

**Published Mark Schemes for  
Geography**

**Summer 2010**



**NORTHERN IRELAND GENERAL CERTIFICATE OF SECONDARY EDUCATION (GCSE)  
AND NORTHERN IRELAND GENERAL CERTIFICATE OF EDUCATION (GCE)**

**MARK SCHEMES (2010)**

**Foreword**

***Introduction***

Mark Schemes are published to assist teachers and students in their preparation for examinations. Through the mark schemes teachers and students will be able to see what examiners are looking for in response to questions and exactly where the marks have been awarded. The publishing of the mark schemes may help to show that examiners are not concerned about finding out what a student does not know but rather with rewarding students for what they do know.

***The Purpose of Mark Schemes***

Examination papers are set and revised by teams of examiners and revisers appointed by the Council. The teams of examiners and revisers include experienced teachers who are familiar with the level and standards expected of 16- and 18-year-old students in schools and colleges. The job of the examiners is to set the questions and the mark schemes; and the job of the revisers is to review the questions and mark schemes commenting on a large range of issues about which they must be satisfied before the question papers and mark schemes are finalised.

The questions and the mark schemes are developed in association with each other so that the issues of differentiation and positive achievement can be addressed right from the start. Mark schemes therefore are regarded as a part of an integral process which begins with the setting of questions and ends with the marking of the examination.

The main purpose of the mark scheme is to provide a uniform basis for the marking process so that all the markers are following exactly the same instructions and making the same judgements in so far as this is possible. Before marking begins a standardising meeting is held where all the markers are briefed using the mark scheme and samples of the students' work in the form of scripts. Consideration is also given at this stage to any comments on the operational papers received from teachers and their organisations. During this meeting, and up to and including the end of the marking, there is provision for amendments to be made to the mark scheme. What is published represents this final form of the mark scheme.

It is important to recognise that in some cases there may well be other correct responses which are equally acceptable to those published: the mark scheme can only cover those responses which emerged in the examination. There may also be instances where certain judgements may have to be left to the experience of the examiner, for example, where there is no absolute correct response – all teachers will be familiar with making such judgements.

The Council hopes that the mark schemes will be viewed and used in a constructive way as a further support to the teaching and learning processes.



## CONTENTS

	<b>Page</b>
<b>Foundation Tier</b>	
Unit 1	1
Unit 2	13
<b>Higher Tier</b>	
Unit 1	27
Unit 2	43



New  
Specification



*Rewarding Learning*

General Certificate of Secondary Education  
2010

---

## **Geography**

Unit 1:  
Understanding Our Natural World

Foundation Tier

**[GGG11 ]**

**MONDAY 14 JUNE, MORNING**

---

**MARK  
SCHEME**

## Theme A: The Dynamic Landscape

AVAILABLE  
MARKS

1 (a) (i) A = Groundwater flow [1]  
B = Precipitation [1] [2]

(ii) Meaning of interception

**Level 1 [1]** An incomplete definition  
Water on vegetation

**Level 2 [2]** A full definition  
Rainfall which is caught and stored on the leaves and branches  
of vegetation. [2]

(iii)

Situation	More surface run-off	Less surface run off
Light rain on dry ground		GIVEN
Lots of tarmac surfaces	✓	
Heavy rain onto wet ground	✓	
Lots of trees		✓

[1] PER CORRECT ARROW [3]

(b)

Statement	Order number
Hard rock overhang collapses	4
Soft rock erodes faster than hard rock so a step in the river bed forms.	Given 1
A plunge pool begins to form at the base of the waterfall	2
The waterfall retreats to form a gorge	5
The hard rock is undercut	3

[4]



(c) underlined should be – Suspension      Traction [2]  
[1] each

(d) (i) Flood prevention.  
If the candidate chooses a method which is not listed in Fig –  
give a maximum of [2]

**Level 1 [1]** A simple statement, which may be only descriptive.  
e.g. Afforestation is the planting of trees to reduce flooding.  
e.g. A dam is like a wall built across a river.

**Level 2 [2]** A statement with some detail on how it might prevent  
flooding.  
e.g. Afforestation is planting trees, these drink water through  
roots and this can help prevent flooding.

**Level 3 [3]** A statement and more detailed explanation related to  
afforestation/dam building or levees. Credit also answers which  
refer to interception.  
e.g. Afforestation is planting trees, these take up through their  
roots and this can help prevent flooding because less water will  
then reach the river after a storm. [3]

(ii) Describe one impact flooding might have on people.

