Surname	Centre Number	Candidate Number
First name(s)		2

wjec cbac

GCE AS

B110U10-1

S24-B110U10-1

eduqas Part of WJEC

TUESDAY, 14 MAY 2024 – AFTERNOON

GEOGRAPHY – AS component 1
CHANGING LANDSCAPES

2 hours 15 minutes

For Examiner's use only		
Question	**Maximum Mark**	**Mark Awarded**
Either 1 and 2 or 3 and 4	**15**	
	20	
5.	**10**	
6.	**16**	
7.	**49**	
8.	**10**	
Total	**120**	

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ADDITIONAL MATERIALS

A calculator.

INSTRUCTIONS TO CANDIDATES

Use black ink or black ball-point pen. Do not use gel pen or correction fluid.

You may use a pencil for graphs and diagrams only.

Write your name, centre number and candidate number in the spaces at the top of this page.

In Section **A**, answer **either** questions 1 **and** 2 **or** questions 3 **and** 4.

Answer **all** questions in Section **B** (Tectonic Hazards) and **all** questions in Section **C** (Challenges in the 21st Century).

Write your answers in the spaces provided in this booklet. If you run out of space, use the additional page(s) at the back of the booklet, taking care to number the question(s) correctly.

INFORMATION FOR CANDIDATES

The number of marks is given in brackets [ ] at the end of each question or part-question; you are advised to divide your time accordingly.

This paper requires that you make as full use as possible of appropriate examples and reference to data to support your answers. Sketch maps and diagrams should be included where relevant.

A plain page is available at the end of each section for you to add any relevant sketch maps and diagrams you may wish to include. The question number(s) should be clearly shown.

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Section A: Changing Landscapes

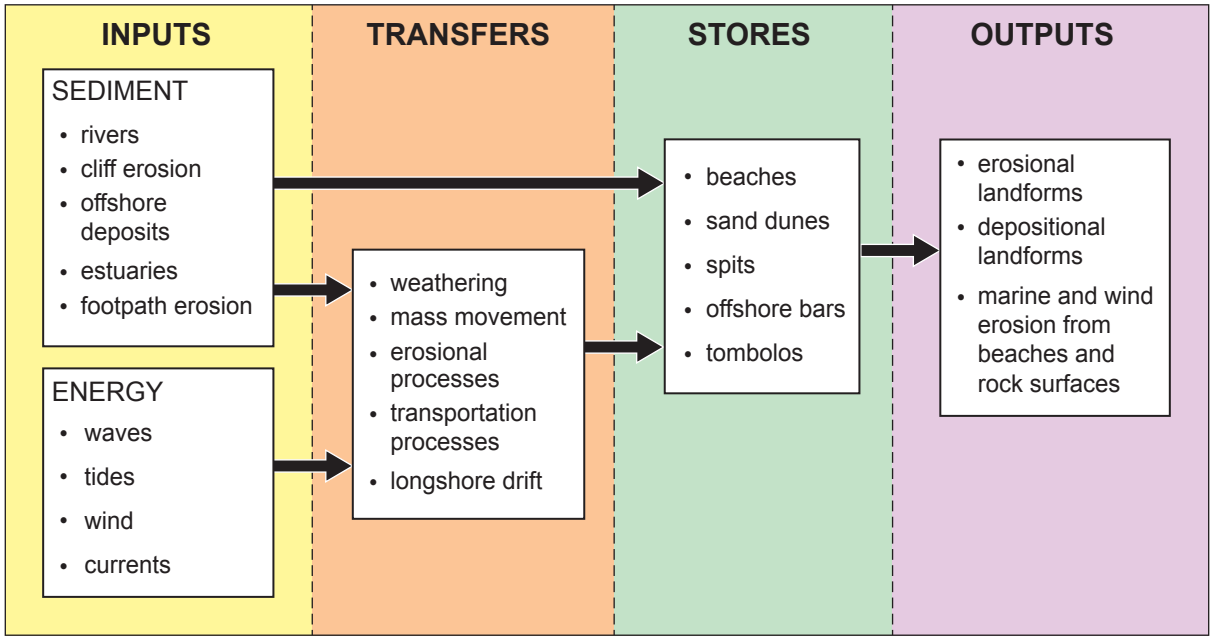
Answer **either** questions 1 **and** 2 **or** questions 3 **and** 4 from your chosen landscape.

