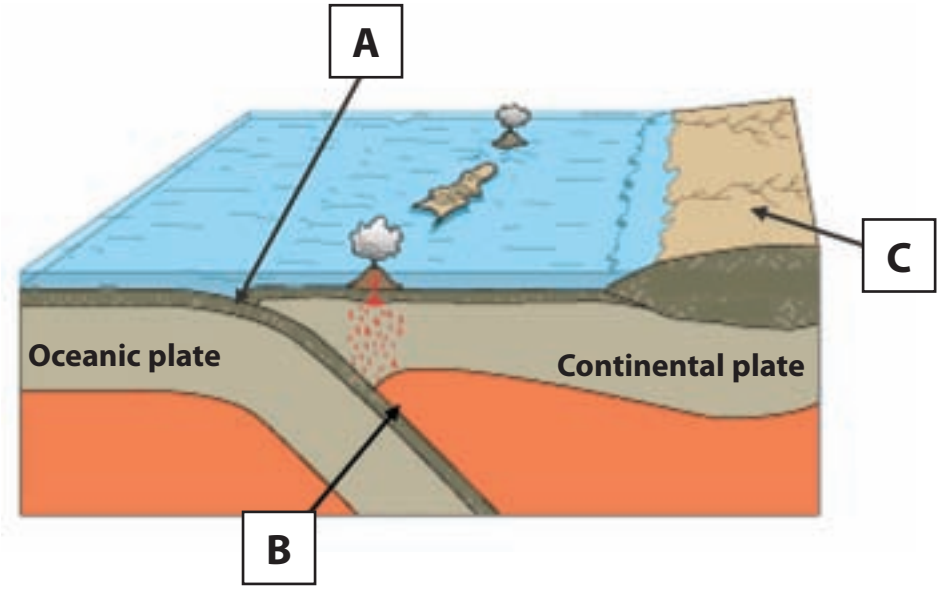

Figure 4a

(i) Describe the landforms **A** and **B** shown on Figure 4a.

(4)

A .....

.....

.....

.....

B .....

.....

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.....

(ii) Landform **C** shown on Figure 4a is an area of fold mountains.

Explain how they are formed.

You may use a diagram to help your answer.

(4)

(b) The plate boundary illustrated in Figure 4a is a destructive one.
Some plate boundaries are known as constructive.

(i) Explain the processes that take place at constructive plate boundaries.

(4)

(ii) Study Figure 4b in the Resource Booklet. It is a map showing the global distribution of volcanoes.

Explain why the distribution of volcanoes is very uneven.

(3)

(c) Study Photograph F in the Resource Booklet. It shows an area that has been affected by a volcanic eruption in an low-income country (LIC).

Explain the effects of volcanic eruptions such as this on the economy of a low-income country.

(4)

*(d) Study Photograph G in the Resource Booklet. It shows a disaster survival kit.

Explain the methods used both **before and after** a natural disaster to limit its effects.

(6)

(Total for Question 4 = 25 marks)

TOTAL FOR SECTION A = 25 MARKS

SECTION B – ENVIRONMENTAL ISSUES

Answer EITHER Question 5 OR Question 6.

Topic 5: A Wasteful World

If you answer Question 5 put a cross in this box ☒ .

Spelling, punctuation and grammar will be assessed in *(d).

5 (a) Study Photographs H and I in the Resource Booklet.

(i) Photograph H shows a power station using a 'fossil fuel'.

Give **two** examples of fossil fuels used in power stations.

(2)

1 .....

2 .....

(ii) Define the term **renewable energy**.

(2)

.....

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.....

(iii) Suggest **three** reasons why wind farms, such as that shown in Photograph I, are unpopular with some people.

(3)

1 .....

.....

2 .....

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3 .....

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(b) Study Figure 5a below. It shows the percentage of each material that is recycled for selected European countries.

Country	Percentage recovered by recycling					
	Glass	Plastics	Paper and board	Metals	Wood	**Total**
Denmark	95	97	99	40	44	**89**
Finland	61	42	72	50	84	**68**
France	57	50	92	58	33	**64**
Germany	92	77	93	83	77	**88**
Italy	53	47	66	55	60	**58**
Netherlands	81	92	100	82	11	**82**
Spain	38	34	62	47	41	**48**
Sweden	92	74	88	70	100	**89**
UK	37	33	74	41	54	**53**

Figure 5a

(i) Compare the UK with other European countries in terms of recycling different materials.

