Geography A
Unit 2: The Natural Environment

Foundation Tier

Thursday 22 May 2014 – Morning
Time: 1 hour 15 minutes

You do not need any other materials.

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 all questions.
• In Section B answer either question 4 or 5.
• Answer the questions in the spaces provided – there may be more space than you need.

Information
• The total mark for this paper is 69.
• 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 your written communication will be assessed – you should take particular care on these questions with your spelling, punctuation and grammar, as well as the clarity of expression.
• The marks available for spelling, punctuation and grammar are clearly indicated.

Advice
• Read each question carefully before you start to answer it.
• Check your answers if you have time at the end.

©2014 Pearson Education Ltd.

Topic 1: Coastal Landscapes

1 (a) Study Figure 1 (photograph) below.

![Figure 1 – Destructive waves at Freshwater Bay, Isle of Wight.](Source: © Jason Swain/Getty Images)

(i) Which one of the following is a characteristic of a destructive wave? (1)

- [ ] A Strong swash
- [ ] B High energy
- [ ] C Low frequency
- [ ] D Wave height below 1 metre
(ii) Identify landform X in Figure 1.

☐ A Headland
☐ B Beach
☐ C Bay
☐ D Stack

(iii) Which one of the following best describes abrasion?

☐ A The chemical action between sea water and the cliff.
☐ B The force of the waves against the cliff face.
☐ C The scraping of sand and stones in the waves against the cliff face.
☐ D Sand and stones knock into each other making them smaller.

(b) Complete the following sentences that describe and explain the formation of a spit.

Use some of the words in the box below.

A spit is a ridge of .............................................................. which extends from the coastline.

It is formed by the process of ..................................................

Material is .............................................................. along the coastline.

When the coastline changes direction this material is

deposited ...............................................................
(c) (i) Name one type of hard engineering on the coast.

(ii) Outline the advantages of the hard engineering type named in (c)(i).

(d) Using examples, explain how coastal recession affects the human environment.

(Total for Question 1 = 15 marks)
Study Figure 2 below.

<table>
<thead>
<tr>
<th>Upstream</th>
<th>Downstream</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discharge</td>
<td></td>
</tr>
<tr>
<td>Channel width</td>
<td></td>
</tr>
<tr>
<td>Channel depth</td>
<td></td>
</tr>
<tr>
<td>Average velocity</td>
<td></td>
</tr>
<tr>
<td>Gradient</td>
<td></td>
</tr>
</tbody>
</table>

Figure 2 – A prediction of downstream changes in river channel characteristics.

(a) (i) Which river characteristic shown on Figure 2 changes by the greatest amount?  

☐ A Discharge  
☐ B Average velocity  
☐ C Channel width  
☐ D Channel depth

(ii) Which one of the following best describes the relationship between discharge and gradient on Figure 2?

☐ A As discharge increases gradient increases.  
☐ B As gradient increases discharge increases.  
☐ C As gradient decreases discharge decreases.  
☐ D As discharge increases gradient decreases.
(iii) Which one of the following best describes the reason for an increase in discharge downstream?

- A  An increase in deposition downstream.
- B  A faster velocity in the upper course.
- C  A greater amount of water entering the river.
- D  A reduction in the cross-sectional area of the river.

(b) Complete the following sentences that describe and explain the changes in a river.

Use some of the words in the box below.

- mouth
- channel
- smallest
- more
- watershed
- less
- largest
- source
- valley
- meander

A river starts at its ................................................................. .

Further down the river’s course, after the v-shaped valley stage, the ................................................................. shape becomes flatter and wider.

One reason for this change is ................................................................. erosion.

When a river reaches its mouth the cross-sectional area is usually at

its ..................................................................
(c) Explain the formation of an oxbow lake.

Use a diagram(s) in your answer.

(4)
(d) For a river you have studied, explain how the river is managed.

Named river ........................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
........................................................................................................................................

(Total for Question 2 = 15 marks)
3 (a) Study Figure 3a below.