Where possible, make full use of examples and data to support your answers.

Either: Coastal Landscapes

Answer questions 1 **and** 2 if this is your chosen landscape.

Figure 1: The coastal system



1. (a) Use **Figure 1** to describe links between different parts of the coastal system. [5]

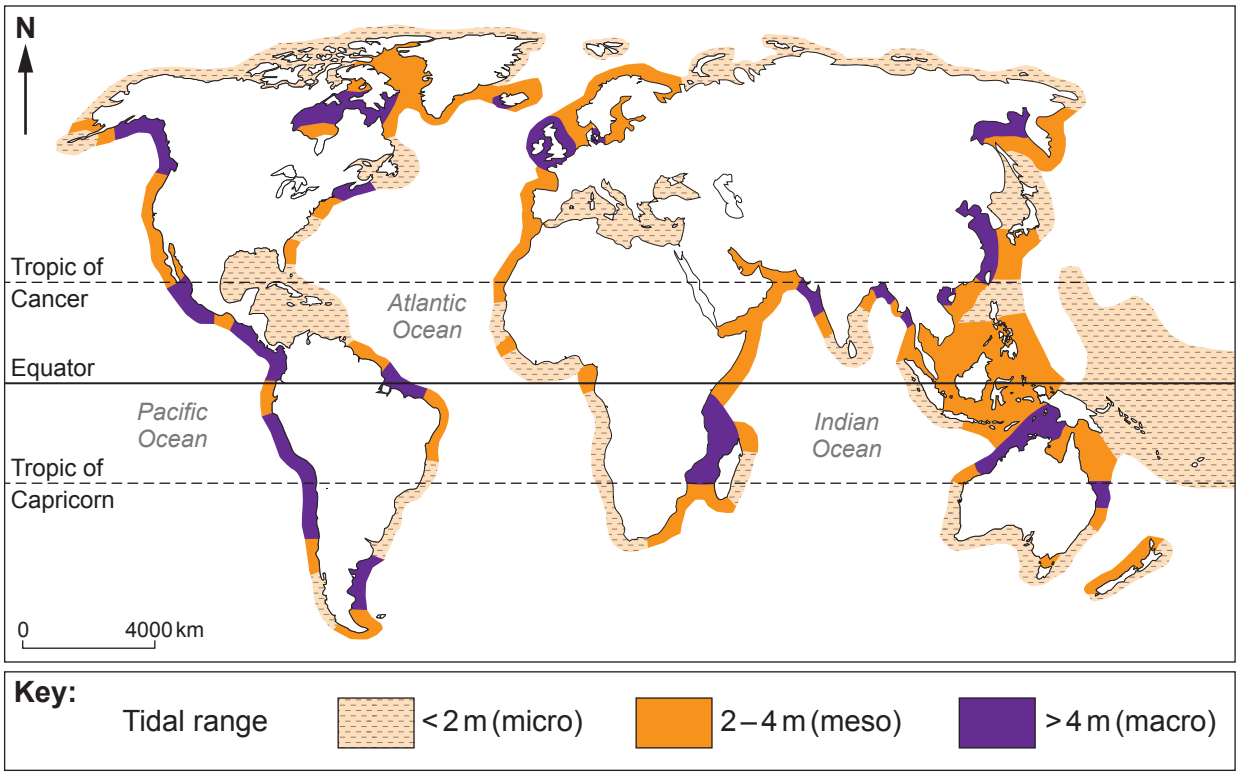
Examiner only

(b) Examine the role that waves play in the formation of beach profiles. [10]

Additional space for Question **1**(b):

Examiner only

Figure 2: The global distribution of tidal ranges



Source: https://www.hoddereducation.co.uk

2. (a) Use **Figure 2** to analyse the global pattern of tidal ranges. [5]

Examiner only

(b) Discuss the view that biotic processes play the most significant role in the formation of **either** mangroves **or** coral reefs. [15]