(4)

(ii) Suggest reasons why some countries are more successful than others in recycling waste.

(4)

(c) Study Figure 5b in the Resource Booklet. It shows the Eastcroft District Heating Scheme in Nottingham.

Using Figure 5b, and your own knowledge, examine the costs and benefits of expanding the incinerator facility.

(4)

*(d) Carbon footprints vary between countries.

With the use of examples explain how the level of development of a country affects its carbon footprint.

(6)

Spelling, punctuation and grammar.

(3)

(Total for Question 5 = 28 marks)

Topic 6: A Watery World

If you answer Question 6 put a cross in this box ☒ .

Spelling, punctuation and grammar will be assessed in *(d).

6 (a) Study Photographs J and K in the Resource Booklet that show different uses of water in a low-income country.

(i) Photograph J shows people washing clothes in a river.
Identify **two** other domestic uses of water.

(2)

1 .....

2 .....

(ii) Photograph K shows an irrigation system in a field. Such systems are unusual in LICs.

Give **two** reasons why such systems are unusual in LICs.

(2)

1 .....

.....

2 .....

.....

(iii) Describe **two** problems of water **supply** in high-income countries.

(4)

1 .....

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2 .....

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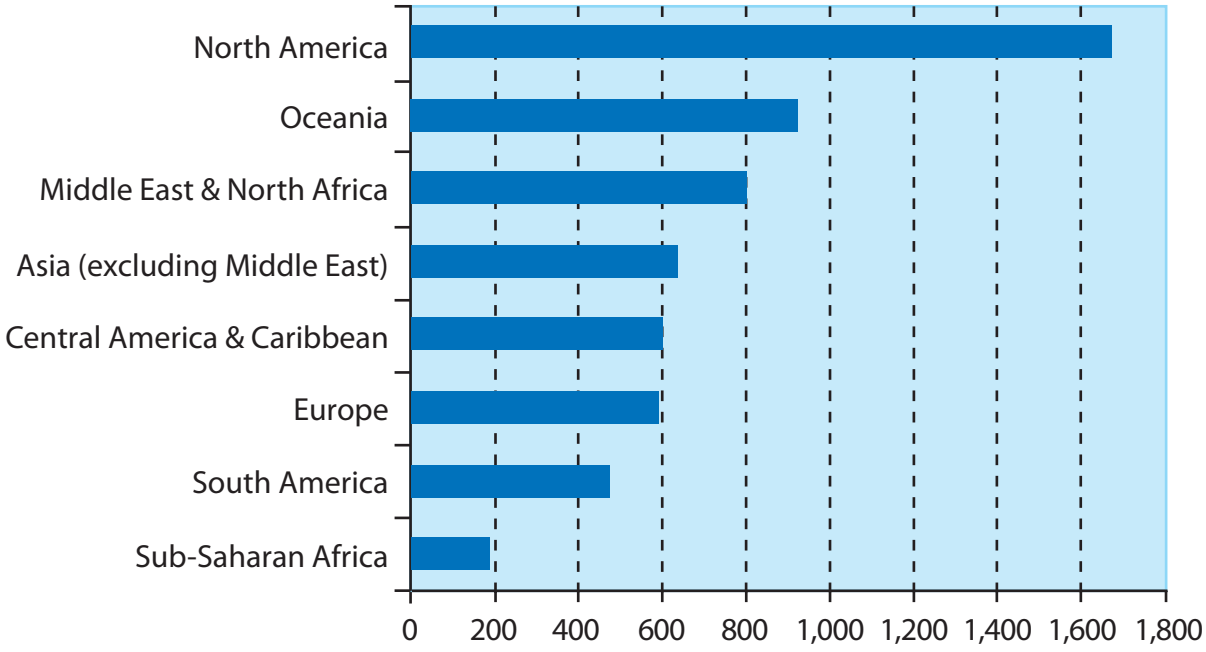
(b) Study Figure 6a below. It shows the amount of water (in cubic metres) used per person per year for selected global regions.