The Hollywood film ‘Pirates of the Caribbean’ was filmed on the island

Volcanoes

The Trafalgar waterfall, accessible by bus

Trafalgar

Canefield airport used for imports and exports

Canefield

Roseau

The distance from X to Y along the coast of Roseau is 1km

X

Y

Figure 3a – Information about the volcanic region of Roseau, Dominica.

(i) Identify the tectonic feature labelled in Figure 3a.

☐ A Lava flow
☐ B Waterfall
☐ C River
☐ D Volcanoes

(ii) Which **one** of the following is a likely reason why people continue to live in Roseau?

☐ A A lack of basic services.
☐ B The ‘Pirates of the Caribbean’ was filmed there.
☐ C Jobs at Canefield airport.
☐ D A risk of volcanic eruption.
(iii) Which one of the following best describes the location of a hot spot?

- A Convergent plate boundary
- B Conservative plate boundary
- C Mid-plate
- D Divergent plate boundary

(b) Complete the following sentences about landforms on a convergent plate boundary.

Use some of the words in the box below.

volcano         earthquakes         ridge         together         landslides
mountain         magma         trench         apart         lava

At a convergent plate boundary, two plates move ..................................................... .

Where one plate moves under another (subduction)

a ..................................................... is formed.

In the subduction zone the pressure builds up to

form ..................................................... .

Molten material called ..................................................... rises through the crust.
(c) Using the following terms, complete the diagram below showing earthquake characteristics.

One has been done for you.

Focus  epicentre  surface fault line  seismic wave  ground level

![Diagram of earthquake characteristics](image)

Figure 3b – A diagram showing characteristic earthquake features.

(d) Using examples, explain how the effects of earthquakes can be reduced by building design.

(Total for Question 3 = 15 marks)
BLANK PAGE

QUESTION 4 IS ON THE NEXT PAGE.
4 (a) Study Figure 4 below.

Figure 4 – Energy mix for selected regions

(i) Give the percentage for renewable energy used for the following regions.

North America ......................................................... %

Africa ................................................................. %
(ii) Compare the energy mix of Europe and the Middle East shown on Figure 4. Use data in your answer.

(b) (i) Which of the following is the best definition of a **renewable** energy source?

- [ ] A An energy source which will run out.
- [ ] B An energy source which will not run out.
- [ ] C An energy source which has already run out.
- [ ] D An energy source using fossil fuels.

(ii) Which of the following is a type of **non-renewable** energy source?

- [ ] A Coal
- [ ] B Wind
- [ ] C Water
- [ ] D Sun

(c) Describe how greater wealth can affect energy consumption.
Suggest one advantage and one disadvantage of using landfill to dispose of waste.

(4)

Advantage

Disadvantage
*(e) Explain the views that individuals and government have about solutions to energy wastage in the UK.*

(Total for spelling, punctuation and grammar = 4 marks)
(Total for Question 4 = 24 marks)
5 Study Figure 5 below.

**Figure 5 – Water use for selected countries.**

(a) (i) Give the percentage of water used by agriculture in the following countries.

Sweden ................................................................. %
Spain ................................................................. %
(ii) Compare the water use in the UK and Turkey. Use data in your answer. (4)

(b) (i) Which one of the following is the best definition of domestic water use? (1)

☐ A Using water to grow crops.
☐ B Using water in a factory.
☐ C Using water in the home.
☐ D Using water in energy production.

(ii) Which one of the following would use water for irrigation? (1)

☐ A Power stations
☐ B Homes
☐ C Factories
☐ D Farms

(c) Describe how greater wealth can affect water consumption. (2)
(d) Suggest two problems which may lead to a higher risk of water-borne diseases in Low Income Countries (LICs).

1. ...........................................................
2. ...........................................................
*(e) For a named water management scheme, explain the views that individuals and
government(s) have about the scheme.

Named scheme

(Total for spelling, punctuation and grammar = 4 marks)
(Total for Question 5 = 24 marks)

TOTAL FOR SECTION B = 24 MARKS
TOTAL FOR PAPER = 69 MARKS