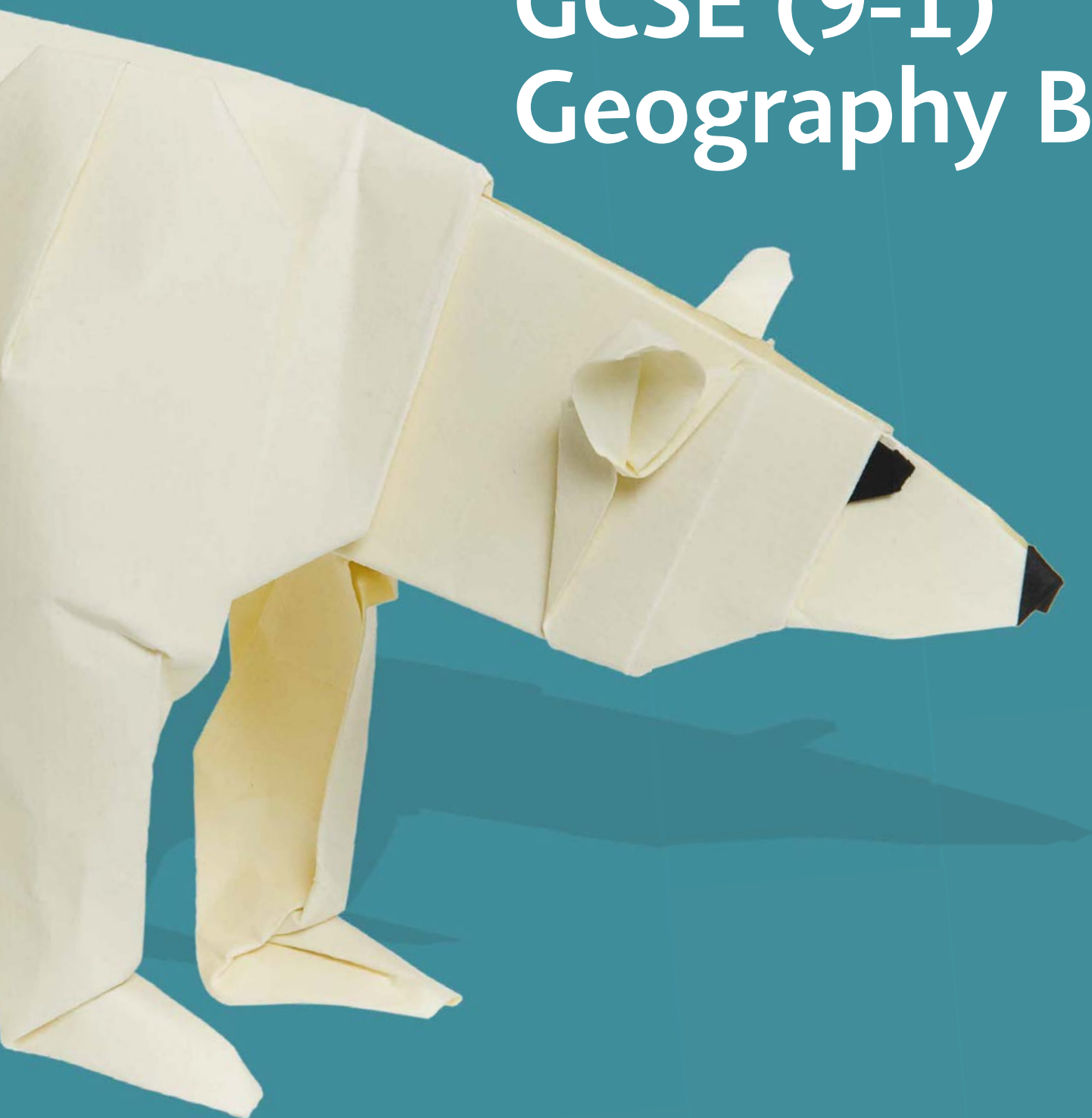


GCSE (9-1) Geography B



Sample Assessment Materials

Pearson Edexcel Level 1/Level 2 GCSE (9-1) in Geography B (1GB0)

First teaching from September 2016

First certification from 2018

Issue 3

Edexcel, BTEC and LCCI qualifications

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Summary of Pearson Edexcel Level 1/2 GCSE in Geography B SAMs Issue 3 changes

| Summary of changes made between previous issue and this current issue | Page number |
|---|-------------|
| The level descriptors for Paper 3 Question 4 have been replaced with the correct version. | 140 |

Earlier issues show previous changes.

If you need further information on these changes or what they mean, contact us via our website at: qualifications.pearson.com/en/support/contact-us.html.

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Introduction

The Pearson Edexcel Level 1/Level 2 GCSE in Geography B is designed for use in schools and colleges. It is part of a suite of GCSE qualifications offered by Pearson.

These sample assessment materials have been developed to support this qualification and will be used as the benchmark to develop the assessment students will take.

General marking guidance

- All candidates must receive the same treatment. Examiners must mark the last candidate in exactly the same way as they mark the first.
- 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.
- 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.
- For all questions marked using a levels based mark scheme, examiners should pay particular attention to the initial rubric which begins the indicative content section. This rubric details the Assessment Objective and where applicable strand emphasis that should be applied when making judgements within each band.

How to award marks when level descriptions are used

1. Finding the right level

The first stage is to decide into which level the answer should be placed in. To do this, use a 'best-fit' approach, deciding which level most closely describes the quality of the answer. Answers can display characteristics from more than one level, and where this happens markers must use the guidance below and their professional judgement to decide which level is most appropriate.

For example, one stronger passage at L4 would not by itself merit a L4 mark, but it might be evidence to support a high L3 mark, unless there are substantial weaknesses in other areas. Similarly, an answer that fits best in L3 but which has some characteristics of L2 might be placed at the bottom of L3. An answer displaying some characteristics of L3 and some of L1 might be placed in L2.

2. Finding a mark within a level

After a level has been decided on, the next stage is to decide on the mark within the level. The instructions below tell you how to reward responses within a level. However, where a level has specific guidance about how to place an answer within a level, always follow that guidance.

Levels containing 2 marks only

Start with the presumption that the work will be at the top of the level. Move down to the lower mark if the work only just meets the requirements of the level.

Levels containing 3 or more marks

Markers should be prepared to use the full range of marks available in a level and not restrict marks to the middle. Markers should start at the middle of the level (or the upper-middle mark if there is an even number of marks) and then move the mark up or down to find the best mark. To do this, they should take into account how far the answer meets the requirements of the level:

- If it meets the requirements *fully*, markers should be prepared to award full marks within the level. The top mark in the level is used for answers that are as good as can realistically be expected within that level
- If it only *barely* meets the requirements of the level, markers should consider awarding marks at the bottom of the level. The bottom mark in the level is used for answers that are the weakest that can be expected within that level
- The middle marks of the level are used for answers that have a *reasonable* match to the descriptor. This might represent a balance between some characteristics of the level that are fully met and others that are only barely met.

Write your name here

Surname

Other names

Pearson Edexcel
Level 1/Level 2
GCSE (9–1)

Centre Number

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Candidate Number

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Geography B

Paper 1: Global Geographical Issues

Sample assessment material for first teaching
September 2016

Time: 1 hour 30 minutes

Paper Reference

1GB0/01

You must have:
Calculator

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.
- Answer **all** questions.
- Answer the questions in the spaces provided
– *there may be more space than you need.*
- You must **show all your working out** with **your answer clearly identified** at the **end of your solution**.

Information

- The total mark for this paper is 94.
- 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, grammar and use of specialist terminology and grammar, as well as the clarity of expression.*
- The marks available for spelling, punctuation, grammar and use of specialist terminology are clearly indicated.

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.

Turn over ►

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Pearson

SECTION A**Hazardous Earth**

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

- 1** (a) (i) Which of the following is an alternative name for a tropical cyclone?

(1)

- ☐ **A** Hurricane
- ☐ **B** Anticyclone
- ☐ **C** Monsoon
- ☐ **D** Tornado

- (ii) The Saffir-Simpson scale is used to categorise tropical cyclones.

Which of the following is the most important measurement used when deciding the category of a cyclone?

(1)

- ☐ **A** The length of time that the cyclone lasts.
- ☐ **B** The wind speed in the cyclone.
- ☐ **C** The size of the cyclone.
- ☐ **D** The height of the storm clouds.

- (b) Explain why tropical cyclones lose their power over land.

(2)

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(c) Analyse the data in **Figure 1** which shows the impact of two tropical cyclones.

| Tropical cyclone name and date | Location | GDP per person of country (US \$) | Economic cost (US \$) | Number of deaths | Total population in the affected area |
|--------------------------------|--------------|-----------------------------------|-----------------------|------------------|---------------------------------------|
| Haiyan (2013) | Phillippines | 2 750 | 3 billion | 7 000 | 14 million |
| Katrina (2005) | USA | 53 000 | 100 billion | 1 800 | 4 million |

Figure 1

- (i) Calculate the difference between the economic costs of tropical cyclone Haiyan and tropical cyclone Katrina.

(1)

- (ii) For Haiyan, calculate the ratio of the number of deaths to the affected population.

(1)

- (iii) New Orleans was affected by tropical cyclone Katrina and is located on low-lying coastline.

Explain **one** reason why low-lying coastlines are vulnerable to tropical cyclones.

(2)

- (d) Analyse **Figure 2**, which shows the global distribution of recently active volcanoes.

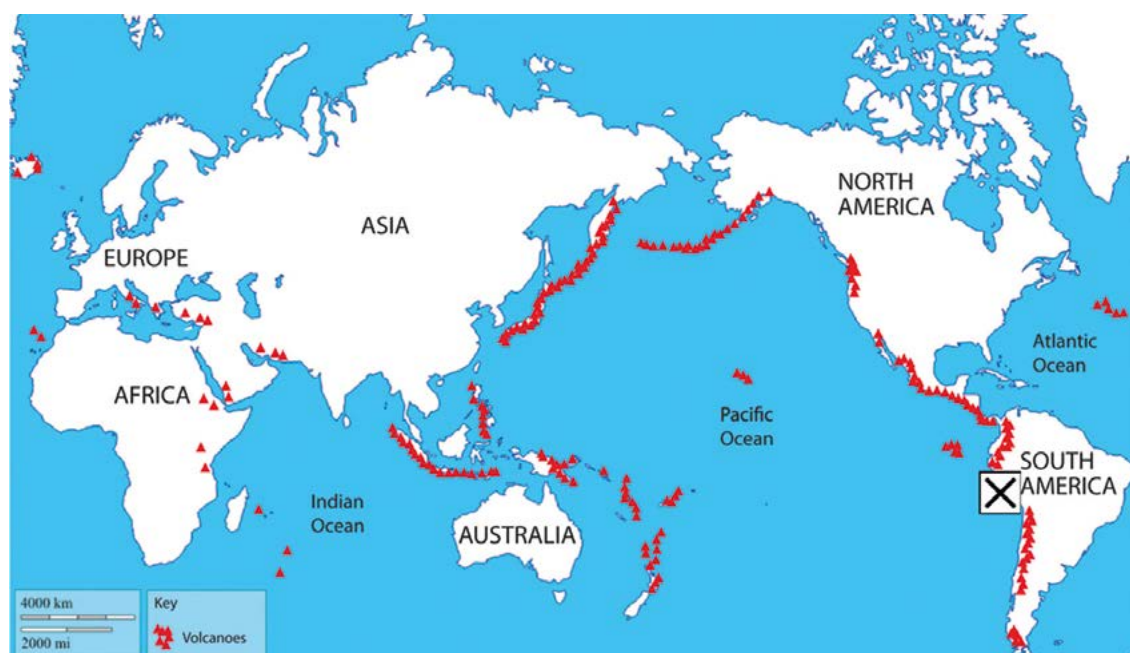


Figure 2

- (i) Suggest **two** reasons for the distribution in **Figure 2**.

(4)

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(ii) Identify the most appropriate technique to accurately measure volcano type.

(1)

- ☐ A satellite image
- ☐ B cross section
- ☐ C seismometer
- ☐ D pictogram

(iii) Identify **two** data presentation techniques that would show the contrasting impact of a hazard event on different countries.

(2)

- ☐ A line graph
- ☐ B population pyramid
- ☐ C bar graph
- ☐ D flow line map
- ☐ E choropleth map

(iv) Other than volcanoes, explain how two tectonic hazards could occur at X in **Figure 2**.

(4)

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(e) Explain **one** way people can predict volcanic eruptions or earthquakes.

(3)

(f) 'The causes of past climate change and current global warming are different.'
Assess this statement.

(8)

(Total for Question 1 = 30 marks)

TOTAL FOR SECTION A = 30 MARKS

SECTION B**Development Dynamics**

Answer ALL questions. Write your answers in the spaces provided.

Spelling, punctuation, grammar and use of specialist terminology will be assessed in (f).

- 2** (a) (i) Which of the following is the definition of 'fertility rate'?

(1)

- ☐ **A** the average number of deaths per year
- ☐ **B** the average number of births per woman
- ☐ **C** the average number of times a woman marries
- ☐ **D** the average number of teenage mothers

- (ii) Which of the following is used to calculate the 'infant mortality rate'?

(1)

- ☐ **A** the number of children who die before their 1st birthday
- ☐ **B** the number of women who die in childbirth
- ☐ **C** the number of children who do not go to school
- ☐ **D** the number of children seen by a doctor before their 1st birthday

- (b) Explain **one** way in which the Human Development Index (HDI) measures development.

(2)

- (c) Analyse the information in **Figure 3** which shows data for three countries at different levels of development.

| Country | GDP per capita (\$) | Infant mortality per 1000 | Doctors per 1000 of population |
|----------------|---------------------|---------------------------|--------------------------------|
| United Kingdom | 42 000 | 4 | 2.7 |
| Brazil | 12 000 | 12 | 1.8 |
| Malawi | 250 | 44 | 0.1 |

Figure 3

Explain why the infant mortality rate varies between the countries in Figure 3.

(4)

(d) Study **Figure 4** which shows changes in the price of coffee beans and the cost of a cup of coffee between 2009 and 2013.

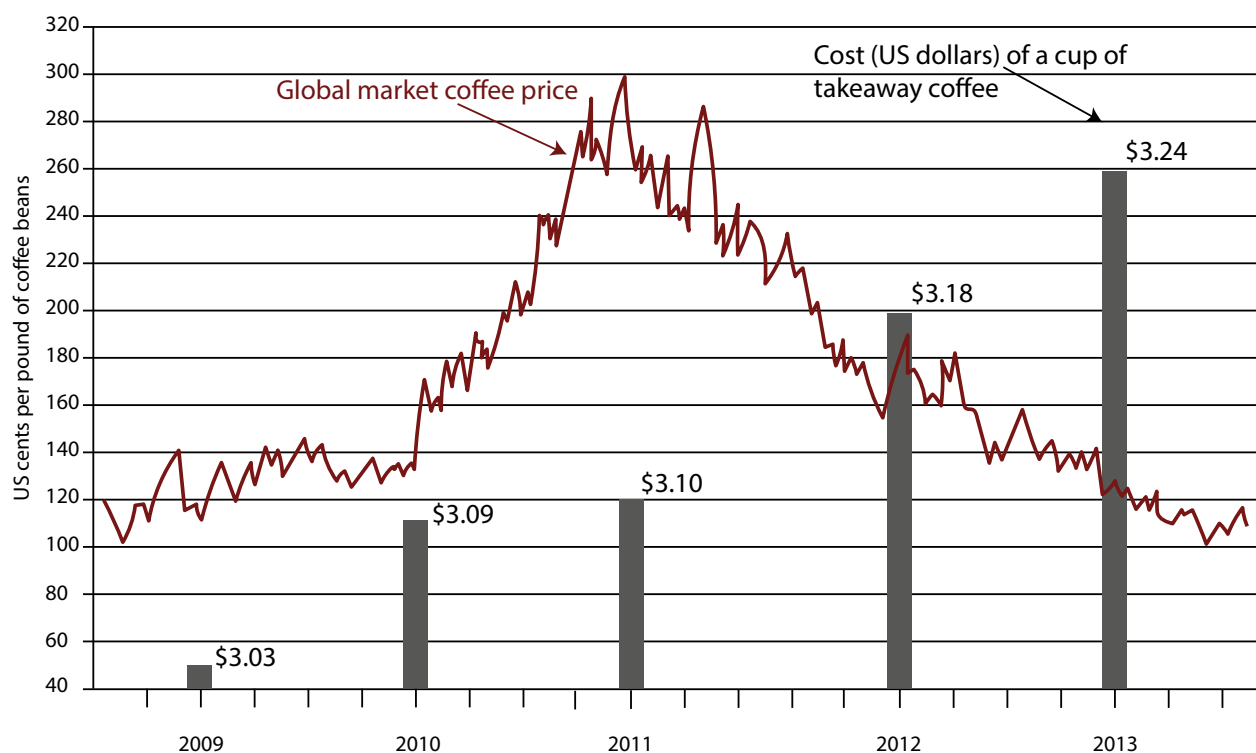


Figure 4

(i) Calculate the mean price of a cup of takeaway coffee between 2009 and 2013.

(2)

(ii) Describe the relationship between the global market price of coffee and the price of a cup of takeaway coffee between **2010** and **2012**. Use data from the graph to support your answer.

(2)

(iii) Coffee beans are a commodity that some countries export.

Explain how countries that rely on exporting coffee beans would be affected by the price trends in **Figure 4**.

(4)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

(e) Study **Figure 5** which shows air pollution levels in cities for five emerging countries in 2010 and projected to 2030 and 2050.