(Source: © 2007 World Resources Institute Content Licensed under a Creative Commons Licence)

Figure 6a

(i) Using Figure 6a, and your knowledge, describe the global pattern of water consumption.

(3)

(ii) Explain why water consumption is so high in HICs, such as those in North America.

(4)

(c) For a water management scheme you have studied explain why the scheme was necessary.

(4)

Chosen scheme .....

Explanation .....

*(d) Study Figure 6b in the Resource Booklet which shows the annual rainfall in the Murray-Darling River Basin (Australia) since 1900.

Comment on the reliability of the data for rainfall in the Murray-Darling River Basin since 1900 and suggest why variations in annual rainfall might cause difficulties for the population.

(6)

Spelling, punctuation and grammar.

(3)

(Total for Question 5 = 28 marks)

TOTAL FOR SECTION B = 28 MARKS
TOTAL FOR PAPER = 53 MARKS

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Mark Scheme

Sample Assessment Material

GCSE Geography A (5GA2H)
Unit 2: The Natural Environment

Edexcel and BTEC Qualifications
Edexcel and BTEC qualifications come from Pearson, the world's leading learning company. We provide a wide range of qualifications including academic, vocational, occupational and specific programmes for employers. For further information, please call our GCE line on 0844 576 0025, our GCSE team on 0844 576 0027, or visit our qualifications website at www.edexcel.com. For information about our BTEC qualifications, please call 0844 576 0026, or visit our website at www.btec.co.uk.

If you have any subject specific questions about this specification that require the help of a subject specialist, you may find our Ask The Expert email service helpful.

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General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

Placing a mark within a level mark band

- The instructions below tell you how to reward responses within a level. Follow these unless there is an instruction given within a level. However, where a level has specific guidance about how to place an answer within a level**, always** follow that guidance.

- **2 mark bands**
  Start with the presumption that the mark will be the higher of the two.
  An answer which is poorly supported gets the lower mark.

- **3 mark bands**
  Start with a presumption that the mark will be the middle of the three.
  An answer which is poorly supported gets the lower mark.
  An answer which is well supported gets the higher mark.

- **4 mark bands**
  Start with a presumption that the mark will be the upper middle mark of the four.
  An answer which is poorly supported gets a lower mark.
  An answer which is well supported and shows depth or breadth of coverage gets the higher mark.

- Mark schemes will indicate within the table where, and which strands of QWC, are being assessed. The strands are as follows:

  i) ensure that text is legible and that spelling, punctuation and grammar are accurate so that meaning is clear

  ii) select and use a form and style of writing appropriate to purpose and to complex subject matter

  iii) organise information clearly and coherently, using specialist vocabulary when appropriate.

Spelling, Punctuation and Grammar Marking Guidance

- The spelling, punctuation and grammar assessment criteria are common to GCSE English Literature, GCSE History, GCSE Geography and GCSE Religious Studies.

- All candidates, whichever subject they are being assessed on, must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.

- Spelling, punctuation and grammar marking criteria should be applied positively. Candidates must be rewarded for what they have demonstrated rather than penalised for errors.

- Examiners should mark according to the marking criteria. All marks on the marking criteria should be used appropriately.

- All the marks on the marking criteria are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the marking criteria.

- Examiners should be prepared to award zero marks if the candidate's response is not worthy of credit according to the marking criteria.

- When examiners are in doubt regarding the application of the marking criteria to a candidate's response, the team leader must be consulted.

- Crossed out work should be marked unless the candidate has replaced it with an alternative response.

- Handwriting may make it difficult to see if spelling, punctuation and grammar are correct. Examiners must make every effort to assess spelling, punctuation and grammar fairly and if they genuinely cannot make an assessment, the team leader must be consulted.

- Specialist terms do not always require the use of complex terminology but the vocabulary used should appropriate to the subject and the question.

- Work by candidates with an amanuensis, scribe or typed script should be assessed for spelling, punctuation and grammar.

- Examiners are advised to consider the marking criteria in the following way:
  - How well does the response communicate the meaning?
  - What range of specialist terms is used?
  - How accurate is the spelling, punctuation and grammar?