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Additional space for Question **2**(b):

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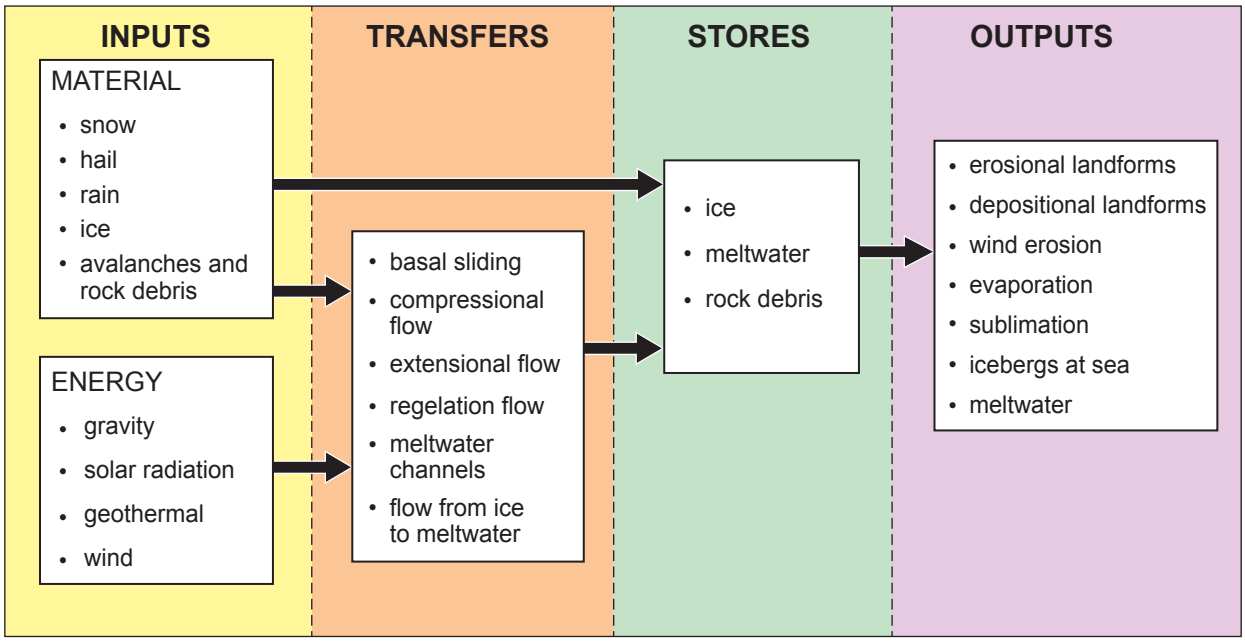
Or: Glaciated Landscapes

Answer questions 3 **and** 4 if this is your chosen landscape.