**Level 1 [1]** A simple statement that relates to people rather than  
natural environment  
e.g. Houses get flooded.

**Level 2 [2]** A statement and description of the flooding impact on  
people  
e.g. Houses get flooded and so they might have to live in  
temporary housing whilst theirs is fixed. [2]

(iii) For a named river within the British Isles, explain why it flooded.

Name of a river in the British Isles [1]

Explanation

**Award [0] for a response not worthy of credit.**

**Level 1 ([1]–[2])**

Cause/s of a river flooding are stated or described, but without  
explanation.

e.g. It flooded in England due to heavy rain, and peat extraction.

Candidates present some relevant information in a form and  
using a style of writing which suits its purpose. The text is  
reasonably legible. Spelling, punctuation and the rules of  
grammar are used with some accuracy so that the meaning is  
clear. A limited range of specialist terms is used appropriately.

AVAILABLE  
MARKS

**Level 2 ([3]–[4])**

The causes of flooding are described and some explanation is included, but no specific facts or figures are included relating to a river in the British Isles.

e.g. In England there was flooding. This was because of heavy rainfall at the time of the flood, also the rainfall fell onto ground that was almost full from previous rainfall events. Human factors also played a part as some areas had been built up.

Candidates present information in a form and using a style of writing which suits its purpose. The text is legible. Spelling, punctuation and the rules of grammar are used with considerable accuracy so that the meaning is clear. A good range of specialist terms is used appropriately.

**Level 3 ([5]–[6])**

The causes of flooding are described in detail with full explanations: referring to both physical and human causes, including two facts or figures relating to a river within the British Isles.

e.g. In March 1999 people near the River Derwent experienced flooding. There were several physical causes such as the heavy rainfall at the time of the flood. 250 mm of rain fell on the North York Moors. Also there was a lack of infiltration as this rainfall fell onto ground that was almost saturated from previous rainfall events. Human factors also played a part. Areas of the flood plain were being urbanized e.g. at Malton a new housing estate was built. This reduced infiltration and increased surface run-off.

Candidates present and organise efficiently, relevant information in a form and style of writing which suits its purpose. The text is fluent and legible. Spelling, punctuation and the rules of grammar are used with almost flawless accuracy so the meaning is clear. A wide range of specialist terms is used skilfully and with precision.  
[6]

- (e) (i) Why destructive waves erode coasts.

**Level 1 ([1])** A simple description of a destructive wave.

e.g. Strong waves cause erosion.

**Level 2 ([2])** They have a strong backwash.

**Level 3 ([3])** An answer with an explanation that elaborates on the erosive effect of having a strong backwash and weak swash.

e.g. They have a weak swash taking material up the beach, but a strong backwash which scours the beach pulling sand and pebbles back towards the sea, thus causing erosion. [3]

- (ii) Describe either attrition, abrasion or hydraulic action

**Level 1 ([1])** A simple statement about the process  
e.g. abrasion wears away the base of cliffs.

**Level 2 ([2])** A full description of how the erosive process operates.

e.g. abrasion occurs when pebbles crash against the base of cliffs, slowly chipping away at their surface and wearing it away.

[2]

(f) (i) Formation of a spit.

**Award [0] for a response not worthy of credit.**

**Level 1 ([1]–[2])**

Candidates make reference to the movement of sand.

e.g. A spit is formed when sand moves along a beach.

Candidates present some relevant information in a form and using a style of writing which suits its purpose. The text is reasonably legible. Spelling, punctuation and the rules of grammar are used with some accuracy so that the meaning is clear. A limited range of specialist terms is used appropriately.

**Level 2 ([3]–[4])**

Reference is made either to the conditions required for a spit to develop or the process involved.

e.g. Sand is moved along the beach by longshore drift, this sand or shingle builds up to form a ridge.

Candidates present information in a form and using a style of writing which suits its purpose. The text is legible. Spelling, punctuation and the rules of grammar are used with considerable accuracy so that the meaning is clear. A good range of specialist terms is used appropriately.

**Level 3 ([5]–[6])**

Reference is made to both the conditions required for a spit to develop and to the process which is involved.

e.g. Sand is moved along the beach by longshore drift, caused by angled waves hitting the coastline. Sand or shingle accumulate and form a narrow ridge where the direction of the coastline changes. All spits need a constant supply of sand to be deposited or they will be washed away.

Candidates present and organise efficiently, relevant information in a form and style of writing which suits its purpose. The text is fluent and legible. Spelling, punctuation and the rules of grammar are used with almost flawless accuracy so the meaning is clear. A wide range of specialist terms is used skilfully and with precision.