Safe level of air pollution for human health

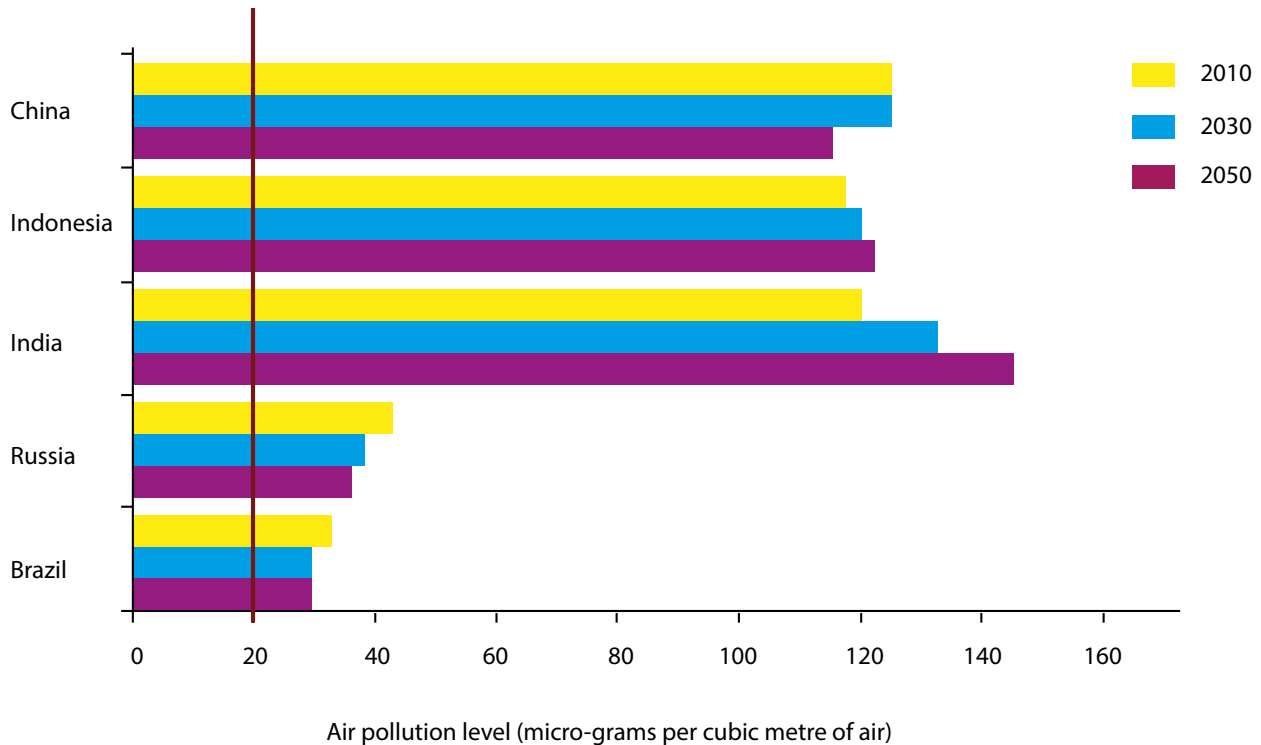


Figure 5

(i) What is the likely projected level of air pollution in Russia by 2070 if the trend on Figure 5 continues?

(1)

- ☐ **A** 25 micrograms of air pollution per cubic metre
- ☐ **B** 33 micrograms of air pollution per cubic metre
- ☐ **C** 39 micrograms of air pollution per cubic metre
- ☐ **D** 50 micrograms of air pollution per cubic metre

(ii) Describe the projected trends in air pollution levels between 2010 and 2050 for India and Indonesia.

(2)

DO NOT WRITE IN THIS AREA

(iii) Explain **one** reason why economic growth leads to higher levels of all types of pollution in emerging countries.

(3)

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(Total for Question 2 = 34 marks)

TOTAL FOR SECTION B = 34 MARKS

SECTION C

Challenges of an Urbanising World

Answer ALL questions. Write your answers in the spaces provided.

- 3 (a) Megacities in the developing world often have a large 'informal economy'.

Which of the following is the definition of informal employment?

(1)

- ☐ A Jobs that require no qualifications
- ☐ B Jobs that are badly paid
- ☐ C Jobs that are not taxed or officially recorded
- ☐ D Jobs that are temporary or part-time

- (b) Which of the following land use zones is dominated by commercial functions?

(1)

- ☐ A CBD
- ☐ B inner city
- ☐ C suburbs
- ☐ D rural-urban fringe

- (c) (i) State **one** reason for rapid population growth in megacities.

(1)

- (ii) Explain **one** reason why this growth is concentrated at the rural-urban fringe.

(2)

- (d) Analyse **Figure 6** which shows the percentage of journey times to work for a megacity in the developing world compared with the rest of the country.

| Journey time to work | Percentage (%) of all journeys to work | |
|----------------------|--|-----------------|
| | Megacity | Rest of country |
| 1–15 minutes | 50 | 82 |
| 16–30 minutes | 20 | 8 |
| 31–45 minutes | 15 | 6 |
| 46–60 minutes | 5 | 4 |
| >60 minutes | 10 | 0 |

Figure 6

- (i) Which of the following is the modal journey time to work in the megacity

(1)

- ☐ **A** 1–15 minutes
- ☐ **B** 16–30 minutes
- ☐ **C** 31–45 minutes
- ☐ **D** 46–60 minutes

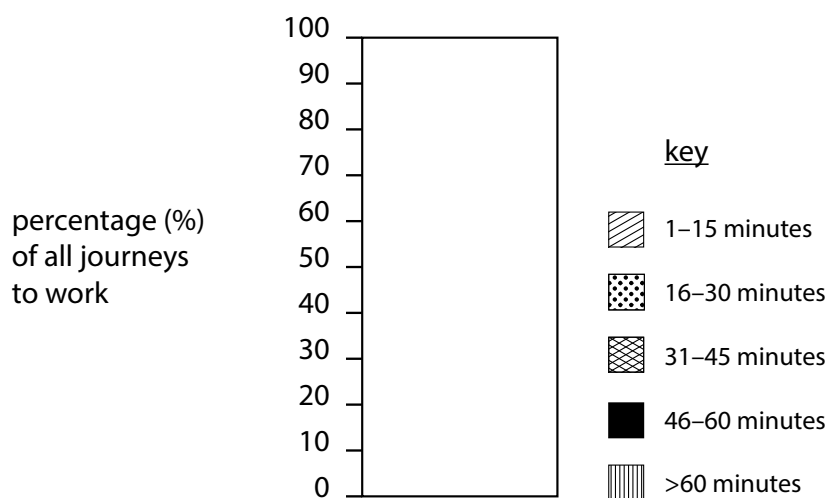
- (ii) The total number of journeys to work in the megacity is 1.2 million.

Calculate the number of people whose journey time is greater than 60 minutes.

(1)

(iii) Complete a compound bar chart for the Megacity using the data in **Figure 6**.

(3)



(iv) Suggest **two** reasons for the differences shown in **Figure 6** between the Megacity and the rest of the country.

(4)

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- (e) (i) For a named megacity in a developing or emerging country, give **two** reasons why residential areas have contrasting quality of life.

(2)

Named megacity

- (ii) Explain **one** way in which bottom-up projects can improve city housing.

(2)

- (f) Megacities in both developing and emerging countries have experienced rapid population growth.

Explain **two** reasons why rapid population growth leads to problems with water supply.

(4)

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TOTAL FOR SECTION C = 30 MARKS
TOTAL FOR PAPER = 94 MARKS

Paper 1 Mark scheme

| Question | Answer | Marks |
|----------------|--------|------------|
| 1(a)(i) | A | (1) |

| Question | Answer | Marks |
|-----------------|--------|------------|
| 1(a)(ii) | B | (1) |

| Question | Answer | Marks |
|-------------|--|------------|
| 1(b) | <p>Award 1 mark for identifying the energy source and a further mark for explaining how this source of energy has been lost, up to a maximum of 2 marks:</p> <p>The energy source is warm water/detail of ocean temperatures, e.g. above 26° C (1), overland cyclones are cut off from this source (they lose power) (1).</p> <p>Accept any other appropriate response.</p> | (2) |

| Question | Answer | Marks |
|----------------|---|------------|
| 1(c)(i) | <p>1 mark for the correct answer:</p> <p>\$97 billion (1) (or '97' or '97 billion')</p> | (1) |

| Question | Answer | Marks |
|-----------------|--|------------|
| 1(c)(ii) | <p>Award 1 mark for any of the following:</p> <p>7 000 to 14 million.</p> <p>7 000/14 million</p> <p>7:14000</p> <p>1:2000</p> <p>Accept other correct expressions of the ratio.</p> | (1) |

| Question | Answer | Marks |
|------------------|---|------------|
| 1(c)(iii) | <p>Award 1 mark for identifying the vulnerability and a further mark for justifying how the low-lying coastlines increases vulnerability, up to a maximum of 2 marks:</p> <p>low-lying coastlines are vulnerable to storm surge flooding (1) caused by low air pressure within cyclones (1)</p> <p>low-lying coastlines are vulnerable to large waves causing flooding (1) driven onshore by intense winds (1).</p> <p>Reject low-lying land as an explanation, as it is given. Reject reference to human vulnerability, e.g. poverty.</p> <p>Accept any other appropriate response.</p> | (2) |

| Question | Answer | Marks |
|----------------|---|------------|
| 1(d)(i) | <p>Award 1 mark for each correctly identified cause of the distribution, and a further mark for a justification of how the cause might affect volcanic activity, up to a maximum two marks each:</p> <p>clusters/chains of volcanoes near island chains occur on convergent plate boundaries (1) caused by oceanic crust being subducted under continental crust (1)</p> <p>volcanoes in mid-ocean locations are usually those along divergent plate boundary/mid-ocean ridges (1) caused by sea floor spreading (1)</p> <p>few/no volcanoes in the middle of landmasses where there is no plate boundary/conservative plate boundary where there is no magma present (1), which limits volcanic activity from occurring (1)</p> <p>some of the mid-ocean volcanic activity may be due to hotspots (1) which are caused by mantle plumes where the oceanic crust is very thin (1).</p> <p>Accept any other appropriate response.</p> | (4) |

| Question | Answer | Marks |
|-----------------|--------|------------|
| 1(d)(ii) | B | (1) |

| Question | Answer | Marks |
|------------------|--------|------------|
| 1(d)(iii) | C E | (2) |

| Question | Answer | Marks |
|-----------------|---|------------|
| 1(d)(iv) | <p>Award 1 mark for each correctly identified hazard, and a further mark for a justification of how the location of X the causes it, up to a maximum of 2 marks each:</p> <p>earthquakes (1) caused by convergent plate boundary with subduction zone (1)</p> <p>tsunamis (1) caused by undersea earthquake activity (1).</p> <p>Accept secondary hazards such as landslides/liquefaction (1) caused by intense ground shaking/unconsolidated sediments.</p> <p>Accept any other appropriate response.</p> | (4) |

| Question | Answer | Marks |
|----------|---|-------|
| 1(e) | <p>Award 1 mark for identifying a method of predicting an eruption and a further 2 marks for justifying how the method can predict eruptions, up to a maximum of 3 marks:</p> <p>Measuring bulges/rate of change in bulges in the sides of volcanoes (1) as this shows pressure of the build up of gas/material inside the volcano (1), which can indicate an eruption/release of pressure is imminent (1).</p> <p>Measuring the numerous small earthquakes (1) which are caused as magma rises up through cracks in the Earth's crust (1) in order to identify an increase in frequency/magnitude that means an eruption could be imminent (1).</p> <p>Using thermal imaging techniques and satellite cameras (1) in order to track temperature fluctuations around the volcano (1), which increase when an eruption is imminent (1).</p> <p>Measuring gases released by the volcano (1) in order to determine the chemical make up of the gases (1), which have an increased sulphur content when eruption is imminent (1).</p> <p>Earthquakes:</p> <p>laser beams (1) can be used to detect minor plate movement(1) just before an earthquake (1)</p> <p>a seismometer (1) is used to pick up the vibrations/foreshocks in the Earth's crust (1). An increase in vibrations may indicate a possible earthquake (1)</p> <p>radon gas escapes from cracks in the Earth's crust (1) as the crust moves slightly (1) just before an earthquake</p> <p>rocks crack and expand (1) under the increased stress associated pressure and stress (1) just before an earthquake (1).</p> <p>Accept any other appropriate response.</p> | (3) |

| Question | Indicative content |
|----------|---|
| 1(f) | <p style="text-align: center;">A02 (4 marks)/A03 (4 marks)</p> <p>Expect different natural causes (volcanic eruptions, asteroid strikes, solar variations, orbital geometry) to be identified with comments on their respective timescales.</p> <p>A02 (4 marks)</p> <ul style="list-style-type: none"> • Global warming is caused by rising of greenhouse gases (human activities; burning fossil fuels, deforestation). • Details of enhanced greenhouse effect; greenhouse gases (CO₂, methane), incoming and outgoing radiation. • Causes of global warming, e.g. human activities and their gases. • Volcanic eruptions causing climate cooling, e.g. ash and gases blocking incoming solar radiation. • Sun spot activity causes both warming and cooling, details of 11-year sun spot cycle and longer trends. • Orbital changes have different elements – shape of orbit, axial tilt, 'wobble' on axis – all operating together, on very long timescales (major cycle is 100,000 years). <p>A03 (4 marks).</p> <ul style="list-style-type: none"> • Natural vs human causes, e.g. past natural causes were not manageable, whereas current human causes are theoretically manageable. • Judgement about differences in causes, e.g. natural in the past and the addition of human in the present. • Recognition of similarities and continuation of natural causes in the present day. • Significance of CO₂ in causing global warming and as measured in ice cores linked to past climate change. • Judgement about timescale differences, e.g. limited significance of volcanic eruptions and sun spot variation versus long-term orbital changes and present atmospheric composition changes. • Impacts from volcanic events can be short term but occur frequently; the cooling is minor (less than 1°C/a year or two) but may be compared to large-scale events (e.g. supervolcano eruptions) triggering 'nuclear winters' (also true of asteroid collisions). • Orbital changes, although slow, are the main factor behind glacial/interglacial cycles – so they could be seen as the most significant in terms of magnitude and continue into the present day. • Possibility of mechanisms operating in conjunction with one another and/or in opposing directions. |

| Level | Mark | Descriptor |
|---------|------|--|
| | 0 | <ul style="list-style-type: none"> No acceptable response |
| Level 1 | 1–3 | <ul style="list-style-type: none"> Demonstrates isolated elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2) Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) |
| Level 2 | 4–6 | <ul style="list-style-type: none"> Demonstrates elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2) Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) |
| Level 3 | 7–8 | <ul style="list-style-type: none"> Demonstrates accurate understanding of concepts and the interrelationship of places, environments and processes. (AO2) Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3) |

| Question number | Answer | Marks |
|-----------------|--------|-------|
| 2(a)(i) | B | (1) |

| Question number | Answer | Marks |
|-----------------|--------|-------|
| 2(a)(ii) | A | (1) |

| Question number | Answer | Marks |
|-----------------|--|-------|
| 2(b) | <p>Award 1 mark for correctly identifying an aspect of development that the HDI measures, and a further mark for the specific measure, up to a maximum of 2 marks:</p> <p>it measures health of the population (1) using life expectancy (1).</p> <p>it measures the educational levels of the population (1) by measuring adult literacy/secondary schooling years (1).</p> <p>it measures GDP per capita (1), which is a measure of the economic development (1).</p> <p>Accept any other appropriate response.</p> | (2) |

| Question number | Answer | Marks |
|-----------------|--|-------|
| 2(c) | <p>Award 1 mark for identifying a variation using data from Figure 3, and a further mark for a correct reason for the variation, up to a maximum of 4 marks:</p> <p>infant mortality generally falls shown by the fall from 44 to 4 (1) as GDP per capita from 250–42,000 rises (1) because wealthier countries can afford more doctors per person (1) shown by a rise from 0.1 to 2.7 doctors per person (1).</p> <p>Allow other sensible points drawn from both the resource and candidate's own understanding. If data not used limit to 2 marks.</p> | (4) |

| Question number | Answer | Marks |
|-----------------|---------------------------------------|-------|
| 2(d)(i) | <p>3.128</p> <p>Accept 3.12, 3.13</p> | (2) |

| Question number | Answer | Marks |
|-----------------|---|------------|
| 2(d)(ii) | <p>Award 1 mark for each comparative statement which uses the data presented, up to a maximum of 2 marks.</p> <p>The cost of a cup of takeaway coffee rises over the period, whereas the cost of coffee beans rise then falls (1).</p> <p>The cost of takeaway coffee rises gradually/steadily between 2009 and 2013, whereas coffee-bean prices are much more variable/change more rapidly (1).</p> <p>In 2010-2011 the cost of coffee barely changed but the cost of coffee beans rose from 120 to 300 (1).</p> <p>Over the whole period the price of coffee beans is virtually unchanged whereas takeaway coffee is more expensive (1).</p> <p>Accept any other appropriate response.</p> | (2) |

| Question number | Answer | Marks |
|------------------|---|------------|
| 2(d)(iii) | <p>Award 1 mark for identifying a way in which countries would be affected and a further mark for justifying how they would be affected, up to a maximum of 4 marks:</p> <p>rising prices for coffee beans will deliver higher incomes for farmers (1) which could improve healthcare, access to education or be invested back into farming to help future income (1). Variable/unpredictable commodity prices make planning difficult (1) and low prices could push people into poverty (1)</p> <p>government/business income from exports would be very variable (1) leading to low tax/profits and possible job losses/reduced government spending (1) as income can't be guaranteed (1). Credit the idea that the price of takeaway coffee has no impact on exporting countries (1).</p> <p>Accept any other appropriate response.</p> | (4) |

| Question number | Answer | Marks |
|-----------------|--------|------------|
| 2(e)(i) | B | (1) |

| Question number | Answer | Marks |
|-----------------|---|------------|
| 2(e)(ii) | <p>Award 1 mark for each descriptive point up to a maximum of 2 marks:</p> <p>India and Indonesia are projected to have rises in air pollution levels (1), in India's case this is over 20 micrograms (1).</p> <p>India much faster rate of increase than Indonesia (1) data to support e.g. approx. 25 compared to approx. 4 (1).</p> <p>Accept any other appropriate response.</p> | (2) |