Figure 3: The glacial system



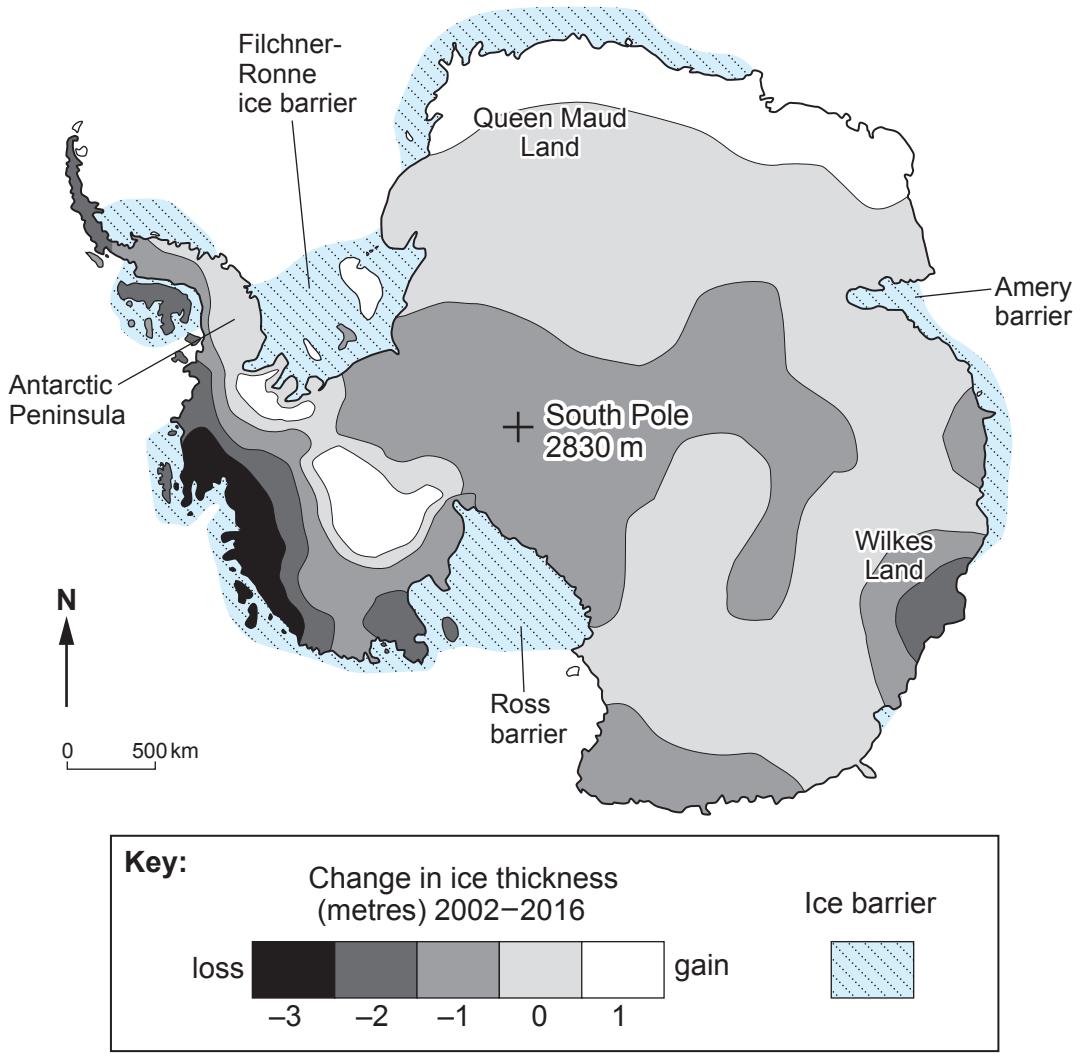
3. (a) Use **Figure 3** to describe links between different parts of the glacial system. [5]

Examiner only

(b) Examine the relative importance of frost weathering and mass movement in the formation of **one or more** periglacial landforms. [10]

Additional space for Question **3**(b):

Figure 4: Changes in ice thickness, Antarctica, 2002–2016



Adapted from: https://phys.org/news/2018-03-antarctica-laboratory-climate.html

Examiner only

4. (a) Use **Figure 4** to analyse the pattern of ice thickness change. [5]

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(b) Discuss the view that human activity influences glacial landscapes more than physical processes. [15]

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Section B: Tectonic Hazards

Answer **all** questions.

Where possible, make full use of examples and data to support your answers.

Figure 5: Magnitude of eruption and mortality for selected volcanic eruptions, 2010–2022

Volcano	Number of deaths	Volcanic Explosivity Index (VEI)
Popocatépetl, Mexico	1	2
Hunga Tonga, Tonga	5	5
Mount Nyiragongo, DRC	32	1
Krakatoa, Indonesia	426	3
Calbuco, Chile	0	4
Mount Ontake, Japan	63	3
Nabro, Eritrea	31	4
Cordon Caulle, Chile	0	5
Grímsvötn, Iceland	0	4
Mount Merapi, Indonesia	300	4
Pacaya, Guatemala	3	3

Source: USGS

5. (a) (i) Name a suitable graphical technique to represent the number of deaths shown in **Figure 5**. [1]

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(ii) Justify your choice of graphical technique in **5**(a)(i). [2]

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(iii) Calculate the interquartile range for the number of deaths. Show your working. [3]