[6]

(ii) shingle

[1]

- (g) (i)** Problems caused by tourists  
2 x [1] per worthy answer e.g. lighting fires, litter, overcrowding,  
dune erosion, dog fouling etc. [2]
- (ii)** 3 x [1] per acceptable reason,  
e.g. to let tourists use it, to protect road links, to help fishermen,  
to stop houses being flooded etc. [3]
- (h) (i)** An acceptable named area with coastline [1]
- (ii)** description of coastal management.  
Award [1] for a management strategy applicable to the area e.g.  
groynes and [2] for an elaboration. The strategy must be specific  
to the named area e.g. concrete groynes were built in the 1980s  
along the Newcastle stretch of beach. [3]
- (iii)** Has it worked?
- Level 1 [1–2]** a stated answer that may explain how the strategy  
works but which does not evaluate how well it works.  
e.g. the groynes trap sand [1]  
e.g. the groynes are meant to trap sand and keep the beach  
around Newcastle [2]
- Level 2 [3–4]** An answer that will evaluate how well the strategy  
works. For [4] there will be a specific fact/figure.  
e.g. the groynes are meant to trap sand and keep the beach  
around Newcastle but as they are so old they have worn away  
and no longer work, in fact they may have contributed to sand  
loss. New, expensive wooden groynes may now have to be built.  
[4]



AVAILABLE  
MARKS

**Theme B: Our Changing Weather and Climate**

**AVAILABLE  
MARKS**

- 2 (a) (i) Complete **Table 3** by inserting the correct answers in the blank spaces.

**Table 3**

<b>IMAGE OF INSTRUMENT</b>	<b>NAME OF INSTRUMENT</b>	<b>ELEMENT RECORDED</b>	<b>UNIT OF MEASUREMENT</b>
	<b>BAROMETER</b>	<b>GIVEN</b>	<b>MILLIBARS/MB</b>
	<b>GIVEN</b>	<b>WIND SPEED</b>	<b>GIVEN</b>

[3 x 1] [3]

- (ii) Describe how a max/min thermometer works.

**Level 1 [1 mark]**

The answer consists of a simple statement e.g.

It records the temperature.

[1]

**Level 2 [2 marks]**

The answer shows some understanding of how it works e.g.

The max/min thermometer is U-shaped with two scales to record the highest temperature throughout the day and the lowest temperature at night.

[2]

**Level 3 [3 marks]**

The answer shows a high level of understanding of how it works e.g.

The max/min thermometer is U-shaped with two scales to record the highest temperature throughout the day and the lowest temperature at night. The two metal indicators need to be reset with a magnet at the end of each recording.

[3]

(b) (i) Complete **Fig. 6** by inserting the name of the correct air mass.

Maritime [1]

(ii) Underline the correct word from each sentence in relation to air masses.

- A tropical maritime air mass comes from a **southeast/southwest** direction.
- Polar continental air masses have **hot/cold** temperatures.
- A tropical continental air mass usually occurs in the **winter/summer** time.
- The word maritime is associated with the **land/sea**.

[4 x 1]

(c) (i) Underline the correct name of the weather system over the British Isles in December 2009.

**Front**      **Depression**      **Anticyclone** [1]

(ii) Underline the correct term which shows lines of equal pressure on a weather map.

**Contour**      **Isotherm**      **Isobar** [1]

(iii) State fully **one** reason why this weather system brings low temperatures.

**LOW TEMPERATURES**

**Level 1 [1 mark]**

A simple statement e.g.

The days are short **or** there are no clouds or low angle of sun.

[1]

**Level 2 [2 marks]**

A statement with a consequence e.g.

There are no clouds in the sky so heat escapes quickly.

[2]

**Level 3 [3 marks]**

A statement, consequence and elaboration

- Due to the lack of cloud cover heat will escape quickly as a result of rapid cooling. This heat loss is caused by radiation and the temperature falls quickly at night which means it gets very cold and frosty. [3]

(d) (i) Definition of global warming.

**Level 1 [1 mark]**

The temperature of the atmosphere is increasing. [1]

**Level 2 [2 marks]**

Should include the temperatures rising and man's role in it for 2 marks.

The temperature of the atmosphere is increasing. This is due to man's activity such as burning fossil fuels. [2]

(ii) Complete **Table 4** by drawing arrows to show the cause of climate change. (One has been completed for you).