Sample Mark Scheme

Unit 2H: The Natural Environment

Question Number	Answer	Mark
1(a)(i)	A = Stack (1), free-standing 'pillar of rock surrounded by sea on all sides (1). B = Cave or arch (1), enlarged indentation in cliff face or where a cave has eroded through a headland to the other side (1). (2 x 2)	**4**

Question Number	Answer	Mark
1(a)(ii)	Explanation to include **four** points given from: Retreat of cliff (1), through wave erosion (1), with processes such as hydraulic action and abrasion Creating a flat or gently sloping bench (1), often at foot of cliff (1), extending out to sea (1), covered at high tide (1), modified by erosion and/or weathering (1).	**4**

Question Number	Answer	Mark
1(b)(i)	Rock Type: Softer (1), so easier to erode (1), easier to weather (1). Jointed (1), so easier to erode (1), easier to weather (1). Allow either rock type for maximum 2 marks. Fetch: Longer distance waves have more energy (1), more power to erode (1), increasing hydraulic action/abrasion (1). Maximum 2 marks. (2 x 2)	**4**

Question Number	Answer	Mark
1(b)(ii)	Mass movement could be rockfall/slumping/sliding/flow (1). Any one process described, eg 'rocks loosened by weathering (1) and then fall by gravity' (1). Any other process identified (1). Maximum 2 marks. (1 + 2)	**3**

Question Number	Answer	Mark
1(b)(iii)	Explanation to include **four** points given from: Loss of property/land (1), increase insurance issues (1), loss of businesses (1), costs of closing beaches (1), any other legitimate explanation (1). Only allow to 4 marks if links to economy (ie loss of income or wealth) established.	**4**

Question Number	Indicative content	
1(c) **QWC** **i–ii-iii**	Depends on case study but likely to include: other types of hard engineering – sea-walls etc. soft engineering such as beach replenishment managed retreat or do nothing approaches method chosen depends on needs of area/section usually determined by economic value of that area/section.	
Level	Mark	Descriptor
Level 0	0	No acceptable response.
Level 1	1-2	Attempted to explain one problem, but explanation may be with very little detail. Location is named but no more. No concept of variation. Basic use of geographical terminology, spelling, punctuation and grammar.
Level 2	3-4	Some explanation of varied methods. Detail of one of these methods. Local data supporting one method. Variation not well explained. Clearly communicated, but with limited use of geographical terminology, spelling, punctuation and grammar.
Level 3	5-6	There is a good explanation of the chosen methods. Answer has detail of own case study which can be clearly related to the variation of methods used. Well communicated with good use of geographical terminology, spelling, punctuation and grammar.

Question Number	Answer	Mark
2(a)(i)	A = Floodplain (1), relatively flat area (1), in mid/lower course of rivers (1). Maximum 2 marks. B = Meander (1), sequence of bends on river (1), that move over time across/down the floodplain (1). Maximum 2 marks. (2 x 2)	**4**

Question Number	Answer	Mark
2(a)(ii)	Explanation to include **four** points given from: Fastest flowing current close to outside bend (1), therefore more force for erosion (1), through hydraulic action/abrasion (1), creates a steep bank (river cliff) (1), on the outside of a meander bend (1), as it is actively eroded it changes position (1).	**4**

Question Number	Answer	Mark
2(b)(i)	Explanation to include **four** points given from: Damage to property (1), damage to infrastructure (1), impact on people's movements (1), insurance issues (1), factories/shops/offices unable to operate (1), area cut-off from other areas/regions (1). Only allow to 4 marks for link to economy such as loss of earnings/cost of replacement etc.	**4**

Question Number	Answer	Mark
2(b)(ii)	Human actions include: Urbanisation (1), river management (1), agricultural changes (1), global warming issues (1). Maximum 2 marks. Increased risk, so more runoff/rainfall (1). (2 + 1)	**3**

Question Number	Answer	Mark
2(c)	Levees are raised banks alongside rivers (1), can be both natural and artificial (1), some set back from river (see resource) (1), increase channel capacity so reduce flood risk (1). They fail because of: 1. poor construction (1) 2. poor maintenance (1) 3. extreme events (1). Must include at least 1 mark addressing why they fail, to score maximum of 4 marks.	**4**