(iv) Outline **one** disadvantage of using the interquartile range when analysing the number of deaths shown in **Figure 5**. [3]

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(v) Name **one** other measure of dispersion that could be used to analyse the number of deaths other than the interquartile range. [1]

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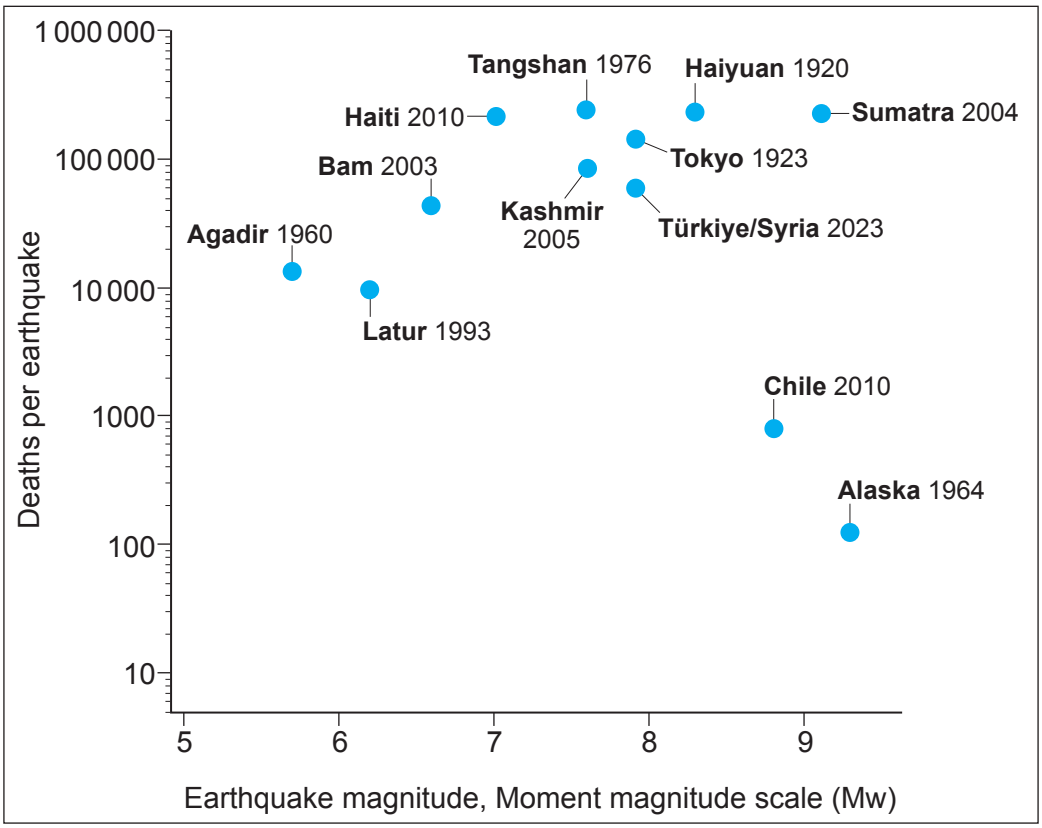
Figure 6: Relationship between earthquake magnitude and deaths per earthquake



Adapted from: https://www.researchgate.net

6. (a) Use **Figure 6** to analyse the relationship between earthquake magnitude and deaths per earthquake. [5]

Examiner only

(b) Explain the characteristics of liquefaction that make it a hazard. [6]