| Question number | Answer | Marks |
|------------------|---|------------|
| 2(e)(iii) | <p>Award 1 mark for identifying a consequence of economic growth and a further mark for each linked extension of how this leads to high levels of pollution (air, water or land), up to a maximum of 3 marks.</p> <p>Economic growth is a result of industrialisation (1) and the increase in factories leads to air pollution (1) such as CO₂, NO_x and SO₂ (1).</p> <p>Economic growth leads to rising demand for fossil fuels (1), which release pollution when burned in power stations/factories/vehicles (1) and waste which is dumped/land-filled (1).</p> <p>Economic growth leads to increased demand for water (1), which is often not treated in emerging countries after it is used (1), leading to chemical/sewage/farm runoff pollution in rivers and lakes (1).</p> <p>Accept any other appropriate response.</p> | (3) |

| Question number | Indicative content |
|-----------------|--|
| 2*(f) | <p style="text-align: center;">A02 (4 marks)/A03 (4 marks)</p> <p>A02</p> <ul style="list-style-type: none"> • Rapid economic change will involve both changes to the structure of the economy and changes to its regional geography, as well as a growing GDP. • Rural-urban migration is a consequence of the changing structure of the economy. • There are significant changes to the population data as a consequence of these changes being unevenly spread across society. • In many emerging economies there have been rising inequalities of income. • Impacts will be both positive and negative, with some groups benefiting both economically and socially but others not, especially the urban poor and landless rural populations. • Environmental impacts also affect human health unevenly. <p>A03</p> <ul style="list-style-type: none"> • In many emerging societies a powerful elite run the country and have profited from its development and from their relationship with both foreign governments and foreign TNCs. • Improvements in infrastructure and higher government spending have improved levels of health and education for this group and an emerging middle class, often in the major cities. • There are clearly rural groups who are not currently benefiting from rapid economic change because they lose their land as agriculture becomes more commercial. • Urban economies provide only a limited number of relatively well-paid industrial jobs so many new city dwellers are forced into the informal economy. • As a result, high rates of mortality are common in both squatter settlements and shanty towns, and in rural communities. • Long-term development might lead to the increased growth of a middle class with benefits spreading more widely as a consequence. |

| Level | Mark | Descriptor |
|---------|------|--|
| | 0 | No acceptable response |
| Level 1 | 1–3 | <ul style="list-style-type: none"> • Demonstrates isolated elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2) • Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) |
| Level 2 | 4–6 | <ul style="list-style-type: none"> • Demonstrates elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2) • Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) |
| Level 3 | 7–8 | <ul style="list-style-type: none"> • Demonstrates accurate understanding of concepts and the interrelationship of places, environments and processes. (AO2) • Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3) |

| Marks for SPGST | | |
|-----------------|-------|---|
| Performance | Marks | Descriptor |
| SPaG 0 | 0 | <i>No marks awarded</i> <ul style="list-style-type: none"> • Learners write nothing. • Learner's response does not relate to the question. • Learner's achievement in SPaG does not reach the threshold performance level, for example errors in spelling, punctuation and grammar severely hinder meaning. |
| SPaG 1 | 1 | <i>Threshold performance</i> <ul style="list-style-type: none"> • Learners spell and punctuate with reasonable accuracy. • Learners use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall. • Learners use a limited range of specialist terms as appropriate. |
| SPaG 2 | 2–3 | <i>Intermediate performance</i> <ul style="list-style-type: none"> • Learners spell and punctuate with considerable accuracy. • Learners use rules of grammar with general control of meaning overall. • Learners use a good range of specialist terms as appropriate. |
| SPaG 3 | 4 | <i>High performance</i> <ul style="list-style-type: none"> • Learners spell and punctuate with consistent accuracy. • Learners use rules of grammar with effective control of meaning overall. • Learners use a wide range of specialist terms as appropriate. |

| Question number | Answer | Marks |
|-----------------|--------|-------|
| 3(a) | C | (1) |

| Question number | Answer | Marks |
|-----------------|--------|-------|
| 3(b) | A | (1) |

| Question number | Answer | Marks |
|-----------------|---|-------|
| 3(c)(i) | <p>Award 1 mark for one of the following, maximum 1 marks:</p> <p>rural to urban migration (1)</p> <p>more jobs/opportunities in megacities (1)</p> <p>escape poverty in rural areas (1)</p> <p>Accept any other appropriate response.</p> | (1) |

| Question number | Answer | Marks |
|-----------------|--|-------|
| 3(c)(ii) | <p>Award 1 mark for identification of a reason, and a further one mark for an explanation of this reason, up to a maximum of 2 marks.</p> <p>Land is cheaper at the rural-urban fringe (1) as it is more prone to landslides (1).</p> <p>Accept other reasonable reasons as to why the land is cheaper.</p> <p>People are too poor to afford to live in the CBD/more central area (1) so the access to the CBD/more central area is more problematic (1).</p> <p>Accept other reasonable reasons as to why the people are poor.</p> <p>Accept any other appropriate response.</p> | (2) |

| Question number | Answer | Marks |
|-----------------|--------|-------|
| 3(d)(i) | A | (1) |

| Question number | Answer | Marks |
|-----------------|---------|-------|
| 3(d)(ii) | 120 000 | (1) |

| Question number | Answer | Marks |
|------------------|--|------------|
| 3(d)(iii) | <p>Award 3 marks for correctly completed bar chart. Where there are errors the maximum 3 marks must not be awarded.</p> <p>Errors are incorrectly plotted minute % lines in the bar chart.</p> <p>Allow + or – 1mm for each</p> <p>1 error = 2 marks 2 errors = 1 mark 3 errors = 0 mark</p> | (3) |

| Question number | Answer | Marks |
|-----------------|---|------------|
| 3(d)(iv) | <p>Award 1 mark for each correctly identified reason and a further mark for a linked extension to that reason, up to a maximum of 4 marks.</p> <p>Megacities are very large (1) so journey times are longer as many people commute large distances/and may use multiple modes of transport so increasing travel time (1).</p> <p>Many people live in the very centre of developing megacities (1) which means the journey time will be short as they can walk/cycle to work (1).</p> <p>In other areas of the country, e.g. rural areas people may live closer to work (1) for instance farming-related jobs (1).</p> <p>Megacities may have heavy congestion/limited transport (1), which leads to longer journey times (>60 min) (1).</p> <p>Accept any other appropriate response.</p> | (4) |

| Question number | Answer | Marks |
|-----------------|---|------------|
| 3(e)(i) | <p>Award 1 mark for an identified reason for segregation, and 1 mark each for a link to inequalities in wealth which impacts on quality of life and planning, up to a maximum of 3 marks.</p> <p>Wealthy residents occupy central city in better locations often in gated/protected/managed zones (1), ensuring higher quality of air/water/services (1).</p> <p>Poorer/dispossessed residents are forced to occupy marginal land (1) in unplanned and often illegal unmanaged dwellings with poor infrastructure so a poor quality of life (1).</p> <p>Accept any other appropriate response.</p> | (2) |

| Question number | Answer | Marks |
|-----------------|---|------------|
| 3(e)(ii) | <p>Award 1 mark for identifying a way in which bottom-up projects can improve housing, and a further one mark for a justification/extension of this improvement, up to a maximum of 2 marks.</p> <p>Micro-credit systems (1), which allow communities/residents to access resources to make targeted housing improvements (e.g. better roofing materials) (1).</p> <p>Community schemes improving access to lawyers (1) so that residential rights can be secured (1).</p> <p>Accept any other appropriate response.</p> | (2) |

| Question number | Answer | Marks |
|-----------------|--|------------|
| 3(f) | <p>Award 1 mark for identifying a correct cause of the problem and a further mark for expansion, up to a maximum of 4 marks:</p> <p>Water supply Rising population increases demand for water (1), creates pressure on supply from ground water/other sources (1).</p> <p>Rising population increases waste/pollution (1) which contaminates local water supplies/decreasing the quality of water supply (1).</p> <p>Accept any other appropriate response.</p> | (4) |

| Question number | Indicative content |
|-----------------|--|
| 3(g) | <p style="text-align: center;">A02 (4 marks)/A03 (4 marks)</p> <p>The chosen megacity can be in the developed or developing world.</p> <p>A02</p> <ul style="list-style-type: none"> • Rapid population growth will lead to a higher consumption of resources, including land, water, energy and food. • Rapid population growth will lead to a problem of managing increasing amounts of waste. • Rapid population growth will pose a strain on existing infrastructures. • Attempts to improve sustainability can be top-down improvements in public transport/schemes, e.g. bus lanes, increasing rail links, park-and-ride which will decrease waste and improve sustainability. • Attempts to improve sustainability might include urban farms and allotments, recycling schemes, affordable housing and 'greening' cities, which will decrease waste and increase output. • There are contrasts in the effectiveness of top-down and bottom-up schemes. <p>A03</p> <ul style="list-style-type: none"> • Evaluation involves a judgement made about the relative success of different schemes/projects, with some attempt to establish the criteria by which success might be measured. • Population growth poses a challenge because the rate of city growth might overwhelm the attempts to improve its living environment and the quality of life of its citizens. • Success can be measured using improvements in life expectancy, improved levels of education, reduction in crime, economic growth and a reduction in inequalities. • Some schemes have better success rates than others, e.g. success of doorstep collections compared to low success rate of recycling centres). • Success might depend on the public's willingness to change, e.g. switching from cars to buses. • Some schemes might be seen as tokenistic, e.g. urban food production is small scale and has little overall impact on urban sustainability. • Large-scale regeneration attempts could be viewed as more successful as they address economic, social and environmental sustainability, and affect larger numbers of people and perhaps address the issues caused by rapid growth. |

| Level | Mark | Descriptor |
|---------|------|--|
| | 0 | No acceptable response |
| Level 1 | 1–3 | <ul style="list-style-type: none"> • Demonstrates isolated elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2) • Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) |
| Level 2 | 4–6 | <ul style="list-style-type: none"> • Demonstrates elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2) • Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) |
| Level 3 | 7–8 | <ul style="list-style-type: none"> • Demonstrates accurate understanding of concepts and the interrelationship of places, environments and processes. (AO2) • Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3) |

Write your name here

Surname

Other names

Pearson Edexcel
Level 1/Level 2
GCSE (9–1)

Centre Number

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Geography B

Paper 2: UK Geographical Issues

Sample assessment material for first teaching
September 2016
Time: 1 hour 30 minutes

Paper Reference

1GB0/02

You must have:
Calculator

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.
- **Answer ALL questions in Sections A and B.**
- **In Section C1 answer either Question 8 or Question 9.**
- **In Section C2 answer either Question 10 or Question 11.**
- Answer the questions in the spaces provided
– *there may be more space than you need.*
- You must **show all your working out** with **your answer clearly identified** at the **end of your solution**.

Information

- The total mark for this paper is 94.
- 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 questions where the quality of your written communication will be assessed
– *you should take particular care on these questions with your spelling, punctuation, grammar and use of specialist terminology and grammar, as well as the clarity of expression.*
- The marks available for spelling, punctuation, grammar and use of specialist terminology are clearly indicated.

Advice

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

Turn over ►

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Pearson

SECTION A

The UK's Evolving Physical Landscape

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.



Figure 1

Relief map of the British Isles.

1 (a) Study **Figure 1**.

(i) Identify area X.

(1)

- ☐ **A** An upland area of Scotland
- ☐ **B** A lowland area of Wales
- ☐ **C** An upland area of Wales
- ☐ **D** A lowland area of Scotland

(ii) Which of the following best describes the river located at Y?

(1)

- ☐ **A** Its source is in central England and it flows into the Thames Estuary
- ☐ **B** Its source is in Wales and it flows into the Bristol Channel
- ☐ **C** Its source is in Scotland and it flows into the Firth of Forth
- ☐ **D** Its source is in the Pennines and it flows into the English Channel

(b) Explain **one** way in which glaciation has affected the physical landscape of the UK.

(2)

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(Total for Question 1 = 4 marks)

Coastal change and conflict

- 2 Study **Figure 2** which shows the percentage of coast that is eroding and the percentage that is defended.

| Region | Percentage (%) of coast that is eroding | Percentage (%) of coast that is defended |
|--------------------------|---|--|
| North West | 19 | 50 |
| Yorkshire and Humberside | 56 | 43 |
| East Midlands | 9 | 99 |
| East Anglia | 30 | 69 |
| South East | 31 | 54 |

Figure 2

- (a) (i) Identify the region with the highest percentage of coast that is **eroding**.

(1)

- ☐ **A** East Midlands
- ☐ **B** South East
- ☐ **C** North West
- ☐ **D** Yorkshire and Humberside

- (ii) Give **one** way the data presentation in **Figure 2** could be adapted to make it more obvious which region has the highest percentage of coast that is **defended**.

(1)

(b) Groynes are a type of coastal defence.

Explain why groynes can reduce coastal erosion.

(2)

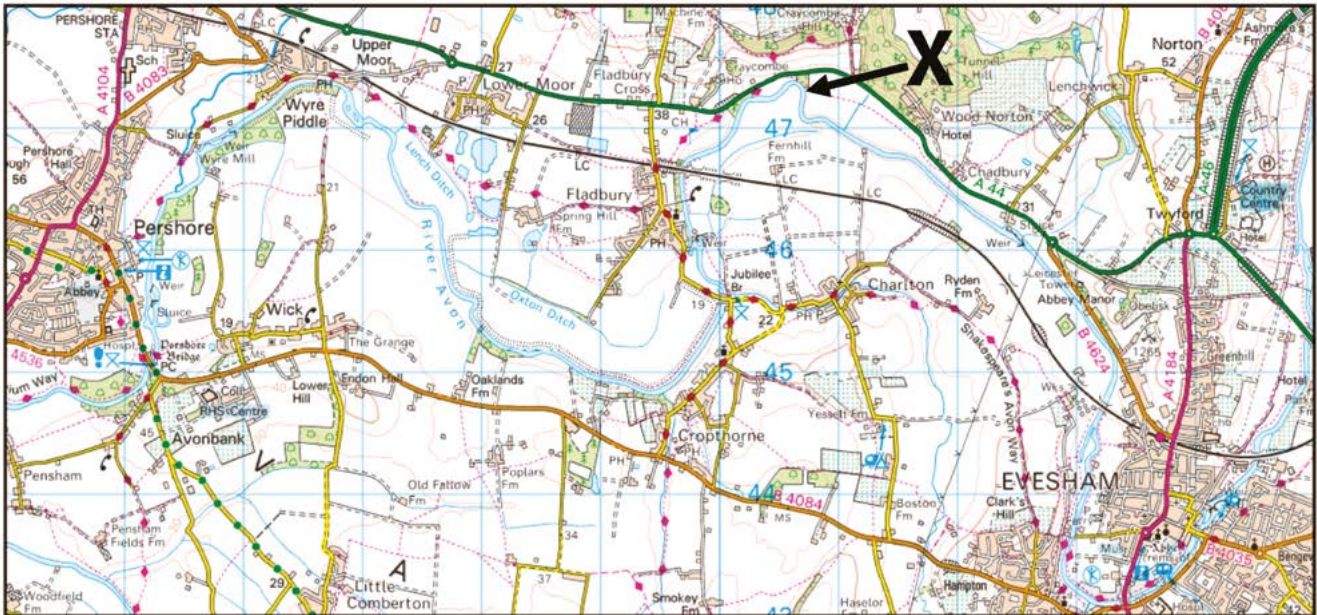
(c) Explain why differences in rock type affect the rate of erosion on UK coastlines.

(4)

(Total for Question 2 = 8 marks)

River Processes and Pressures

- 3 Study **Figure 3** which is a 1:50000 scale Ordnance Survey extract showing part of the River Avon in Worcestershire.



(Source: Extract produced by Ordnance Survey 2015.
© Crown copyright 2012. All rights reserved.)

Figure 3

- (a) (i) Which of the following is the best description of the River Avon?

(1)

- ☐ **A** A fast-flowing mountain stream
- ☐ **B** A lowland river with waterfalls and interlocking spurs
- ☐ **C** A river flowing through a steep-sided valley
- ☐ **D** A lowland river with a wide floodplain

(ii) Feature X is a meander.

Explain how a meander is formed.

(4)

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(b) Explain **one** reason why the antecedent conditions in a drainage basin can affect the peak discharge of a river's hydrograph.

(2)

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(Total for Question 3 = 7 marks)

Investigating a UK Geographical Issue

Spelling, punctuation, grammar and use of specialist terminology
will be assessed in this question.

- *4 Analyse **Figure 4** which shows the impact of a 2 metre sea level rise on UK coastal areas and numbers of properties at risk from flooding.



(Source: Map from '<http://www.theguardian.com/environment/2010/jan/29/cost-of-uk-flood-protection>')

Figure 4

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(Total for Question 4 = 12 marks)

TOTAL FOR SECTION A = 31 MARKS

SECTION B

The UK's Evolving Human Landscape

Answer ALL questions. Write your answers in the spaces provided.

- 5 Study **Figure 5** which shows the change in total population, 1981–2011, for some UK regions.



Figure 5

- (a) Which of the following regions experienced the largest increase in population between 1981 and 2011?

(1)

- ☐ **A** South West
- ☐ **B** West Midlands
- ☐ **C** London
- ☐ **D** Wales

- (b) State **two** reasons why tertiary employment has increased in the UK.

(2)

1

2

- (c) The population geography of the UK has been changed by internal migration in the past 50 years.