**Table 4**

NATURAL CAUSE	CAUSE OF CLIMATE CHANGE	HUMAN CAUSE
	Vehicle emissions	→ (given)
←	Cycles of climatic change	
←	Volcanic eruptions	
	Burning fossil fuels	→

[3]

(iii) Explain **one** negative effect of climate change in a country that you have studied.

Any valid country [1]

Negative effect

If no country mentioned or positive effects mark Level 1.

**Level 1 [1 mark]**

The answer is a brief statement e.g.

It will cause a lack of rainfall or it will cause sea levels to rise. [1]

**Level 2 [2 marks]**

The answer is a statement and consequence e.g.

Sea levels will rise due to melting ice caps. This will cause coastal areas to flood [2]

**Level 3 [3 marks]**

The answer has a statement, consequence and elaboration.  
Some case study evidence should be evident for 3 marks.

Sea levels will rise due to melting ice caps. This will cause coastal areas to flood. This would be particularly bad for people living in the eastern part of the U.K such as the Fens because this will result in the loss of property and farmland. [3]

AVAILABLE  
MARKS



Theme C: Restless Earth 2010

AVAILABLE  
MARKS

3 (a) (i) A = mantle  
B = Crust  
(2x[1]) [2]

(ii) True, False, True  
(3x[1]) [3]

(b) (i) igneous [1]

(ii) Formation of basaltic columns

**Award [0] for a response not worthy of credit.**

Award [1]–[2] for a simple explanation linking the formation of basaltic columns to volcanic activity. e.g. they are formed when lava cools and splits into shapes that look like columns.

Award [3]–[4] for a detailed e.g. 50 million years ago lava flowed out over the North coast of Northern Ireland through large cracks called fissures. This lava flowed into hollows and cooled very slowly into the rock called basalt. On cooling it contracted into regular hexagonal and pentagonal columns. These were later exposed following coastal erosion. [4]

(c) (i) Meaning of the term epicentre  
Award [1] for a limited definition  
e.g. Where an earthquake hits.

Award [2] for a full definition  
e.g. The point on the earth's surface where the shockwaves from an earthquake are first felt.

(ii) boundaries, Pacific, few  
(3x[1]) [3]

(d) (i) Earthquake case study

[1] for an area which would have experienced a notable earthquake [1]

Explanation [3]  
Award [1] for a simple stated cause.  
e.g. The plates moved near Indonesia.

Award [2] for a cause stated with some explanatory detail  
e.g. The earthquake near Indonesia happened because there is a destructive plate margin nearby and the plates moved.

Award [3] for a cause stated with good detail, including one fact or figure related to the named case study.  
e.g. The earthquake near Indonesia happened because there is a

destructive plate margin nearby where the Australian plate meets the Sundra plate, the plates had been stuck for some time, and then they moved suddenly in a release of pressure along a 15 metre slippage zone.

- (ii) Describe three impacts the earthquake had. [6]

**Award [0] for a response not worthy of credit.**

**Level 1 ([1]–[2])**

One impact is either stated or described in detail or two impacts are only stated.

e.g. Over 1 million people had to move away from the coastline temporarily. [2]

e.g. people were displaced and the coastline was damaged. [2]

Candidates present some relevant information in a form and using a style of writing which suits its purpose. The text is reasonably legible. Spelling, punctuation and the rules of grammar are used with some accuracy so that the meaning is clear. A limited range of specialist terms is used appropriately.

**Level 2 ([3]–[4])**

Two impacts are noted and at least one is clearly described.

e.g. Over 1 million people had to move away from the coastline temporarily and the energy released by the slippage actually changed the shape of the earth. [4]

Candidates present information in a form and using a style of writing which suits its purpose. The text is legible. Spelling, punctuation and the rules of grammar are used with considerable accuracy so that the meaning is clear. A good range of specialist terms is used appropriately.

**Level 3 ([5]–[6])**

Three impacts are noted and may be described – with detail which includes specific facts and figures to the study area for [6]  
e.g. Over 1 million people had to move away from the coastline temporarily and the energy released actually changed the shape of the earth and reduced the length of a day by over 2 microseconds. Also a tsunami wave over 30m high hit coastlines on all sides of the Indian Ocean.