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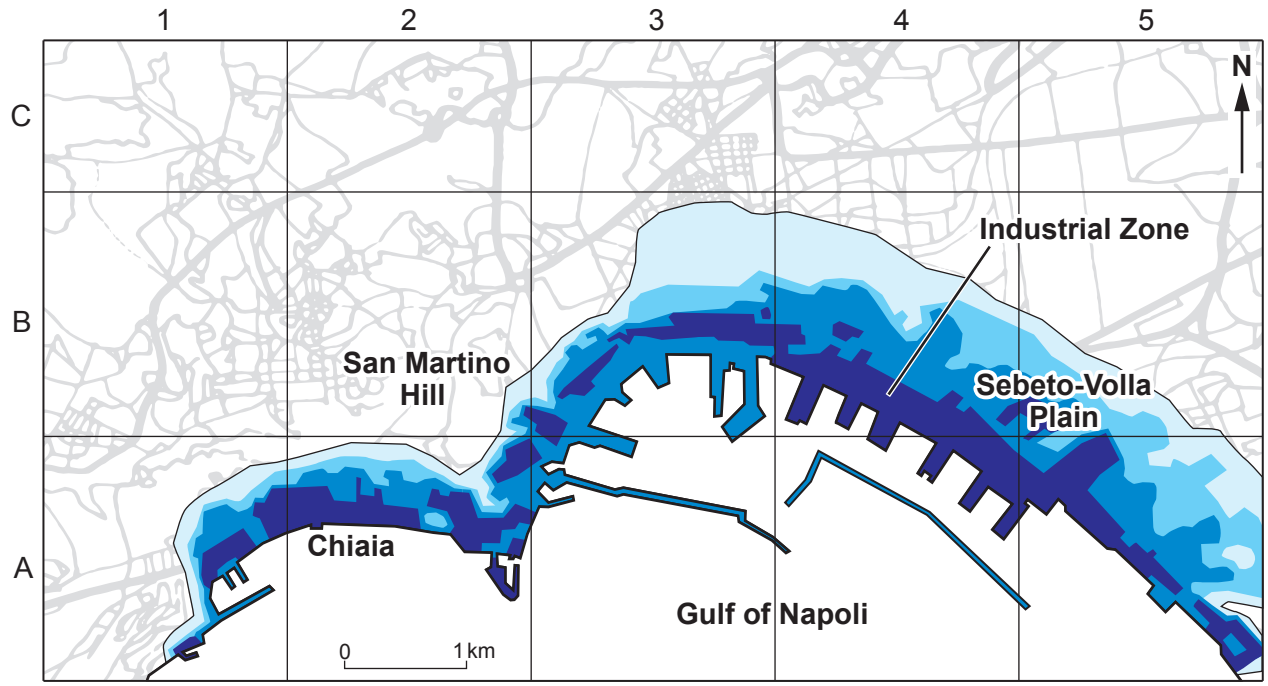
Figure 7: Variation in levels of vulnerability to tsunami flooding, city of Napoli, Italy, 2015



Area of Napoli vulnerable to tsunami flooding

Class	Area (%)	Class	Area (%)
Low	44	High	26
Medium	9	Very High	21

Source: https://www.mdpi.com/2077-1312/3/3/981/htm

(c) Use **Figure 7** to describe the vulnerability of Napoli to tsunami flooding. [5]

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7. (a) Examine the role that the type of volcanic eruption can play in contributing to volcanic hazards. [15]

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Additional space for Question **7**(a):

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(b) Discuss the view that earthquakes only generate hazards at the local scale. [14]

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Additional space for Question **7**(b):

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(c) 'Recovery from the impacts of a tectonic event mainly depends on the quality of governance.' To what extent do you agree? [20]

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Additional space for Question **7**(c):

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Section C: Challenges in the 21st Century

Answer **all** questions.

Make the fullest possible use of examples and data to support your answers.

8. Assess the view that present day processes influence places more than processes operating in the past. [10]

In your answer to question **8**, you may make use of the material in **Figures 8a, 8b and 8c**, and apply your own knowledge and understanding.

Figure 8a: Coastline at Hemsby, Norfolk, England

Source: https://news.sky.com/story/demolition-of-houses-along-norfolk-coastline-as-erosion-takes-its-toll-12831821

Figure 8b: Glacier mining for gold at Kumtor Mine, Kyrgyzstan

Source: http://williamcolgan.net/blog/?tag=kumtor

Figure 8c: Lava flows at Kilauea volcano, Hawaii

Source: https://www.nps.gov/havo/learn/news/park-offers-route-and-tips-for-viewing-lava-flows.htm

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Additional space for Question **8**:

END OF PAPER

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Question number	Additional page, if required. Write the question number(s) in the left-hand margin.

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