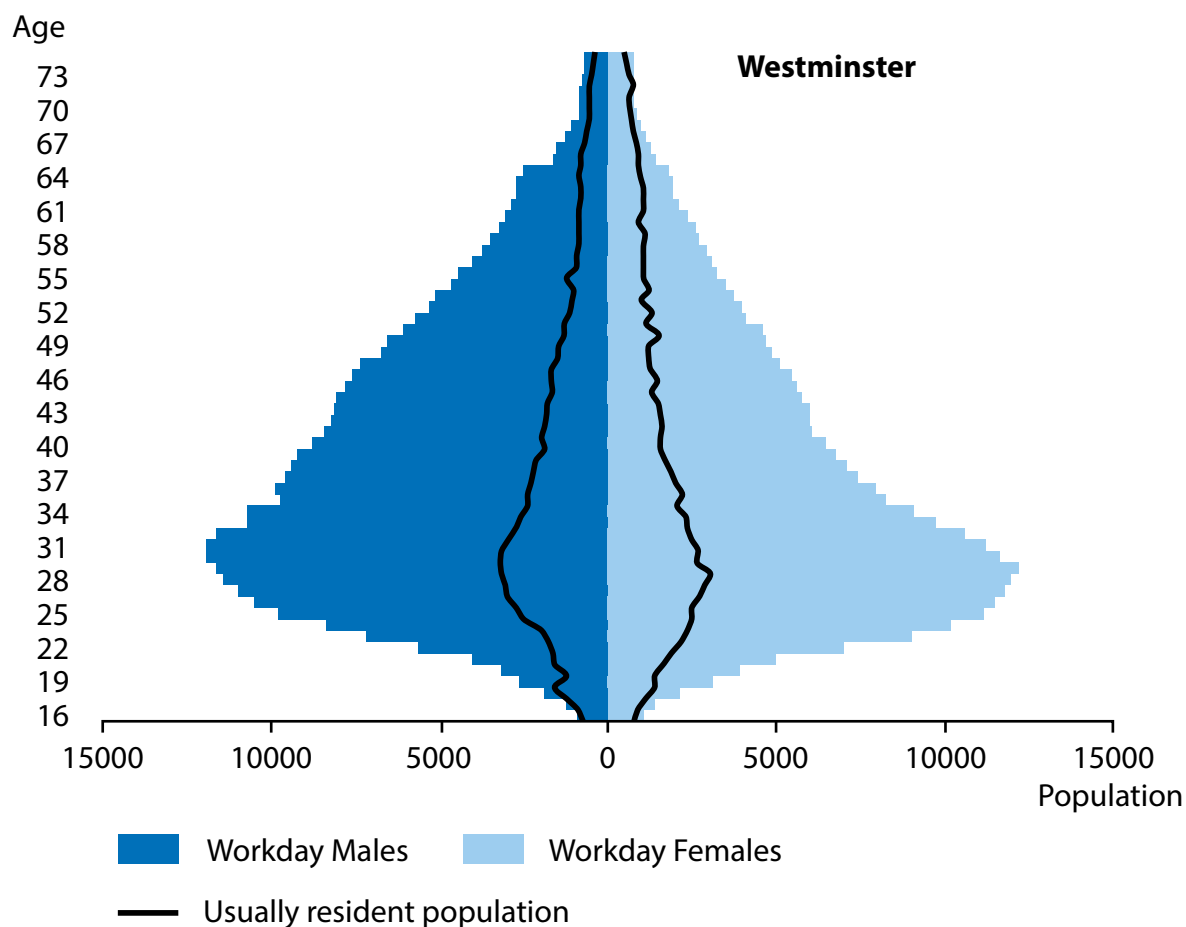
Explain **one** reason why some regions of the UK have experienced almost no population growth in the past 50 years.

(2)

(Total for Question 5 = 5 marks)

Dynamic UK cities

- 6 Study **Figure 6** which shows the population pyramid for Westminster, an area of central London.



(Source: Office for National Statistics, © Crown copyright 2015.)

Figure 6

- (a) (i) Study **Figure 6**. Identify the modal class for work day males.

(1)

- ☐ A 16
- ☐ B 31
- ☐ C 43
- ☐ D 61

- (ii) Identify **one** age group for which the work day female and resident female population is the same.

(1)

(b) Explain **one** reason why major cities attract large numbers of international migrants.

(2)

(c) State **two** characteristics of a Central Business District (CBD).

(2)

(d) Explain **two** reasons why the land use of inner cities has changed in the past 20 years.

(4)

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(e) Explain the interdependence between cities and their surrounding rural areas.

(4)

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(Total for Question 6 = 14 marks)

7 Analyse the data in **Figure 7**. It shows the affordability of houses in urban and rural areas of the UK. Affordability is calculated by comparing average house prices with average incomes.

| Location (urban/rural) | Average Income (£) | Average House Price (£) | Affordability (Average House Price/Average income) |
|------------------------|--------------------|-------------------------|--|
| Stoke-on-Trent (urban) | 17900 | 62800 | 3.5 |
| The Chilterns (rural) | 29400 | 385700 | 13.1 |
| Richmond (urban) | 36200 | 450500 | 13.6 |
| Devon coast (rural) | 19800 | 232800 | 11.8 |

Figure 7

Assess the causes of variations in house price affordability in the UK.

(8)

[illegible]

(Total for Question 7 = 8 marks)

TOTAL FOR SECTION B = 27 MARKS

SECTION C1

Geographical Investigations: Fieldwork in a Physical Environment

Answer EITHER Question 8 OR Question 9 in this section. Write your answers in the spaces provided.

If you answer Question 8 put a cross in this box ☐ .

Investigating coastal change and conflict

- 8 You have carried out a fieldwork investigation in a coastal environment.

Name your coastal environment fieldwork location:

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- (a) (i) Explain **one** reason why the method you used to measure the gradient of the beach was appropriate to the task

Name of method used

(2)

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- (ii) Explain **one** possible source of error when you measured the beach gradient.

(2)

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(b) You have used a geology map in your investigation. Explain **one** way using a geology map supported your investigation.

(2)

(c) Using an annotated diagram, explain **one** impact of coastal management on the coastal processes you studied.

(4)

- (d) A group of 20 students chose to investigate the relationship between coastal management and coastal processes along the stretch of coastline shown on **Figure 8**.

Study **Figure 8** which shows part of the Sussex coast.



(Source: Extract produced by Ordnance Survey 2015,
© Crown copyright 2012. All rights reserved.)

Key: DN = Do Nothing SR = Strategic Realignment HTL = Hold the line

Figure 8

Assess the suitability of the student's choice of sites to investigate the relationship between coastal management and coastal processes.

(8)

(Total for Question 8 = 18 marks)

If you answer Question 9 put a cross in this box ☐ .

Investigating river processes and pressures

- 9** You have carried out a fieldwork investigation in a river environment.

Name your river environment fieldwork location:

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- (a) (i) Explain **one** reason why the method you used to measure the velocity of the river was appropriate to the task.

Name of method used

(2)

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- (ii) Explain **one** possible source of error when you measured the depth of the river channel.

(2)

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- (b) You have used the Environment Agency flood-risk map in your investigation. Explain **one** way using the Environment Agency flood-risk map supported your investigation.

(2)

- (c) Using an annotated diagram, explain **one** change in the channel characteristics of the river you studied.

(4)

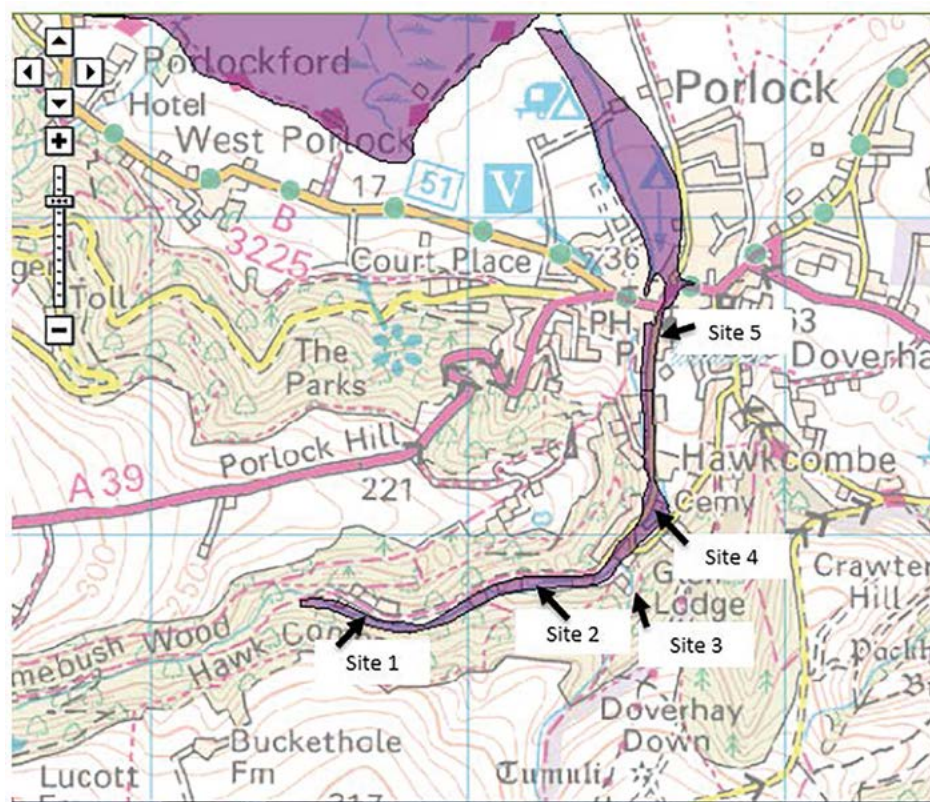
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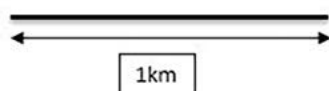
DO NOT WRITE IN THIS AREA

- (d) A group of 20 students chose to investigate the impact of changing river discharge and drainage basin characteristics on flood risk. They collected data at five sites along the Hawkcombe stream.

They had one afternoon to collect their data. They travelled between the sites in minibuses.



Scale



(Source: Extract produced by Ordnance Survey 2015,
© Crown copyright 2012. All rights reserved.)

Figure 9

Flood risk map of the Hawkcombe stream in Somerset

Assess the suitability of the student’s choice of sites to investigate the impact of changing river discharge and drainage basin characteristics on flood risk. (8)

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(Total for Question 9 = 18 marks)

TOTAL FOR SECTION C1 = 18 MARKS

SECTION C2

Geographical Investigations: Fieldwork in a Human Environment

Answer EITHER Question 10 OR Question 11 in this section. Write your answers in the spaces provided.

If you answer Question 10 put a cross in this box ☐.

Investigating dynamic urban areas

- 10 (a) Study **Figure 10** which shows levels of multiple deprivation in wards of Sunderland in 2010.

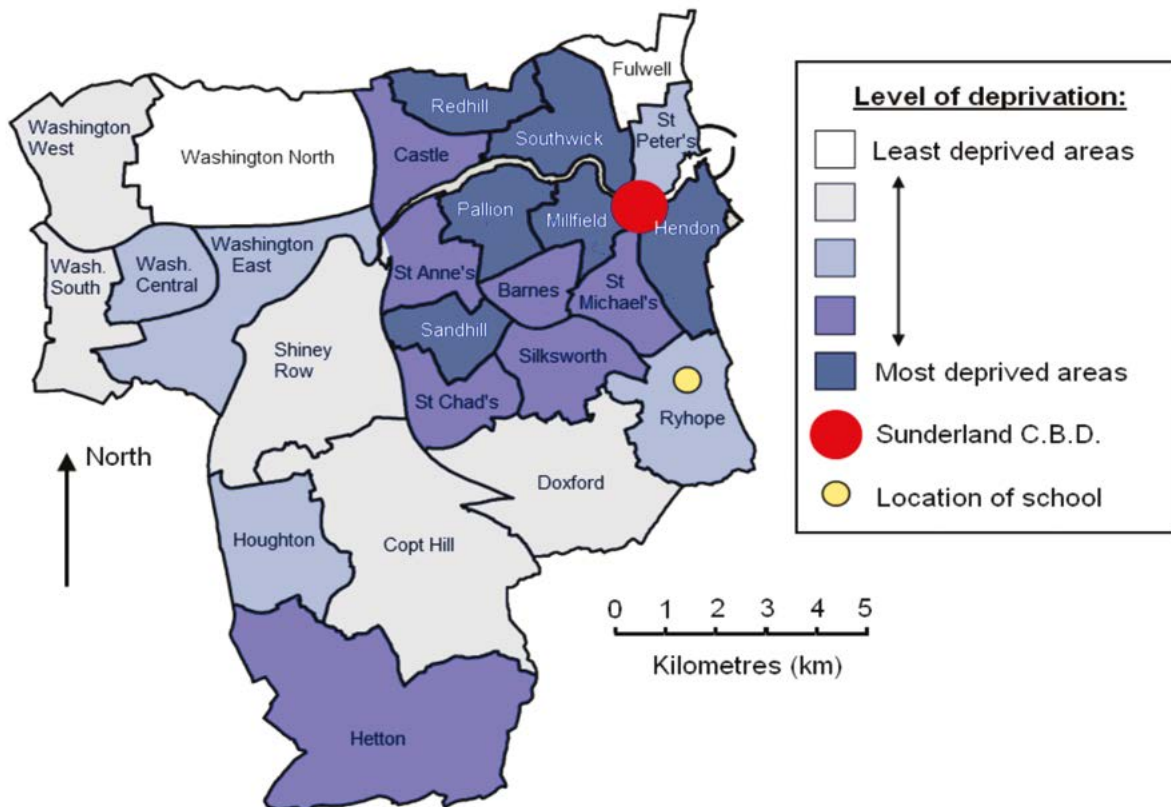


Figure 10

- A student at the school shown in Figure 10 investigated how and why the quality of life varied within the inner city residential locations in Sunderland.
- They developed this by carrying out research using the 2010 Index of Multiple Deprivation.

- (i) Explain **one** disadvantage of using the 2010 Index of Multiple Deprivation as a source of secondary data to investigate urban quality of life.

(2)

- (ii) Explain **one** weakness of using the choropleth map, **Figure 10**, to show urban deprivation.

(2)

- (iii) State **two** ways students could improve the presentation of the 2010 Index of Multiple Deprivation data to be more useful.

(2)

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2

- (iv) Identify **two** wards from **Figure 10** that would be appropriate places to carry out the student's fieldwork.

For each area explain **one** reason why it would be an appropriate place to carry out fieldwork.

(4)

Chosen ward

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Chosen ward

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(b) You have carried out your own fieldwork investigating variations in the quality of life within urban areas.

Name your urban environment fieldwork location:

Evaluate the relative importance of primary and secondary data in your investigation.

(8)

(Total for Question 10 = 18 marks)

If you answer Question 11 put a cross in this box ☐ .

Investigating changing rural areas

- 11 (a) Study **Figure 11** which shows levels of deprivation in rural areas in and around the South Downs National Park.

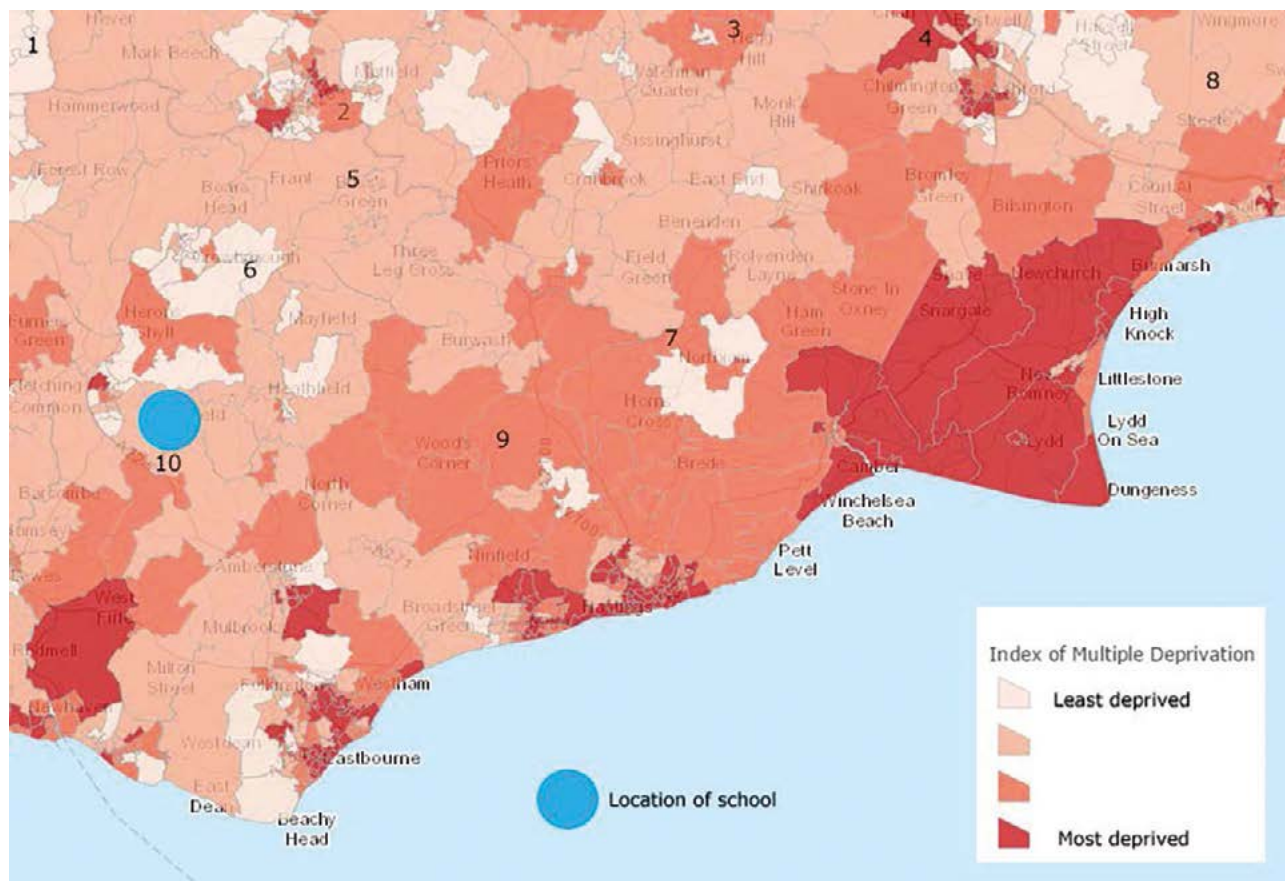


Figure 11

- A student at the school shown on Figure 11 investigated how and why the level of deprivation varied in rural areas of Sussex.
- They developed this by carrying out research using the 2010 Index of Multiple Deprivation.