Candidates present and organise efficiently, relevant information in a form and style of writing which suits its purpose. The text is fluent and legible. Spelling, punctuation and the rules of grammar are used with almost flawless accuracy so the meaning is clear. A wide range of specialist terms is used skilfully and with precision. [6]

New  
Specification



*Rewarding Learning*

General Certificate of Secondary Education  
2010

---

## **Geography**

Unit 2: Living in Our World

Foundation Tier

**[GGG21]**

**THURSDAY 17 JUNE, AFTERNOON**

---

**MARK  
SCHEME**

## Theme A: People and Where They Live

AVAILABLE  
MARKS

### 1 (a) World population growth 1700–2150.

#### (i) Completion of statements.

Award [1] per correct answer.

The world's population grew **steadily** from 1700 to 1950 when it passed **2** billion. Since then the greatest increase has been in the **LEDCs**. The world's population is expected to pass 10 billion by **2150**. [4]

#### (ii) The meaning of the term **migration**.

Award [1] for a limited definition e.g.  
When people move to a new area.

Award [2] for a full definition e.g.  
The permanent or semi-permanent movement of people from one place to another to live. [2]

#### (iii) Consequence of in-migration for your chosen region.

Award [1] for region of in-migration e.g. United Kingdom [1]

Consequence

Credit either positive or negative consequences in relation to services or the economy. Answers may focus on employment rates, taxation, housing or social costs and benefits etc.

Award [0] for a response not worthy of credit.

Award [1] for basic statement e.g.  
It can lead to a multi cultural society  
More taxes can be collected.

Award [2] for valid statement and consequence e.g.  
It can lead to a multicultural society which can lead to racial discrimination, employment problems and language difficulties.  
More taxes can be collected from people who move into the country to find work.

Award [3] for valid statement, consequence and elaboration e.g. People moving into the UK e.g. from the A8 countries, can produce a multicultural society which can bring benefits to people for example offering the opportunity to meet people from a range of different backgrounds and learn from them, experience their culture through festivals and experience different foods.

More taxes can be collected to boost the economy e.g. in 1999/2000 in the UK overseas born migrants contributed £2.5 billion more taxes than they used. This provides the government with more money for benefits and public services. [3]

(iv) One advantage of using a Geographical Information System.

Award [0] for a response not worthy of credit.

Award [1] for a brief statement e.g.  
Migration data is available instantly.

Award [2] where candidate states advantage in some detail  
e.g. Data on migration is available instantly and can be displayed  
in a variety of ways such as in a table or a graph.

or

e.g. Data on numbers of migrants can be obtained and displayed  
quickly. This saves considerable time researching for the relevant  
migration statistics. [2]

(b) Population pyramid for Burundi.

Completion of sentences.

- In Burundi more **males** survive to old age.
- As the pyramid sides curve in sharply from the base, life expectancy is **low**.
- The wide base suggests that Burundi has a **high** birth rate.
- The pyramid shows that Burundi is a **LEDC**.

Award [1] for each correct word.

[4]

(c) Ordnance Survey Map of Durham.

(i) One factor which influenced the original choice of site  
Award [1] for a correct factor ie Defensive site, Wet Point site  
or Bridging Point or Bridge, River, Castle [1]

Explanation

Award [0] for a response not worthy of credit

Award [1] for valid statement relating to site of Durham e.g.

Durham is in the bend of the river/on high land

Durham is a wet point site on the river

Durham is a bridging point

Award [2] for valid statement with consequence e.g.

Durham is on a steep hill/almost entirely surrounded by water so  
it is easy to defend.

Durham is a wet point site as it is on a river, a source of water for  
drinking.

Durham is a bridging point for trade

Award [3] for a valid statement with consequence and elaboration. e.g.

- Durham is a wet point site located within a meander of the River Wear. This would have provided a good water supply for early settlers for drinking, cooking and washing.
- Durham is a bridging point for trade. Bridging point settlements are in places where it is easy to cross the river. This was an advantage for defence and trade.
- Being in the bend of the River Wear, Durham is almost totally surrounded by water which made it easy to defend from other tribes.

[3]

- (ii) Straight line distance from the park and ride area to the bus and coach station in Durham.

Answer is 4.3 km

Award [1] for answers in the range 4.1 to 4.19 km or 4.41 to 4.5 km

Award [2] for answers in the range 4.2 to 4.4 km

[2]

- (iii) Distance of Sherburn from Sacriston

Award [1] for South East

[1]

- (iv) Area of Sherburn

Award [1] for 0.75 km<sup>2</sup>

[1]

- (v) Ranking of settlements.

Rank Order	Settlement
1	Durham
2	Sacriston
3	Sherburn
4	Edmondsley

Award [1] per correct rank.

[4]

- (vi) Term which means the arrangement of settlements by size and importance.