Question Number	Indicative content	
2(d) **QWC** **i–ii–iii**	River management case-study – risk will be determined by the following factors: position on floodplain so lower lying greater risk building on floodplain so some parts of flood plain on risk is exacerbated flood defence systems in place in some areas and not others so some places better protected flood defences elsewhere in the basin so the protection of some places may make problem worse elsewhere variable prediction so some areas may have longer to take precautions nature of flood event so some areas at risk more frequently than others. Note: Resource acts as stimulus material. Candidates with weak case study knowledge may gather a little information from resource.	
Level	Mark	Descriptor
Level 0	0	No acceptable response.
Level 1	1-2	Attempted to explain one factor, but explanation may not be clear. No locational detail of chosen case study excepting name of place. Basic use of geographical terminology, spelling, punctuation and grammar.
Level 2	3-4	Two factors explained. One linked to risk. Some local locational detail/data. Clearly communicated, but with limited use of geographical terminology, spelling, punctuation and grammar.
Level 3	5-6	Good range of factors explained. At least two linked with risk. Effective use of local data/detail. Well communicated with good use of geographical terminology, spelling, punctuation and grammar.

Question Number	Answer	Mark
3(a)(i)	A = Arête (1), sharp ridge (1), between two receding two cirques (1). B = Cirque glacier/cirque (1), armchair shaped depression (1), overdeepened (1), steep backwall (1). Correct identification 1 mark for each. 1 mark for any relevant descriptive point.	**4**

Question Number	Answer	Mark
3(a)(ii)	Explanation to include **four** points given from: Formation as valley glacier (1,) deepens and widens valley(1), through plucking and abrasion (1), creating cut-off spur with steep slope (1).	**4**

Question Number	Answer	Mark
3(a)(iii)	Explanation to include **four** points given from: Formed as glaciers deposit load (1), by melting (1), or lodgement/plastering (1), position determined by ice shape/movement (1), leading to long ridges of debris (1). Note: Allow explanation of 'till' (angular/stratified etc).	**4**

Question Number	Answer	Mark
3(a)(iv)	Formation of U shaped valley (1), by moving ice (1), ice disappears (1), lake occupies over deepened valley bottom (1). (3 x 1)	**3**

Question Number	Answer	Mark
3(b)	Conflicts arise from tourism against resource exploitation such as: Trees v ski runs (1) trees block the runs and thus will be felled (1). Reservoirs v water sports (1) water sports pollute the lakes (1). Dams v natural landscape (1) river flow is interrupted/ artificial lake created – loss of tourist appeal (1). 1 mark for each legitimate conflict + 1 mark for explanation of why they conflict, times 2. (2 x 2)	**4**

Question Number	Indicative content	
3(c) **QWC** **i–ii–iii**	Causes include: heavy snow/weather human action, eg off-piste skiing different prevention techniques land use changes civil engineering works. Effects include: death and injury disruption to infrastructure destruction of property loss of income to area/region. Note: Resources act as stimulus material. Candidates with weak case study knowledge may gather a little information from resource.	
Level	Mark	Descriptor
Level 0	0	No acceptable response.
Level 1	1-2	Limited explanation on both, one cause/one effect or two of either only. Location named but no detail or data. Basic use of geographical terminology, spelling, punctuation and grammar.
Level 2	3-4	Good detail explained on one (probably effects). Offers one or two located details/data examples from case study. Clearly communicated, but with limited use of geographical terminology, spelling, punctuation and grammar.
Level 3	5-6	Explanation full on both causes and effects. Examples and located evidence is convincing. Well communicated with good use of geographical terminology, spelling, punctuation and grammar.

Question Number	Answer	Mark
4(a)(i)	A = Ocean trench (1), deep (1), narrow (1). B= Subduction zone (1), area of crustal melting (1), lots of earthquakes triggered (1), Benioff zone (1). Correct identification 1 mark for each. 1 mark for any relevant descriptive point. (2 x 2)	**4**

Question Number	Answer	Mark
4(a)(ii)	Explanation to include **four** points given from: Formation when plates collide (1), buckling of continental plate (1), leading to long band (1), of highly crumpled crust (1).	**4**

Question Number	Answer	Mark
4(b)(i)	Explanation to include **four** points given from: Convection currents in the mantle (1), cause magma to rise (1), spreading out and moving crust apart (1), forming volcanoes (1), mid-ocean ridges (1), earthquakes result (1).	**4**