- (i) Explain **one** disadvantage of using the 2010 Index of Multiple Deprivation as a source of secondary data to investigate rural quality of life.

(2)

- (ii) Explain **one** weakness of using the choropleth map, **Figure 11**, to show rural deprivation.

(2)

- (iii) State **two** ways students could improve the presentation of the 2010 Index of Multiple Deprivation data to be more useful.

(2)

1

2

(iv) Identify **two** Parish Councils from **Figure 11** that would be appropriate places to carry out the student's fieldwork.

For each site explain **one** reason why it would be an appropriate place to carry out fieldwork.

(4)

Chosen Parish

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Chosen Parish

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- (b) You have carried out your own fieldwork investigating variations in the quality of life of rural areas.

Name your rural environment fieldwork location:

Evaluate the relative importance of primary and secondary data in your investigation.

(8)

(Total for Question 11 = 18 marks)

TOTAL FOR SECTION C2 = 18 MARKS
TOTAL FOR PAPER = 94 MARKS

Paper 2 Mark scheme

| Question number | Answer | Mark |
|-----------------|--------|------|
| 1(a)(i) | A | (1) |

| Question number | Answer | Mark |
|-----------------|--------|------|
| 1(a)(ii) | B | (1) |

| Question number | Answer | Mark |
|-----------------|---|------|
| 1(b) | <p>Award 1 mark for appropriate processes and a further one mark linked to appropriate landform, up to a maximum of 2 marks.</p> <p>Moving ice (glaciers) have modified or eroded valleys (1) by widening them and deepening them through glacial abrasion creating U-shaped valley(s) (1).</p> <p>Melting ice has raised sea levels (1) flooding river valleys creating rias and/or estuaries and/or lochs (1).</p> <p>Accept any other appropriate response.</p> | (2) |

| Question number | Answer | Mark |
|-----------------|--------|------|
| 2(a)(i) | D | (1) |

| Question number | Answer | Mark |
|-----------------|--|------|
| 2(a)(ii) | <p>Award one mark for a graphical presentation technique that would improve clarity of data up to a maximum of one mark, such as:</p> <ul style="list-style-type: none"> • line graph (1) • pie chart (1) • bar graph (1). <p>Accept any reasonable presentation techniques that would improve clarity of data.</p> | (1) |

| Question number | Answer | Mark |
|-----------------|---|------------|
| 2(b) | <p>Award 1 mark for how groynes work and a further one mark for how they protect the coast, up to a maximum of 2 marks:</p> <p>groynes trap sand (1), which absorbs wave energy (1).</p> <p>Accept any other appropriate response.</p> | (2) |

| Question number | Answer | Mark |
|-----------------|--|------------|
| 2(c) | <p>Award 1 mark for appropriate property of rock and a further one mark for relationship to process(es), up to a maximum of 4 marks:</p> <p>Differences in rock hardness/softness (1), which affects the rate of erosion through abrasion/hydraulic action because softer rocks are less resistant/cohesive (1).</p> <p>Differences in rock jointing/structure (1) affected by hydraulic action/abrasion so well-jointed rocks erode faster than less well-jointed rocks because larger surface area in contact with water (1).</p> <p>Accept any other appropriate response.</p> | (4) |

| Question number | Answer | Mark |
|-----------------|--------|------------|
| 3(a)(i) | D | (1) |

| Question number | Answer | Mark |
|-----------------|--|------------|
| 3(a)(ii) | <p>Award 1 mark for process of formation and a further 3 marks expansion, up to a maximum of 4 marks.</p> <p>Abrasion takes place closer to the outside of the bend (1) This happens because this is the fastest-flowing part of the channel (1) the slowest-flowing water is on inside of bend (1) so deposition occurs there (1).</p> <p>Accept any other appropriate response.</p> | (4) |

| Question number | Answer | Mark |
|-----------------|---|------------|
| 3(b) | <p>Award 1 mark for impact on infiltration of antecedent conditions and a further mark for reason why this increases/decreases peak discharge, up to a maximum of 2 marks.</p> <p>If there has been a lot of rain the ground will be saturated and 'cannot take any more' or similar idea (1), therefore more water runs off the surface thus reaches river in a shorter time, hence higher peak discharge (than normal) (1).</p> <p>If the ground is very dry even the rain from a very intense event will be absorbed/infiltrated (or similar idea) (1) so water will reach the river more slowly, thus a lower peak discharge (than normal) (1).</p> <p>Accept any other appropriate response</p> | (2) |

| Question number | Indicative content |
|-----------------|--|
| 4 | <p style="text-align: center;">A03 (4 marks)/A04 (4 marks)</p> <p>A03</p> <ul style="list-style-type: none"> Physical factors (e.g. longer coastlines might be expected to have more areas at risk, coastal landscape – how low lying, presence of river estuaries). Human factors (e.g. coastal protection and management schemes will create varied levels of protection, building on floodplains depending on planning restrictions and population pressures in that region). Numbers of properties at risk is a complex function of several variables, both human and physical, including the size and number of areas at risk. For example - East Anglia is lightly populated so large-scale coastal flooding will have a modest impact on numbers of properties threatened – this may be a function of specific management plans too – e.g. managed retreat. On the other hand, other areas, e.g. South West, have many properties at risk which may reflect the nature of its coastal landscape, the length of its coastline and population distribution. London and the south east stands out as a densely populated region with a low coastline, thus high numbers but some areas protected, e.g. London. <p>A04</p> <ul style="list-style-type: none"> Significant variations in size of areas at risk – east coast at greater risk than west or south. In the east of England region almost all the coast is at risk. Pattern of properties at risk is uneven, with largest number of properties at risk in the south east (111,356). Relatively few in north east (19,167) and West Midlands (19,173). No obvious relationship between size/number of areas at risk and numbers of properties at significant risk. |

| Level | Mark | Descriptor |
|---------|------|---|
| | 0 | No acceptable response |
| Level 1 | 1–2 | <ul style="list-style-type: none"> Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4) |
| Level 2 | 3–5 | <ul style="list-style-type: none"> Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4) |
| Level 3 | 6–8 | <ul style="list-style-type: none"> Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3) Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4) |

| Marks for SPGST | | |
|-----------------|-------|---|
| Performance | Marks | Descriptor |
| SPaG 0 | 0 | <i>No marks awarded</i> <ul style="list-style-type: none"> Learners write nothing. Learner's response does not relate to the question. Learner's achievement in SPaG does not reach the threshold performance level, for example errors in spelling, punctuation and grammar severely hinder meaning. |
| SPaG 1 | 1 | <i>Threshold performance</i> <ul style="list-style-type: none"> Learners spell and punctuate with reasonable accuracy. Learners use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall. Learners use a limited range of specialist terms as appropriate. |
| SPaG 2 | 2–3 | <i>Intermediate performance</i> <ul style="list-style-type: none"> Learners spell and punctuate with considerable accuracy. Learners use rules of grammar with general control of meaning overall. Learners use a good range of specialist terms as appropriate. |
| SPaG 3 | 4 | <i>High performance</i> <ul style="list-style-type: none"> Learners spell and punctuate with consistent accuracy. Learners use rules of grammar with effective control of meaning overall. Learners use a wide range of specialist terms as appropriate. |

| Question number | Answer | Mark |
|-----------------|--------|------|
| 5(a) | C | (1) |

| Question number | Answer | Mark |
|-----------------|--|------|
| 5(b) | <p>Award 1 mark for each of the following, up to a maximum of 2 marks.</p> <p>Growth in retail and services as disposable incomes rise (1).</p> <p>Declining numbers in primary and secondary industry lead to greater proportion of employment in tertiary industry (1).</p> <p>Globalisation led to rise in financial and business services, e.g. London (1).</p> <p>Accept any other appropriate response.</p> | (2) |

| Question number | Answer | Mark |
|-----------------|---|------------|
| 5(c) | <p>Award 1 mark for identification of legitimate cause in identifiable area and a further mark for the impact on the population, up to a maximum of 2 marks.</p> <p>Some areas that have experienced closure of manufacturing/factories, e.g. the north-east (1) so people have moved away to find work (1).</p> <p>Accept any other appropriate response.</p> | (2) |

| Question number | Answer | Mark |
|-----------------|--------|------------|
| 6(a)(i) | B | (1) |

| Question number | Answer | Mark |
|-----------------|-----------------------|------------|
| 6(a)(ii) | Accept 16–17 or 69–71 | (1) |

| Question number | Answer | Mark |
|-----------------|--|------------|
| 6(b) | <p>Award 1 mark for identification of a reason and a further mark for an explanation of the reason, up to a maximum of 2 marks.</p> <p>Lots of high-paid professional jobs (1) because lots of trans-national corps have headquarters in major cities (1).</p> <p>Major cities are easiest to travel to (1) because they have better transport connections/airports (1).</p> <p>Likely to find familiar stuff/language (1) because major cities have existing international/cultural communities (1).</p> <p>Accept any other appropriate response.</p> | (2) |

| Question number | Answer | Mark |
|-----------------|---|------------|
| 6(c) | <p>Award 1 mark for each of the following, up to a maximum of 2 marks:</p> <p>dominated by commercial land use (1)</p> <p>low resident population (1)</p> <p>very high land values (1)</p> <p>high building density (1).</p> <p>Do not accept 'it is in the centre'.</p> <p>Accept any other appropriate response.</p> | (2) |

| Question number | Answer | Mark |
|-----------------|--|------------|
| 6(d) | <p>Award 1 mark for identification of a reason and a further mark each for an explanation of that reason, up to a maximum of 2 marks each:</p> <ul style="list-style-type: none"> • Accessibility has changed in last 20 years, with new transport developments and new forms of communication (1), this leads to changing affordability and therefore patterns of demand for land (1) • Economic changes, such as deindustrialisation will lead to land-use changes (1), deindustrialisation will create brownfield sites that may then become commercial space including offices and retail premises (1). • Political decisions/planning will lead to land-use changes (1), planners might insist on some housing provision creating a mixed land-use of commerce and residential space (1). <p>Accept any other appropriate response.</p> | (4) |

| Question number | Answer | Mark |
|-----------------|---|------|
| 6(e) | <p>Award 1 mark for identification of a reason for interdependence between cities and their surrounding rural areas, and a further 3 marks for an explanation of this reason, up to 4 marks.</p> <p>People commute from rural areas into cities (1), so rural areas experience pressure to build houses/infrastructure as cities grow (1), which is beneficial because house prices increase (1) but this has the effect of pushing out local people (1).</p> <p>Cities get resources from surrounding area (1), which leads to the growth of local amenities and services (1), people from cities use rural areas for leisure and recreation (1), which supports their economy (1).</p> <p>Accept any other appropriate response.</p> | (4) |

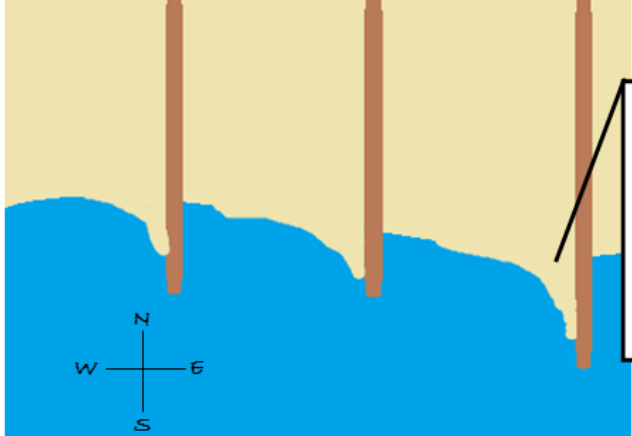
| Question number | Indicative content |
|-----------------|--|
| 7 | <p style="text-align: center;">AO3 (4 marks)/AO4 (4 marks)</p> <p>AO3</p> <ul style="list-style-type: none"> • Income variations determined by level of economic activity. • Deindustrialisation, leading to decline in demand in old manufacturing heartland (Stoke-on-Trent). • Some urban areas in high demand because of economic growth, especially in London and the south east. • International migration contributing to high demand. • Supply issues – competition with other land users, especially in London and south east. • Role of planning in restricting building in greenbelt areas. • Rural areas more variable but distance from major cities a factor. • London the main driver of the changes, including impact on affordability in commuter villages but also retirement impact in other rural areas. <p>AO4</p> <ul style="list-style-type: none"> • Large variations in income with Richmond x 2 Stoke-on-Trent. • Even larger variations in average house prices with Richmond x 7 of Stoke-on-Trent. • Consequentially, very large variations in affordability. • Urban incomes more polarised than rural. • Same true of house prices. • Urban at both extremes of affordability – most and least (3.5–13.6). |

| Level | Mark | Descriptor |
|---------|------|---|
| | 0 | No acceptable response. |
| Level 1 | 1–2 | <ul style="list-style-type: none"> Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4) |
| Level 2 | 3–5 | <ul style="list-style-type: none"> Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4) |
| Level 3 | 6–8 | <ul style="list-style-type: none"> Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3) Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4) |

| Question number | Answer | Mark |
|-----------------|---|------|
| 8(a)(i) | <p>Award 1 mark for identifying why the method was appropriate to the task and a further mark for expansion, up to a maximum of 2 marks.</p> <p>Clinometer It was appropriate because the beach had uneven variations in gradient (1) and clinometer allowed me to take readings for different sizes of intervals/at the points of gradient change (1).</p> <p>Pantometer It was appropriate to use a pantometer because the beach width was narrow (1) and the pantometer allowed me to survey the beach gradient at regular and short intervals (1).</p> <p>Accept any other appropriate response.</p> | (2) |

| Question number | Answer | Mark |
|-----------------|---|------------|
| 8(a)(ii) | <p>Award 1 mark for identifying a source of error and a further mark for expanding on how the error could happen, up to a maximum of 2 marks.</p> <p>I used a systematic sampling technique/interval distance was large/small number of intervals (1) which may have missed variations in gradient between the intervals (1).</p> <p>Human error using the clinometer/the ground that supported the ranging pole was not stable/pole sank into the sand (1) which could have led to inaccurate angle readings (1).</p> <p>Accept any other appropriate response.</p> | (2) |

| Question number | Answer | Mark |
|-----------------|---|------------|
| 8(b) | <p>Award 1 mark for one identifying how the map supported the investigation and a further mark for an explanation of why, up to a maximum of 2 marks:</p> <p>The geology map helped ensure that we chose appropriate sites to study (1) because it gave information about where different types of geology were located (1).</p> <p>The geology map helped me to understand why coastal processes had certain impacts on the landscape (1) because it gave me information about the underlying geology of that area (1).</p> <p>Accept any other appropriate response.</p> | (2) |

| Question number | Answer | Mark |
|-----------------|---|------|
| 8(c) | <p>Diagram: award up to 2 marks for a clear and accurate diagram of a coastal environment that has been impacted by coastal management.</p> <p>Annotation: award 1 mark for identifying an impact of the chosen coastal management method and a further one mark for expansion, up to a maximum of 2 marks.</p>  | (4) |

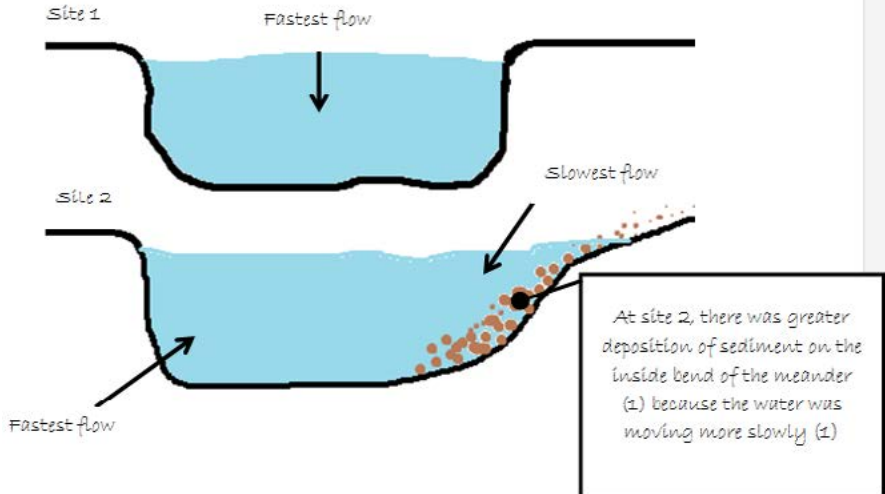
| Question number | Indicative content |
|-----------------|--|
| 8(d) | <p style="text-align: center;">AO3 (4 marks)/AO4 (4 marks)</p> <p>AO3</p> <ul style="list-style-type: none"> • Sites 1, 4 and 3 are appropriate because they cover stretches of coastline where the coastal management policy is different so students will be able to compare the relational between coastal management and coastal processes. • The findings and conclusions of the investigation may be incomplete or inaccurate because all sites are located along stretches of coastline that are being managed by hold the line/strategic realignment/construction of groynes. • Students will not be able to compare stretches of coastline that are being managed with stretches that are not being managed, e.g. the nature reserve where the policy is to do nothing. • There is no evidence of a sampling strategy so findings and conclusions may be inaccurate or invalid. • Site 5 is not appropriate because it is on the other side of the headland/located where the coastline changes direction, which means the conditions may be different, e.g. prevailing wind and wave direction and this may result in inaccurate findings. <p>AO4</p> <ul style="list-style-type: none"> • Sites 1–4 cover stretches of coastline where the policy is to hold the line and strategic realignment. • Sites are predominantly located in built-up areas such as Selsey that are used for tourism, e.g. caravan site, camping, and holiday village. • Sites 1–4 cover stretches of coastline where groynes have been constructed. • Sites 1 and 2 are located close together. • The sites do not cover a large area south of the holiday village, it has a different land use and is used as a nature reserve. • Sites do not cover the full range of coastal management policies, e.g. do nothing. • Site 5 is located on the other side of the headland. |

| Level | Mark | Descriptor |
|---------|------|--|
| | 0 | No acceptable response. |
| Level 1 | 1–3 | <ul style="list-style-type: none"> Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4) |
| Level 2 | 4–6 | <ul style="list-style-type: none"> Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity, using relevant geographical terminology occasionally. (AO4) |
| Level 3 | 7–8 | <ul style="list-style-type: none"> Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3) All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity and uses relevant geographical terminology consistently. (AO4) |

| Question number | Answer | Mark |
|-----------------|--|------|
| 9(a)(i) | <p>Award 1 mark for identifying why the method was appropriate to the task and a further mark for expansion, up to a maximum of 2 marks.</p> <p>Flowmeter It was appropriate because the river was flowing fast (1), which meant the most accurate reading could be taken under the surface (1)</p> <p>Floating Object It was appropriate because the river was flowing slowly (1), which meant the most accurate reading could be taken from the surface (1)</p> <p>Accept any other appropriate response.</p> | (2) |

| Question number | Answer | Mark |
|-----------------|--|------|
| 9(a)(ii) | <p>Award 1 mark for identification of a source of error and a further one mark for an explanation of the source of the error, up to 2 marks.</p> <p>The ruler/meter rule/ranging pole can sink into the river bed (1) which could have led to inaccurate depth readings (1).</p> <p>The velocity of the river could interfere with the ruler being vertical (1), which could make it difficult to get a clear depth reading (1).</p> <p>I could not see the bottom of the river very clearly (1) so may have included an anomalous depth reading without knowing (1).</p> <p>Accept any other appropriate response.</p> | (2) |

| Question number | Answer | Mark |
|-----------------|--|------|
| 9(b) | <p>Award 1 mark for one identifying how the map supported the investigation, and a further 1 mark for an explanation of why, up to a maximum of 2 marks.</p> <p>The flood-risk map helped me to understand why some parts are at risk of flooding than others (1) because it gave information about the flood defences used in different areas/the physical land relief in different areas (1).</p> <p>The flood risk map helped me to compare the level of flood risk in different areas (1) which ensured that I chose meaningful sites with different levels of risk to study (1).</p> <p>Accept any other appropriate response.</p> | (2) |

| Question number | Answer | Mark |
|-----------------|--|------|
| 9(c) | <p>Diagram: award up to 2 marks for a clear and accurate diagram of a change in channel characteristics.</p> <p>Annotation: award 1 mark for identifying a channel characteristic change and a further one mark for explaining the change, up to a maximum of 2 marks.</p> <p>Example:</p>  <p>At site 2, there was greater deposition of sediment on the inside bend of the meander (1) because the water was moving more slowly (1)</p> | (4) |

| Question number | Indicative content |
|-----------------|---|
| 9(d) | <p style="text-align: center;">AO3 (4 marks)/AO4 (4 marks)</p> <p>AO3</p> <ul style="list-style-type: none"> • Sites 1, 2, 4 and 5 are appropriate. Across the range of sites, students will observe changes in river discharge and drainage basin characteristics, which will enable them to investigate the relationship between river discharge and drainage basin characteristics and flood risk. • The findings and conclusions of the investigation may be incomplete or inaccurate because the students will not be visiting the area north/downstream of Porlock that is at the greatest risk of flooding, and will have contrasting river discharge and drainage basin characteristics to the other sites. • Students will not be able to compare stretches of the river that have a higher/more extensive flood risk. • There is evidence of a sampling strategy as the sites are evenly spaced along the river between Sites 1 to 5. However, Site 3 is not appropriate because it is located on a tributary of the River Hawkcome, it is not an area at risk of flooding, the conditions may be different – this may result in inaccurate findings. <p>AO4</p> <ul style="list-style-type: none"> • Sites 2, 3 and 4 are located close together and have similar drainage basin characteristics, e.g. steep-sided river valley, vegetated, deciduous forest, and sparsely populated. • Site 1 is located on a tributary of the River Hawkcome and is not in an area of flood risk. • Site 5 is located in the village of Porlock. The land use is built up. Amenities such as a visitor centre, public house, and post office. • The sites do not cover the area north of Porlock where there is a campsite and caravan site and where there is a larger area at risk of flooding. |

| Level | Mark | Descriptor |
|---------|------|--|
| | 0 | No acceptable response. |
| Level 1 | 1–3 | <ul style="list-style-type: none"> Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4) |
| Level 2 | 4–6 | <ul style="list-style-type: none"> Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity, using relevant geographical terminology occasionally. (AO4) |
| Level 3 | 7–8 | <ul style="list-style-type: none"> Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3) All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity and uses relevant geographical terminology consistently. (AO4) |

| Question number | Answer | Mark |
|-----------------|--|------------|
| 10(a)(i) | <p>Award 1 mark for point about secondary data and a further one mark for explanation of disadvantage, up to a maximum of 2 marks.</p> <p>Data is from 2010 (1) and so might be out of date (1).</p> <p>IMD is a composite index (1) and so has domains that might not be relevant to inner-city deprivation (1).</p> <p>Accept any other appropriate response.</p> | (2) |

| Question number | Answer | Mark |
|------------------|---|------------|
| 10(a)(ii) | <p>Award 1 mark for identifying a disadvantage of choropleth maps and a further mark for justifying how this disadvantage relates to urban deprivation up to a maximum two marks.</p> <p>The choropleth map shows data for wards as a whole (1), which means that variation of deprivation within wards is ignored (1).</p> <p>The choropleth map uses one colour for the whole ward (1) which means it looks like there are sudden changes at ward borders/which ignores the gradual changes of deprivation across borders (1).</p> <p>Accept any other appropriate response.</p> | (2) |

| Question number | Answer | Mark |
|-------------------|--|------------|
| 10(a)(iii) | <p>Award 1 mark for each of the following, up to a maximum of 2 marks.</p> <p>Could break the data down by neighbourhoods/smaller areas (1).</p> <p>Could use an isopleth/isoline/heat map (1).</p> <p>Could use GIS to incorporate additional information on population density (1).</p> <p>Accept any other appropriate response.</p> | (2) |

| Question number | Answer | Mark |
|------------------|--|------------|
| 10(a)(iv) | <p>Award 1 mark each for any of the following points and a further mark expansion, up to a maximum 2 marks each:</p> <p>range of deprivation needed (1)</p> <p>size of ward in which to gather data in given time available (1)</p> <p>distance from school (1)</p> <p>safety considerations (1).</p> <p>Accept any other appropriate response.</p> | (4) |

| Question number | Indicative content |
|-----------------|--|
| 10(b) | <p style="text-align: center;">AO3 (4 marks)/AO4 (4 marks)</p> <p>AO3</p> <ul style="list-style-type: none"> • Reference should be made to the results of data collection in terms of specific locations and their judged quality of life. • Conclusions reached should be clear with references, not only to the secondary data but also primary data could be considered and how it supports the interpretation of secondary data. Does it reinforce or conflict? • Assessment should include how easy it was to access and use the secondary data, e.g. the correspondence between primary data collection at specific sites whereas much of the secondary data is areal. • Reliability might be considered in terms of the age of the data, e.g. IMD data is currently 2010 but is itself based on older data. • Assessment address the correspondence between secondary data sources and the results of primary data collection. <p>AO4</p> <ul style="list-style-type: none"> • Quality of life is a concept that can be assessed in a number of different ways using several secondary sources. • Census data might reveal significant information about economic and social variations within the inner city, specifics include age, employment and education attainment. • Crime databases will reveal variations in incidences of different types of crime. • Index of Multiple Deprivation can be used at Lower Super Output Area level – this combines seven different ‘types’ (domains) of deprivation which relate to quality of life. • There are significant variations in deprivation when the different domains are compared. • The domain covering ‘living environment’ includes both indoor and outdoor components, which can be compared to primary data information, e.g. Environmental Quality Indices. <p>Allow any acceptable data that investigates quality of life in inner urban areas.</p> |

| Level | Mark | Descriptor |
|---------|------|--|
| | 0 | No acceptable response. |
| Level 1 | 1–3 | <ul style="list-style-type: none"> Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4) |
| Level 2 | 4–6 | <ul style="list-style-type: none"> Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity, using relevant geographical terminology occasionally. (AO4) |
| Level 3 | 7–8 | <ul style="list-style-type: none"> Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3) All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity and uses relevant geographical terminology consistently. (AO4) |

| Question number | Answer | Mark |
|-----------------|---|------------|
| 11(a)(i) | <p>Award 1 mark for point about secondary data and a further mark for explanation of disadvantage, up to a maximum of 2 marks.</p> <p>Data is from 2010 (1) and so might be out of date (1).</p> <p>IMD is a composite index (1) and so has domains that might not be relevant to rural deprivation (1).</p> <p>Accept any other appropriate response.</p> | (2) |

| Question number | Answer | Mark |
|------------------|--|------------|
| 11(a)(ii) | <p>Award 1 mark for identifying a disadvantage of choropleth maps and a further mark for justifying how this disadvantage relates to rural deprivation, up to a maximum 2 marks.</p> <p>Choropleths exaggerate differences between areas (1) because areas might fall into different categories although very similar (1).</p> <p>Choropleths do not show variations in an area (1) so might disguise or hide pockets of deprivation (1).</p> <p>IMD data shown for super output areas which are different sizes reflecting variations in population density (1) so initial 'reading' might be very misleading with smaller SOAs being 'lost' on the map (1).</p> <p>Accept any other appropriate response.</p> | (2) |

| Question number | Answer | Mark |
|-------------------|--|------------|
| 11(a)(iii) | <p>Award 1 mark for each of the following, up to a maximum of 2 marks.</p> <p>Add the figures showing rank position (1).</p> <p>Show different domains of deprivation for comparison (1).</p> <p>Add key locations, transport links (1).</p> <p>Use an OS map as a base so boundaries are clear (1)</p> <p>Accept any other appropriate response.</p> | (2) |

| Question number | Answer | Mark |
|------------------|---|------------|
| 11(a)(iv) | <p>Award 1 mark each for any of the following points, and a further mark expansion, up to a maximum 2 marks each:</p> <p>range of deprivation needed (1)</p> <p>size of ward in which to gather data in given time available (1)</p> <p>distance from school (1)</p> <p>safety considerations (1).</p> <p>Accept any other appropriate response.</p> | (4) |

| Question number | Indicative content |
|-----------------|---|
| 11(b) | <p style="text-align: center;">A03 (4 marks)/A04 (4 marks)</p> <p>A03</p> <ul style="list-style-type: none"> • Reference should be made to the results of data collection in terms of specific locations and their judged quality of life. • Conclusions reached should be clear with references, not only to the secondary data but also primary data could be considered and how it supports the interpretation of secondary data. Does it reinforce or conflict? • Assessment should include how easy it was to access and use the secondary data, e.g. the correspondence between primary data collection at specific sites, whereas much of the secondary data is areal. • Reliability might be considered in terms of the age of the data, e.g. IMD data is currently 2010 but is itself based on older data. • Assessment address the correspondence between secondary data sources and the results of primary data collection. <p>A04</p> <ul style="list-style-type: none"> • Quality of life is a concept that can be assessed in a number of different ways using several secondary sources. • Census data might reveal significant information about economic and social variations within rural areas, specifics include age, employment and education attainment. • Crime databases will reveal variations in incidences of different types of crime. • Index of Multiple Deprivation can be used at Lower Super Output Area level – this combines seven different ‘types’ (domains) of deprivation which relate to quality of life. • There are significant variations in deprivation when the different domains are compared. • The domain covering ‘living environment’ includes both indoor and outdoor components, which can be compared to primary data information, e.g. Environmental Quality Indices <p>Allow any acceptable data that investigates quality of life in rural areas.</p> |

| Level | Mark | Descriptor |
|---------|------|--|
| | 0 | No acceptable response. |
| Level 1 | 1–3 | <ul style="list-style-type: none"> Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4) |
| Level 2 | 4–6 | <ul style="list-style-type: none"> Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity, using relevant geographical terminology occasionally. (AO4) |
| Level 3 | 7–8 | <ul style="list-style-type: none"> Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3) All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity and uses relevant geographical terminology consistently. (AO4) |

Write your name here

Surname

Other names

Pearson Edexcel
Level 1/Level 2
GCSE (9–1)

Centre Number

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Candidate Number

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Geography B

Paper 3: People and Environment Issues – Making Geographical Decisions

Sample assessment material for first teaching
September 2016
Time: 1 hour 30 minutes

Paper Reference

1GB0/03

You must have:

Resource Booklet, a calculator

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.
- Answer **all** questions.
- Answer the questions in the spaces provided
– *there may be more space than you need.*
- You must **show all your working out** with **your answer clearly identified** at the **end of your solution**.

Information

- The total mark for this paper is 64.
- 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 questions where the quality of your written communication will be assessed
– *you should take particular care on these questions with your spelling, punctuation, grammar and use of specialist terminology and grammar, as well as the clarity of expression.*
- The marks available for spelling, punctuation, grammar and specialist terminology are clearly indicated.

Advice

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

Turn over ►

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SECTION A

People and the Biosphere

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

1 Use Section A (page 3) in the Resource Booklet to answer this question.

(a) Study Figure 1. It is a map of biomes.

(i) What is meant by the term 'biome'?

(1)

(ii) Identify biome X.

(1)

(iii) Identify biome Y.

(1)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

- (b) Study Figure 2 which shows how variations in temperature and rainfall influence the distribution of forest biomes.

Identify the rainfall range needed for tropical rainforest growth.

(1)

- ☐ **A** 500–2300mm
- ☐ **B** 1750–4500mm
- ☐ **C** 1000–4500mm
- ☐ **D** 1750–2500mm

- (c) State **two** resources local people might obtain from the biosphere.

(2)

- (d) Explain **one** way the biosphere can maintain soil health.

(2)

(Total for Question 1 = 8 marks)

TOTAL FOR SECTION A = 8 MARKS

SECTION B**Forests under threat**

2 Use Section B (pages 4 and 5) in the Resource Booklet to answer this question.

(a) Study Figure 4 which shows a photograph of the rainforest in Madre de Dios.

(i) Identify **three** features of the rainforest shown.

(3)

Feature 1

.....

Feature 2

.....

Feature 3

.....

(ii) Study figures 1, 3 and 4.

Explain why Peru has high levels of biodiversity

(4)

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(Total for Question 2 = 7 marks)

TOTAL FOR SECTION B = 7 MARKS

SECTION C

Consuming energy resources

3 Use Section C (pages 6, 7 and 8) in the Resource Booklet to answer this question.

(a) Study Figure 5. It is a factfile about Peru.

(i) The economy of Peru has been growing rapidly at around 6% GDP per year.

Calculate the projected GDP per capita for 2016.

Show your working.

(2)

(ii) GDP is one indicator of development progress.

State **two** other pieces of evidence from Figure 5 which suggest that Peru has made rapid development progress from 2000 to 2014. Use data in your answer.

(2)

1

2

(b) Study Figure 6 which shows details of energy consumption in Peru in 2014.

(i) What percentage of Peru's energy use comes from fossil fuels?

(1)

- ☐ **A** 6%
- ☐ **B** 11%
- ☐ **C** 33%
- ☐ **D** 67%

(ii) Study Figure 7 which shows trends in oil production and consumption in Peru.

Explain why the Peruvian government was concerned about energy supply in 2000 – 2008.

(2)

(iii) Explain why changes in oil prices might affect Peruvian oil production.

(2)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

[illegible]

(d) Study Figure 9 which shows possible impacts of oil and gas development.

Using evidence from the resource, assess the local and national economic benefits of developing the oil and gas.

(8)

(e) (i) Renewable energy is an alternative approach to fossil fuels. Explain **two** negative impacts on the environment of developing renewable energy resources.

(4)

DO NOT WRITE IN THIS AREA

[illegible]

Study Figure 10 which shows conflicting views about developing the Peruvian rainforest for oil and gas.

- (ii) Assess the reasons why some groups are against the development of oil and gas.

(8)

(Total for Question 3 = 33 marks)

TOTAL FOR SECTION C = 33 MARKS

SECTION D

Making a geographical decision

In this question, 4 of the marks awarded will be for your spelling, punctuation and grammar and your use of specialist terminology.

- *4** Study the **three** options below for how Peru should develop its rainforest region for oil and gas.

Option 1: Encourage local companies and foreign TNCs to exploit the oil and gas rapidly to help develop Peru's economy.

Option 2: Develop oil and gas gradually in discussion with the Indian communities but also encourage NGOs to develop sustainable schemes for both energy and tourism.

Option 3: Stop the development for oil and gas, but open up the rainforest region for logging and farming and allow development of new settlements.

Select the option that you think would be the best **long-term** plan for the development of the Peruvian rainforest. Justify your choice.

Use information from the Resource Booklet and knowledge and understanding from the rest of your geography course to support your answer.

(16)

Chosen option:

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DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

(Total for Question 4 = 16 marks)

TOTAL FOR SECTION D = 16 MARKS

TOTAL FOR PAPER = 64 MARKS

Pearson Edexcel Level 1/Level 2 GCSE (9–1)

Geography B

Paper 3: People and Environment Issues – Making Geographical Decisions

Sample assessment material for first teaching
September 2016
Resource Booklet

Paper Reference
1GB0/03

**Do not return the Resource Booklet
with the question paper.**

Turn over ►

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Pearson

Section A

People and the biosphere

The issue: resource conflicts in the rainforest of Peru

- Recently, the economy of Peru has been growing rapidly at around 6% GDP per year.
- The richer urban population have higher living standards than the rural poor, many of whom live in the rainforest.
- The Peruvian government needs to exploit its natural resources such as copper, gold, timber, oil and gas.
- Most of these resources are found in the rainforest regions such as the Madre de Dios. This remote region has extremely high levels of biodiversity.