Question Number	Answer	Mark
4(b)(ii)	Uneven because they occur at plate boundaries (1), plate boundaries are linear hence lines of volcanoes (1), plate boundaries often close to continental margins (1), destructive margins (1), constructive margins in mid-ocean (1). (3 x 1)	**3**

Question Number	Answer	Mark
4(c)	Suitable responses include: Loss of farmland (1) leading to reduced output and GDP (1), destruction of infrastructure, eg roads, hotels, power stations (1) results in drain on resources during rebuild (1), loss of opportunities, eg tourism, export of raw materials (1), positive impact through increase in tourist trade (1) as visitors come to see volcanic activity (1).	**4**

Question Number	Indicative content	
4(d) **QWC** **i–ii–iii**	What methods and why they are employed: early warning allowing evacuation disaster kits reducing secondary death toll public education reducing primary and secondary death toll planning/building regs. reducing primary death toll rescue services in place reducing primary and secondary death toll monitoring/forecasting allowing evacuation and precautionary action speed of response and quality of information services after the event vital. Note: Resources act as stimulus material. Candidates with weak case study knowledge may gather a little information from resource.	
Level	Mark	Descriptor
Level 0	0	No acceptable response.
Level 1	1-2	Attempted to explain one method, but explanation is not clear. No commentary on why they are employed. Basic use of geographical terminology, spelling, punctuation and grammar.
Level 2	3-4	One method explained in terms of its purpose/function. Attempted to explain a second but the explanation may not be clear. Clearly communicated, but with limited use of geographical terminology, spelling, punctuation and grammar.
Level 3	5-6	Good range of methods explained in terms of its purpose function. Well communicated with good use of geographical terminology, spelling, punctuation and grammar.

Question Number	Answer	Mark
5(a)(i)	Choices are: Coal (1), oil (1), gas (1), peat (1). (2 x 1)	**2**

Question Number	Answer	Mark
5(a)(ii)	Energy sources that can be regenerated (1), do not run out because dependent of planetary forces (1). Gives example (1). (2 x 1)	**2**

Question Number	Answer	Mark
5(a)(iii)	They are ugly (1), they are unnecessary as global warming is exaggerated (1), they always need back-up because it isn't always windy (1). Any other plausible objection. (3 x 1)	**3**

Question Number	Answer	Mark
5(b)(i)	Comparison to include **four** points given from: Overall not very good (1), only Spain worse (1), worst performance in glass and plastics (1), best with paper and board (1). Use of data to support any one point (1).	**4**

Question Number	Answer	Mark
5(b)(ii)	Suitable responses include: Richer so more resources to develop recycling capacity (1) political lead from government (1) supported/enforced by fines, incentives etc (1) public awareness/knowledge raised through schools (1) and campaigning journalism (1). Any of these points developed using case study examples should gain an extra point eg political lead from government (1) for example Purbeck local authority gives out free recycling boxes for paper, bottles etc (1), this has meant they now recycle 30% of all household waste (1).	**4**

Question Number	Answer	Mark
5(c)	Costs to include a maximum of **three** points given from: already emitting fumes (1), already generating traffic (1), going to become worse when plant bigger (1), political costs if unpopular with locals (1). Benefits to include a maximum of **three** points given from: even less landfill (1), opportunity cost of savings elsewhere in terms of electricity generation (1), more electricity (1). 4 marks can be made up from 3 costs + 1 benefit, 1 cost + 3 benefits, or 2 costs + 2 benefits.	**4**

Question Number	Indicative content	
5(d) **QWC** **i–ii–iii**	Carbon footprint is the amount of 'land' used to produce resources to support an individual, a region or a country. Level of development is measure of both economic and social 'progress'. Dirtiest societies are countries that are industrialising fast. But biggest footprint is based on consumption so the 'prize' goes to the wealthiest countries. Some exceptions though if governments/ populations show great awareness (Scandinavian states). General rule is that the two are positively correlated.	
Level	Mark	Descriptor
Level 0	0	No acceptable response.
Level 1	1-2	Attempts to explain about carbon footprints but vague over detail. Names countries but minimal development. Basic use of geographical terminology.
Level 2	3-4	Explains carbon footprint in appropriate detail. Some limited statements about why. Some locational/data support. Clearly communicated, but with limited use of geographical terminology.
Level 3	5-6	Good explanation of carbon footprint. Has data and detail to support argument with evidence. Well communicated with good use of geographical terminology.
SPaG Level 0	0	Errors severely hinder the meaning of the response or candidates do not spell, punctuate or use the rules of grammar within the context of the demands of the question.
SPaG Level 1	1	*Threshold performance* Candidates spell, punctuate and use the rules of grammar with reasonable accuracy in the context of the demands of the question. Any errors do not hinder meaning in the response. Where required, they use a limited range of specialist terms appropriately.