Introduction

- With a land area of 1,280,000 km² Peru is the third largest country in South America, after Brazil and Argentina.
- It can be roughly divided into three; the coastal strip, the Andes mountain region and Amazonian rainforest region, the largest and most remote of the three.
- About 50% of the 30 million population live on the coastal strip, including Lima, the capital city, nearly 40% live in the Andes whilst only 13% live in the Amazonian region
- Matching its varied landscapes it is also ethnically diverse.
- Nearly 40% are indigenous Americans (Amerindians) mostly belonging to the Quechua or Aymara people, whose ancestors controlled the vast Inca Empire.
- There are also significant numbers of Afro-Peruvians, the descendants of the slaves brought to Peru whilst under Spanish colonial control.
- Although only 15% of the population are European in origin they are by far the wealthiest and politically most powerful.

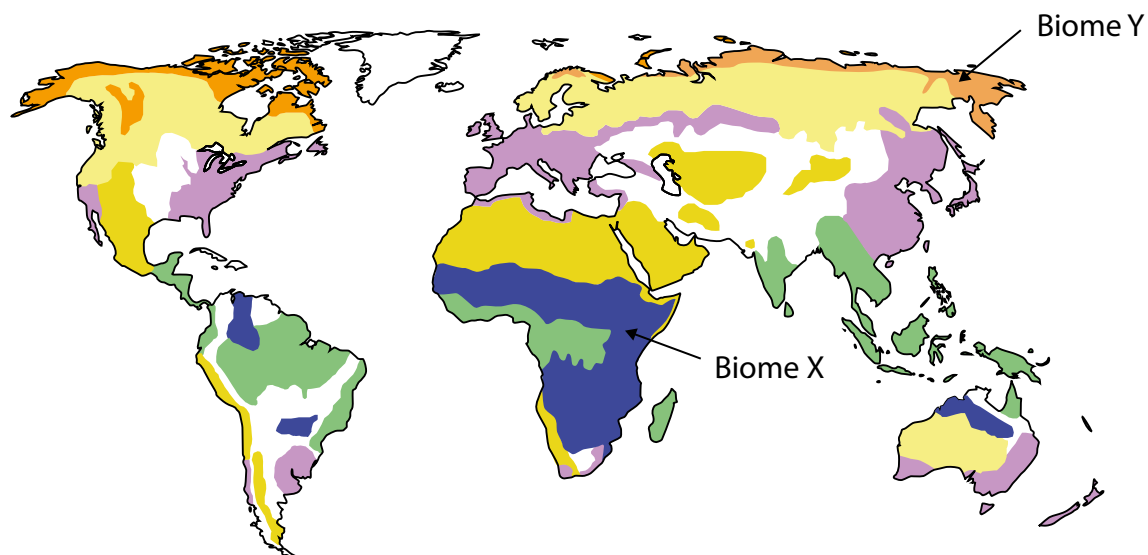


Figure 1

A map of biomes

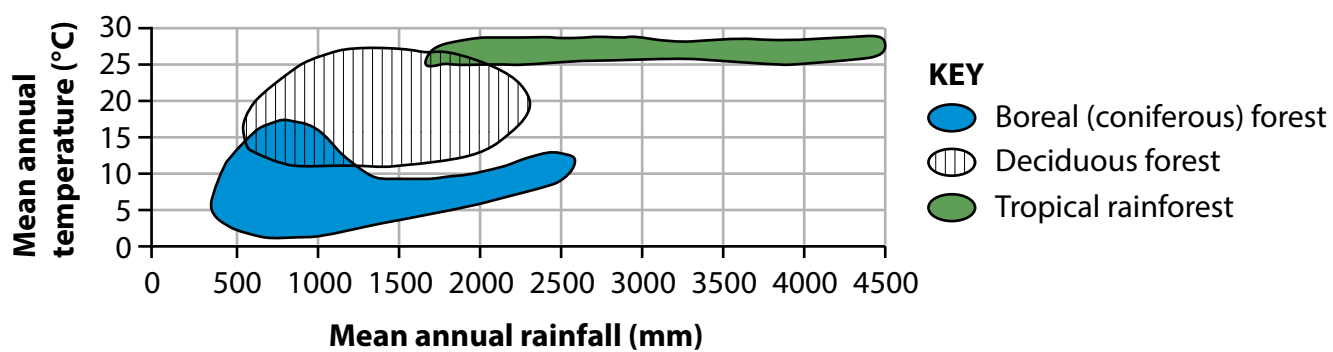


Figure 2

The climate range of selected biomes

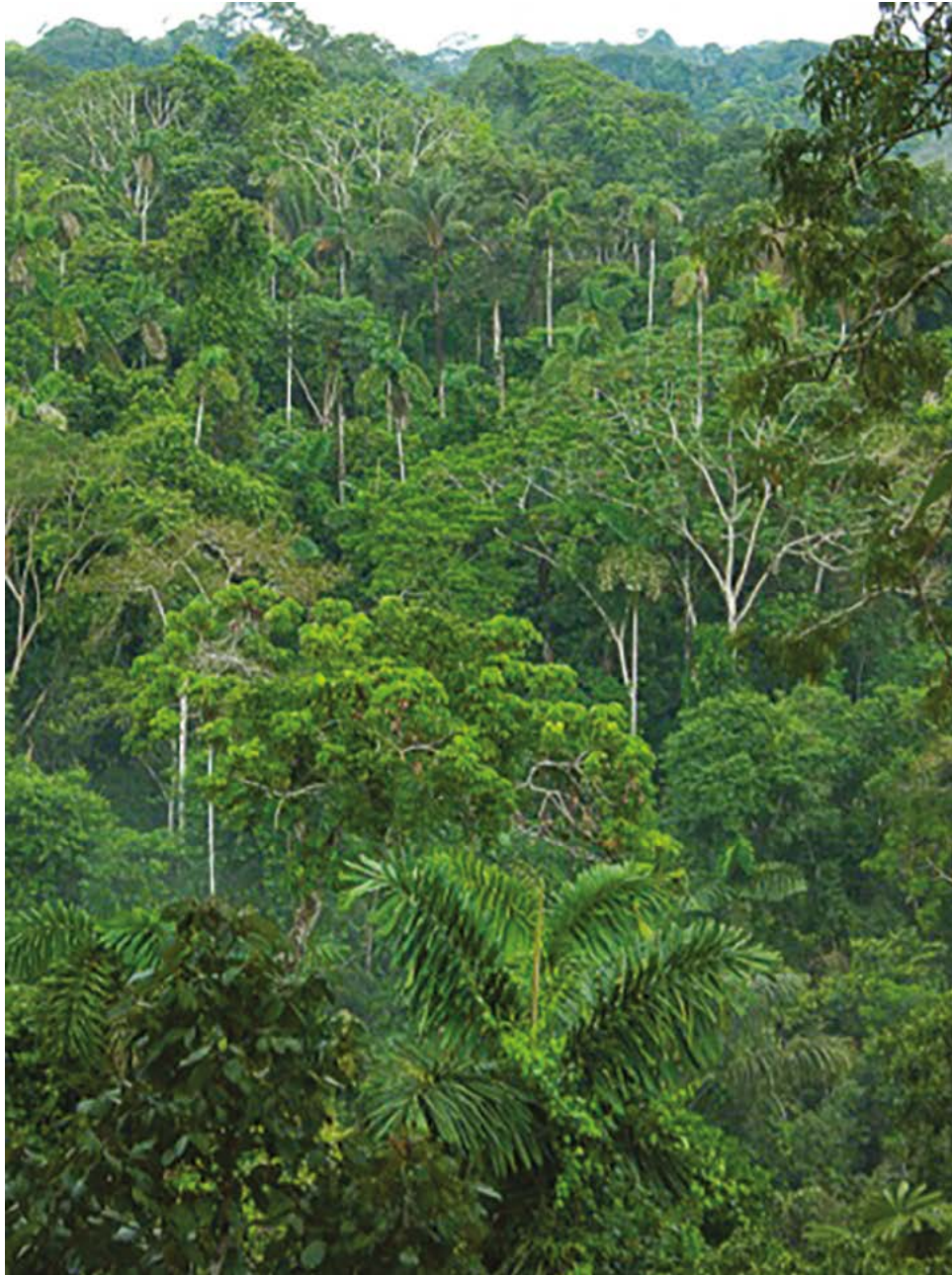
Section B

Forests under threat



Figure 3

The location of the Madre de Dios in Peru



(Source: © Greg Roden/D K Images)

Figure 4

The rainforest in Madre de Dios

Section C

Consuming energy resources

| Peru – Factfile | | |
|--|------------------|------------------|
| Population: <ul style="list-style-type: none"> Population >30 million Population growth rate = 1% per year 77% urban, 23% rural <13% live in the Amazonian region Life expectancy is 73 in Peru as whole although 66 in the Amazonian region | | |
| Economy: | Year 2000 | Year 2014 |
| GDP per capita (per head) | \$5 500 | \$11 000 |
| People living in poverty | 40% | 25% |
| Access to electricity | 70% | 90% |

Figure 5

A factfile for Peru

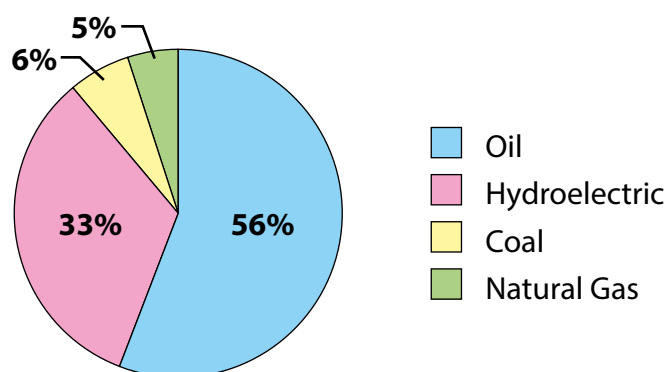
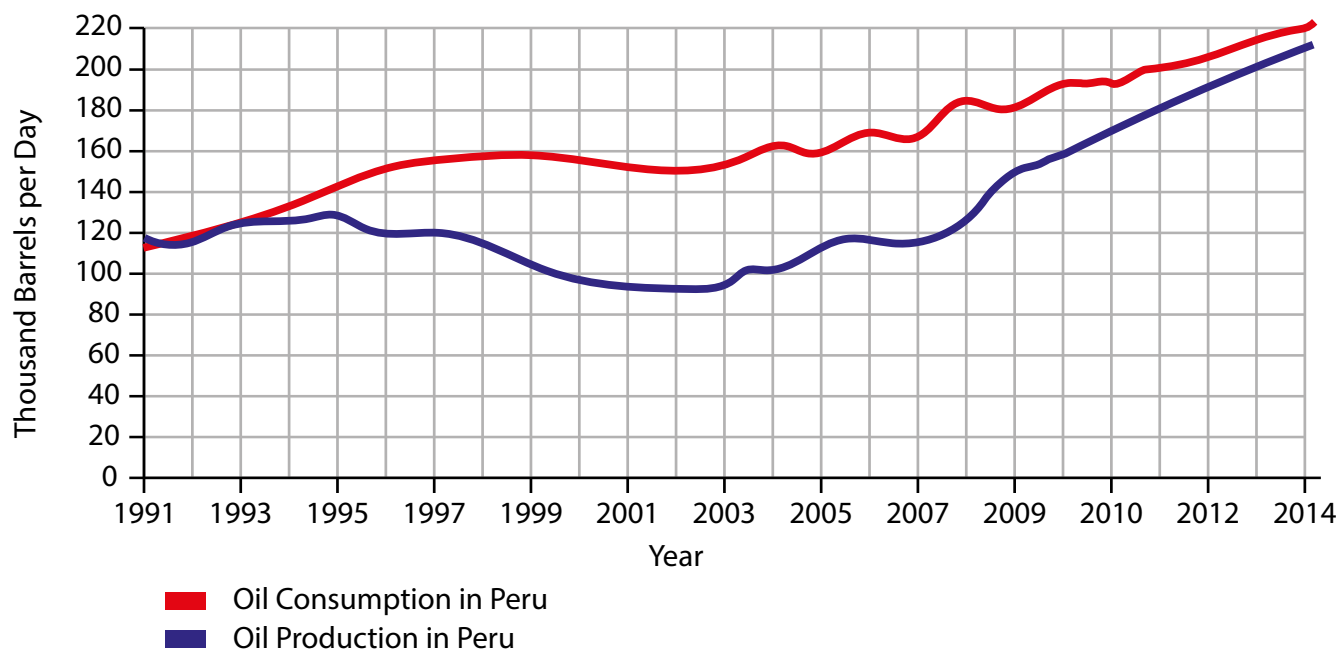


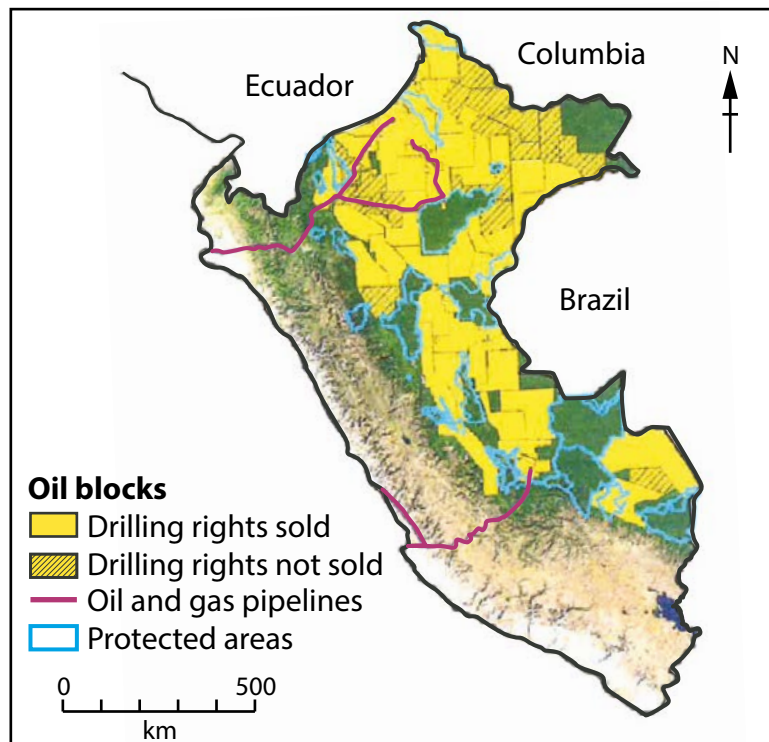
Figure 6

Energy consumption in Peru (2015)



- Peru needs to be more energy secure. Currently it relies on imports of oil to cope with the growing consumption as the country develops.
- The Peruvian government has sold drilling rights for 80% of the rainforest to both Peruvian companies and foreign TNCs for oil and gas development.
- Peruvian reserves are of medium cost to exploit, less costly than shale oil or deep sea oil, but more expensive than some Middle East locations.
- Although Peru is estimated to contain only 1% of the world's oil reserves there has been a good success rate so far in finding oil and TNCs see Peru as a good country to do business with.

Figure 7
Peru's oil production and consumption 1991–2014



- 85% of the blocks overlap with land owned by the indigenous Indian communities.
- Some 40% of blocks overlap with Cultural Reserves, especially set aside to preserve the indigenous Indian way of life.
- 10% overlap with areas protected for their environmental quality and high biodiversity value. These areas have significant potential for ecotourism.

Figure 8

Peru's potential for increasing oil production

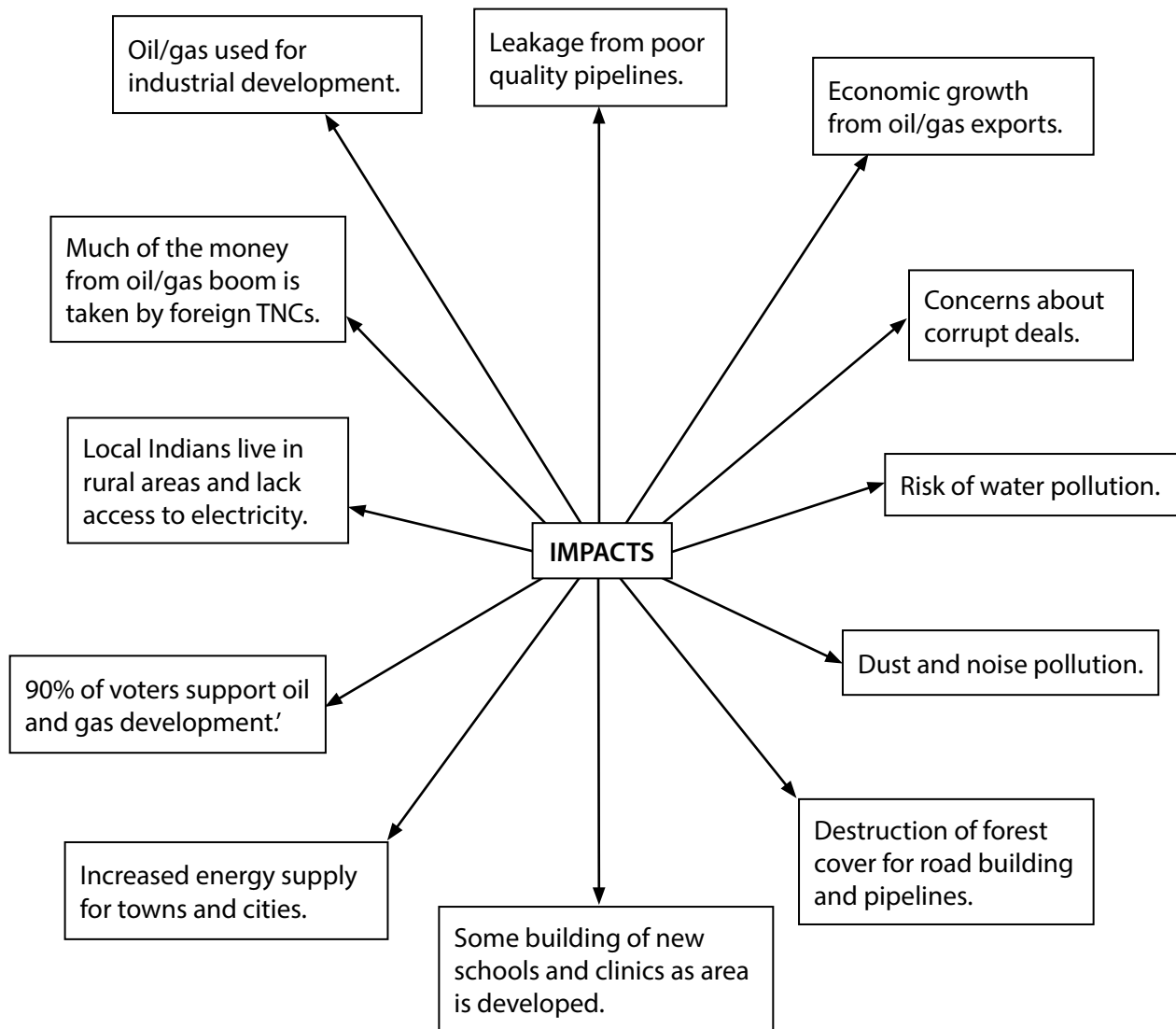


Figure 9
The impacts of oil and gas development on the rainforest

| | |
|---|---|
| Peruvian government | 'Oil and gas are vital resources and will bring benefits to all our people.' |
| Indian indigenous communities | 'We only have the rights to surface land, not to what's underneath. All we have got is contamination of our water supplies.' |
| Environmental pressure groups, e.g. WWF | 'They have even stopped making Environmental Impact Surveys compulsory. The scale and pace of development is increasing and it has an appalling effect on this pristine, high value environment.' |
| TNCs such as Hunt Oil (USA) | 'We are ethical companies with a green code of conduct. Oil spills are exceedingly rare as we take all necessary precautions.' |
| New settlers in the Amazon | 'We moved from the Andes mountains to get a better life. We need to clear the forest for crops such as sugar and biofuels.' |
| NGOs such as FENAMAD (a local group) | 'We want local Indian communities to establish sustainable management of logging, develop ecotourism and provide sustainable energy supplies from mini HEP and solar power.' |

Figure 10
Conflicting views about development in the rainforest

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Paper 3 Mark scheme

| Question number | Answer | Mark |
|-----------------|--|------------|
| 1(a)(i) | Global (scale)/world (scale)/large (scale) ecosystem | (1) |

| Question number | Answer | Mark |
|-----------------|--------------------------------------|------------|
| 1(a)(ii) | Tropical savannah/grassland/savannah | (1) |

| Question number | Answer | Mark |
|------------------|--------|------------|
| 1(a)(iii) | Tundra | (1) |

| Question number | Answer | Mark |
|-----------------|--------|------------|
| 1(b) | B | (1) |

| Question number | Answer | Mark |
|-----------------|--|------------|
| 1(c) | <p>Award 1 mark for each of the following, up to a maximum of 2 marks.</p> <p>Food (hunting, gathering) (1)</p> <p>Traditional medicines (1)</p> <p>Building materials (timber, fibres) (1)</p> <p>Fuels (wood fuel) (1)</p> <p>Water (1)</p> <p>Do not accept oil/gas or other fossil fuels or resources that require destruction of the biosphere, e.g. minerals.</p> <p>Accept any other appropriate response.</p> | (2) |

| Question number | Answer | Mark |
|-----------------|--|------------|
| 1(d) | <p>Award 1 mark for basic mechanism and a further one mark for impact on soil health, up to a maximum of 2 marks.</p> <p>Leaf fall leads to litter which decays into humus (1), which provides nutrients for plant growth (1).</p> <p>Source of organisms, such as earthworms (1), which improve soil quality and/or structure (1).</p> <p>Accept any other appropriate response.</p> | (2) |

| Question number | Answer | Mark |
|-----------------|---|------------|
| 2(a)(i) | <p>Award 1 mark for each of the following up to a maximum of 3 marks.</p> <p>Very tall trees (1)</p> <p>Canopy layer (1)</p> <p>Layered or stratified forest structure (1)</p> <p>Straight and or narrow trunks (1)</p> <p>Very dense vegetation growth (1)</p> <p>Reject answers that cannot be derived from the photograph, e.g. buttress roots, lack of ground cover, lianas/creepers</p> <p>Accept any other appropriate response.</p> | (3) |

| Question number | Answer | Mark |
|-----------------|--|------------|
| 2(a)(ii) | <p>Award 1 mark for an identification of a reason, and a further mark for an explanation of the reason, up to a maximum of 4 marks.</p> <p>The hot/wet tropical climate (1) is ideal for growth of tropical forests which have high biodiversity (1); the complex stratification of the rainforest (1) ensures a wide range of ecological niches (1).</p> <p>Peru contains a number of different biomes such as tropical forest and desert (1) parts of these biomes are isolated and relatively untouched (1) so biodiversity has not been effected by human activity (1) so there is a wide range of different species (1).</p> <p>Accept any other appropriate response.</p> | (4) |

| Question number | Answer | Mark |
|-----------------|---|------------|
| 3(a)(i) | <p>Award 1 mark for correct set up of GDP increase calculation, and a further mark for correct answer, up to maximum 2 marks.</p> <p>Increase of 6% on 11000 = 11660 (1) Increase of 6% of 11660 = 12359.6 (1)</p> <p>OR</p> <p>$11000 \times 1.06^2 = 12359.6$ (2)</p> <p>OR</p> <p>12359.6 (1)</p> <p>Accept responses that round up to 12360. Do not accept 12320</p> <p>Maximum of one mark if no working out is shown.</p> | (2) |

| Question number | Answer | Mark |
|-----------------|---|------------|
| 3(a)(ii) | <p>Award 1 mark for each of the following up to a maximum of 2 marks.</p> <p>Decrease of 15% of people living below the poverty line since 2000 (1).</p> <p>Increase of 20% connected to electricity since 2000 (1).</p> <p>Accept any other appropriate response.</p> | (2) |

| Question number | Answer | Mark |
|-----------------|--------|------------|
| 3(b)(i) | D | (1) |

| Question number | Answer | Mark |
|-----------------|--|------------|
| 3(b)(ii) | <p>Award 1 mark for point about energy production/energy consumption and a further mark for expansion, up to a maximum 2 marks.</p> <p>Because production is falling/not increasing (1) while consumption was rising (1).</p> <p>Accept any other appropriate response.</p> | (2) |

| Question number | Answer | Mark |
|------------------|---|------------|
| 3(b)(iii) | <p>Award 1 mark for point about oil price and a further mark for explanation as to its effect, up to a maximum of 2 marks.</p> <p>If oil prices move up/down (1) this affects the profitability of extraction, making it more/less likely to be extracted (1).</p> <p>Accept any other appropriate response.</p> | (2) |

| Question number | Answer | Mark |
|-----------------|--|------------|
| 3(c) | <p>Award 1 mark for point about sale of drilling rights and a further mark for explanation why this concerns group(s), up to a maximum of 4 marks.</p> <p>85% of the blocks are on Indian land (1) the Indians oppose development as they lose their rights to the land as they do not own any subsurface rights, which leads to disputes (1).</p> <p>40% of the blocks have further problems as they overlap with Indian Cultural Reserves (1) threatening the Indian traditional way of life and their long-term existence as a distinct people (1).</p> <p>Potential health risks to people (1) from both air pollution and contamination of water supplies (1).</p> <p>Reject purely environmental and economic concerns.</p> <p>Accept any other appropriate response.</p> | (4) |

| Question number | Indicative content |
|-----------------|---|
| 3(d) | <p style="text-align: center;">A03 (4 marks)/A04 (4 marks)</p> <p>Answers should focus on the relative benefits to the national economy (GDP growth, energy security) versus local benefits (jobs, higher incomes) but also consider how negative impacts might temper those benefits.</p> <p>A03</p> <ul style="list-style-type: none"> • There is a range of benefits but overall the national benefits might be seen as more significant than the local benefits in terms of scale. • The involvement of foreign TNCs might be seen as key in reducing the likely benefits for Peru, although government could intervene here using taxation. • Local multiplier effect and creation of jobs as a result of oil development. • However, energy industries are capital intensive with low local employment. • Reducing oil imports could also make everyone's energy supplies more reliable and perhaps cheaper although, once again, that is dependent on government tax policies. • Economic benefits for one group might be offset by negative impact on others, with the local economy being spoilt by pollution and deforestation. • Environmental damage is not 'cost-free' with long-term consequences that might be greater than short-term benefits. <p>A04</p> <ul style="list-style-type: none"> • Basis for industrial development (Figure 9) through use in manufacturing processes. • Economic benefits may be translated into social benefits – reliable power (Figure 9). • Export-led growth might lead to rapid economic growth – boom (Figure 9). • Recent history of growth in GDP per capita (\$5 500–\$11 000) (Figure 5) suggests benefits from growing oil production (Figure 7). • Positive impacts might be offset by negatives – TNCs, local corruption (Figure 9). |

| Level | Mark | Descriptor |
|---------|------|---|
| | 0 | No acceptable response |
| Level 1 | 1–3 | <ul style="list-style-type: none"> Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4) |
| Level 2 | 4–6 | <ul style="list-style-type: none"> Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4) |
| Level 3 | 7–8 | <ul style="list-style-type: none"> Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3) Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4) |

| Question number | Answer | Mark |
|-----------------|---|------------|
| 3(e)(i) | <p>Award 1 mark for basic reason and a further mark for development up to a maximum 4 marks.</p> <p>Renewables such as wind power/solar arrays can have a detrimental impact on the landscape (1) by creating ugly/unsightly installations (1).</p> <p>Wind farms have been linked to disruption of wildlife (1), such as impacts on birds/bats (1).</p> <p>HEP or tidal development are large scale and can cause flooding of large areas (1) with potential loss of biodiversity and / or landscape quality (1).</p> <p>Accept any other appropriate response.</p> | (4) |

| Question number | Indicative content |
|-----------------|---|
| 3(e)(ii) | <p data-bbox="667 257 1134 291" style="text-align: center;">A03 (4 marks)/A04 (4 marks)</p> <p data-bbox="411 353 1358 421">Answers should focus on explaining why some of the groups in Figure 10 are against development.</p> <p data-bbox="411 454 475 488">A03</p> <ul data-bbox="459 488 1390 1227" style="list-style-type: none"> • It could be argued that the rainforest ecosystem is globally important in terms of ecosystem services, meaning we all lose. • Cutting back on consumption would be good for the environment and render further expansion unnecessary. • TNCs (particularly energy companies) have a poor record historically for their operations in developing countries so the economic 'gains' may very well be exaggerated. • Environmental losses are not 'costed' so 'high-value environments' are not, in reality, given a monetary value. • Land rights issues raise significant legal issues as both new settlers and Indians could lose rights to land when blocks, (shown on Figure 8), are given/sold to oil and gas companies, thus representing a loss. • Erosion of Indian culture – by overall development of roads, loss of traditional way of life and culture, new diseases and bad habits such as alcoholism; already 40% of blocks overlap with cultural reserves (Figure 8). • Many oil and gas blocks are close to protected areas (Figure 8), or overlap them, which could reduce income from ecotourism for indigenous people leading to economic loss. <p data-bbox="411 1261 475 1294">A04</p> <ul data-bbox="459 1294 1369 1845" style="list-style-type: none"> • Environmentalists oppose the development because of the damage done to the 'pristine' environment (Figure 10). • They also take exception to the alliance between the government and TNCs (Figure 10). • They use the abandonment of EISs as evidence of this collusion (Figure 10). • Indian indigenous communities object on principle because of loss of land rights (Figure 10). • They also object to the environmental impact on their water supplies (Figure 10). • NGOs such as FENAMAD are likely to share the views of the communities that they support (Figure 10). • New settlers express no direct views but it can be inferred that new settlers will share some of the environmental concerns (Figure 10). |

| Level | Mark | Descriptor |
|---------|------|---|
| | 0 | No acceptable response |
| Level 1 | 1–3 | <ul style="list-style-type: none"> Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4) |
| Level 2 | 4–6 | <ul style="list-style-type: none"> Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4) |
| Level 3 | 7–8 | <ul style="list-style-type: none"> Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3) Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4) |

| Question number | Indicative content |
|-----------------|---|
| 4 | <p data-bbox="549 257 1251 291">A02 (4 marks)/A03 (4 marks)/A04 (4 marks)</p> <p data-bbox="411 353 1358 454">In order to fully justify a choice, the candidate must consider all three alternative options and establish a clear argument about the meaning of 'best long-term' plan.</p> <p data-bbox="411 488 1385 551">There is no preferred option. All options can be justified. The balance of the case made will vary according to the chosen option.</p> <ul data-bbox="461 584 1385 1171" style="list-style-type: none"> • Option 1 can be justified by suggesting that the future is uncertain and failure to develop the resource is unacceptable because if wisely used it can lead to benefits for all the Peruvian people. Environmental concerns can be addressed by better management. • Option 2 can be justified by suggesting that slower development will allow more time to allow local indigenous communities to adjust and to control potential negatives for both their culture and the environment. Alternative development ideas might also offset the tendency for oil revenues to leave their source regions. • Option 3 can be justified as the only one that directly addresses the negative impacts of oil exploitation and its long-term impacts on both the local and global environment (which in turn will impact on all Peruvians) but also the needs of the countries' poor, not just the indigenous communities. <p data-bbox="411 1211 472 1238">A02</p> <ul data-bbox="461 1245 1385 1832" style="list-style-type: none"> • Tropical rainforests are fragile environments which are very significant in controlling global climate so changes to them have global consequences. • Tropical rainforests have very high levels of biodiversity so pressures on them resulting in land-use changes have global consequences. • The exploitation of oil has environmental impacts that will have long-term impacts on both social and economic development. • Oil is an important resource both as a source of conflict and as a factor in international relations. • Different groups have very different views about energy futures. • In some developing countries (such as Peru) there are shifts in opinion about unsustainable energy consumption. • Energy consumption globally is extremely uneven, especially oil consumption, much of which is used for transport and so central to the growth of the global economy. <p data-bbox="411 1872 472 1899">A03</p> <ul data-bbox="461 1906 1358 2004" style="list-style-type: none"> • Peruvian people will be affected differently in both the short term and long term, depending on how much power they have and where they live. |

| Question number | Indicative content |
|-----------------|---|
| | <ul style="list-style-type: none"> • Critical choices have to be made about how the resource revenues are used, how TNCs are taxed and how that money can be used to benefit all groups. • 'Best' can be broken down into social, economic and political improvements and measured accordingly allowing a 'greatest good for greatest number' conclusion. • Social improvements would include health, life expectancy, and education, which will improve if income from oil stays in Peru and is recycled in terms of improved social infrastructure. • Economic improvements would be both in terms of growing GDP per capita but also reduction in inequalities and poverty, especially among indigenous communities. • Political improvements would include the empowerment of indigenous peoples, a reduction in political corruption and perhaps a stronger international 'voice'. • In every area, improvements for one group are likely to be offset by limited improvements or, indeed, underdevelopment for others. • In the long term the oil will run out so long-term development and thus 'best' would be the investment of oil revenues in the diversification on the Peruvian economy away from a simple resource-exporting economy to a more balanced, industrialised economy. <p>AO4</p> <ul style="list-style-type: none"> • Very few Peruvians people actually live in Amazonia (13%) so negative local impacts are not experienced by many (Introduction and Figure 3). • Very divided society with those of European origin still in control and the wealthiest (Introduction). • Long history of co-operation between government and TNCs as a 'good country to do business with' (Figure 7). • Peruvian oil is medium cost so better than high-cost oil shale or tar (Figure 5). • Reduction in poverty to date suggests some benefits from oil (Figure 5). • Costs and benefits of oil extraction which fall unevenly (Figures 9 and 10). |

| Level | Mark | Descriptor |
|---------|------|---|
| | 0 | <ul style="list-style-type: none"> No acceptable response |
| Level 1 | 1–4 | <ul style="list-style-type: none"> Demonstrates isolated elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2) Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4) |
| Level 2 | 5–8 | <ul style="list-style-type: none"> Demonstrates elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2) Applies understanding to deconstruct information and provide some logical connections between concepts. An unbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4) |
| Level 3 | 9–12 | <ul style="list-style-type: none"> Demonstrates accurate understanding of concepts and the interrelationship between places, environments and processes. (AO2) Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4) |

| Marks for SPGST | | |
|-----------------|-------|--|
| Performance | Marks | Descriptor |
| SPaG 0 | 0 | <i>No marks awarded</i> <ul style="list-style-type: none"> Learners write nothing. Learner's response does not relate to the question. Learner's achievement in SPaG does not reach the threshold performance level, for example errors in spelling, punctuation and grammar severely hinder meaning. |
| SPaG 1 | 1 | <i>Threshold performance:</i> <ul style="list-style-type: none"> Learners spell and punctuate with reasonable accuracy. Learners use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall. Learners use a limited range of specialist terms as appropriate. |
| SPaG 2 | 2–3 | <i>Intermediate performance</i> <ul style="list-style-type: none"> Learners spell and punctuate with considerable accuracy. Learners use rules of grammar with general control of meaning overall. Learners use a good range of specialist terms as appropriate. |
| SPaG 3 | 4 | <i>High performance</i> <ul style="list-style-type: none"> Learners spell and punctuate with consistent accuracy. Learners use rules of grammar with effective control of meaning overall. Learners use a wide range of specialist terms as appropriate. |

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