SPaG Level 2	2	*Intermediate performance* Candidates spell, punctuate and use the rules of grammar with considerable accuracy and general control of meaning in the context of the demands of the question. Where required, they use a good range of specialist terms with facility.
SPaG Level 3	3	*High performance* Candidates spell, punctuate and use the rules of grammar with consistent accuracy and effective control of meaning in the context of the demands of the question. Where required, they use a wide range of specialist terms adeptly and with precision.

Question Number	Answer	Mark
6(a)(i)	Bathing (1), drinking (1), sewage disposal (1), vegetable watering (1). (2 x 1)	**2**

Question Number	Answer	Mark
6(a)(ii)	They are expensive to install (1), most agriculture is still subsistence (1), they are quite wasteful of water(1), often water is a scarce resource (1). (2 x 1)	**2**

Question Number	Answer	Mark
6(a)(iii)	Leakages (1), lots of water is lost because of old/bad pipes. Pollution (1), some water supplies are affected by toxic groundwater/mining waste/nitrates (1). Shortages (1), arid areas mean water tables/rivers are overused (1). Costs (1), water is getting expensive in some areas (1). 1 mark for valid problem, 1 mark for extension, times 2.	**4**

Question Number	Answer	Mark
6(b)(i)	North America the heaviest user (1), with nearly twice as much as any other (1). Other rich regions, eg Europe quite modest (1). Poorest region uses least, eg Sub-Saharan Africa (1). Use of supportive data for any one or more point (1). (3 x 1)	**3**

Question Number	Answer	Mark
6(b)(ii)	Suitable responses include: Wealthy countries have the ability to meet high	

	demand from agriculture (1) through building more reservoirs, distribution systems etc (1), higher income allows greater domestic water use (1) eg many households in the USA have dishwashers, power showers etc (1).	**4**

Question Number	Answer	Mark
6(c)	Identifiable scheme (1). Reasons will depend on choice but allow 1 mark for each legitimate reason and reserve 4th mark for some locational detail/data.	**4**

Question Number	Indicative content	
6(d) **QWC** **i–ii–iii**	Not very reliable: average around 400-500mm range from 800mm down to 250mm moving average unpredictable too no trend therefore hard to know what is coming next. Problems: hard to plan especially in farming it's a low figure in any case so shortages likely have to provide alternatives.	
Level	Mark	Descriptor
Level 0	0	No acceptable response.
Level 1	1-2	Recognises that it is unreliable but no commentary. Nothing on problems other than 'there isn't much' comment. Little or no data offered. Basic use of geographical terminology.
Level 2	3-4	Good discussion about reliability using some data to support ideas. Limited commentary on problems with simple statements only. Clearly communicated, but with limited use of geographical terminology.
Level 3	5-6	Good on both parts with key idea of planning difficulty central. Uses data to support the argument. Well communicated with good use of geographical terminology.
SPaG Level 0	0	Errors severely hinder the meaning of the response or candidates do not spell, punctuate or use the rules of grammar within the context of the demands of the question.
SPaG Level 1	1	*Threshold performance* Candidates spell, punctuate and use the rules of grammar with reasonable accuracy in the context of the demands of the question. Any errors do not hinder meaning in the response. Where required, they use a limited range of specialist terms appropriately.
SPaG Level 2	2	*Intermediate performance* Candidates spell, punctuate and use the rules of grammar with considerable accuracy and general control of meaning in the context of the demands of

		the question. Where required, they use a good range of specialist terms with facility.
SPaG Level 3	3	*High performance* Candidates spell, punctuate and use the rules of grammar with consistent accuracy and effective control of meaning in the context of the demands of the question. Where required, they use a wide range of specialist terms adeptly and with precision.