Award [1] for settlement hierarchy

[1]

(vii) Completion of table showing services in Sacriston and Edmondsley.

AVAILABLE  
MARKS

Settlement	Post Office	Church	Public house	2 or more roads	Bus Station	School	Hospital
Durham	✓	✓	✓	✓	✓	✓	✓
Sacriston	✓	TICK	TICK	✓		TICK	
Edmondsley	TICK		✓	✓			

Award [1] per tick in Sacriston for Church, Public House and School. [4]

(viii) Completion of sentences.

The larger the settlement the **more** services it will have.

The settlement with the largest sphere of influence is **Durham**.

**Sacriston** has the threshold population needed for a school to exist.

Edmondsley is a **village** which provides **low** order services. Award [1] per correct answer. [5]

(d) (i) World population living in urban areas.

Award [0] for a response not worthy of credit

Award [1] for a brief description only or one which addresses either LEDCs or MEDCs e.g.

More people are living in cities

The biggest increase is in LEDCs

Award [2] for a description which uses at least one figure e.g. In LEDCs the percentage living in urban areas has increased dramatically from 1950 to an estimated 56% in 2030.

Award [3] for a description which refers to both MEDCs and LEDCs with at least two supporting figures e.g.

The percentage of the population living in urban areas has increased in both MEDCs and LEDCs. However, the increase is larger in LEDCs as it increased from 18% in 1950 to 2030.

The MEDCs urban population was highest in 1950 (55%) and is expected to reach 84% by 2030. [3]

(ii) One reason why many people move into cities in LEDCs.

Push or pull factors are equally valid.

Award [0] for a response not worthy of credit

Award [1] for a basic statement. E.g.

Lack of services in rural areas

Natural disasters e.g. drought/floods etc

In search of a better quality of life/job/access to medical care etc

Award [2] for a valid reason with a consequence

e.g. Mechanism has led to a reduction of jobs available on the land so people move to the cities in search of work. There is a better chance of employment in the city. or

e.g. Increased pressure on the land for example due to the division of land among sons, means that each has too little to live on.

Due to drought in the countryside, lots of people are moving to the cities

Award [3] for a valid reason with consequence and elaboration

e.g. In many LEDCs farmer must share his land equally among his sons, so each generation inherits smaller and smaller plots of farmland which is unable to support a family so many people move to the cities in search of work. or

e.g. Due to drought in the countryside, lots of people are moving to the cities in the hope of finding work and better living conditions. [3]

(iii) Word which means the movement of people from rural areas to live in cities.

Award [1] for Urbanisation [1]

(e) Describe and explain one location of a shanty town in a LEDC city you have studied.

Award [1] for named LEDC city e.g. Kolkata [1]

Reason for location of Shanty Town

Award [0] for a response not worthy of merit.

**Level 1 [1]**

Award [1] for a basic statement on location e.g.

Shanties are found by the river

Shanty towns are located close to industries.

Candidates present some relevant information in a form and using a style of writing which suits its purpose. The text is reasonably legible. Spelling, punctuation and the rules of grammar are used with some accuracy so that meaning is reasonably clear. A limited range of specialist terms is used appropriately.



**Level 2 [2]–[3]**

Candidates make a more detailed statement about the location of the shanty town.

e.g. By the River as no-one else wanted to live here or [2]

e.g. Shanties are found around industries at the road intersections [2]

e.g. Shanty towns called bustees are found by the river because no-one else wanted to live here because it often flooded and spread diseases easily. [3]

Candidates present relevant information in a form and using a style of writing which suits its purpose. The text is legible. Spelling, punctuation and the rules of grammar are used with considerable accuracy so that meaning is clear. A good range of specialist terms is used appropriately.

**Level 3 [4]**

Candidates make a valid statement about the location of a shanty town in their chosen settlement and attempts to explain why it grew up in this location e.g. Shanty towns or bustees grew up by the river Hooghly because no-one else wanted to live here because it often flooded destroying the makeshift homes and the swampy location also spread diseases easily or.

e.g. Shanty towns called bustees grew up around industries and at road intersections and alongside roads and railways 60 years ago as people flocked to the city in search of work and settled along the roads coming into the city near the factories where they might get work.

Candidates present and organise effectively relevant information in a form and style of writing which suits its purpose. The text is fluent and legible. Spelling, punctuation and the rules of grammar are used with almost faultless accuracy so that meaning is clear. A whole range of specialist terms is used skilfully and with precision. [4]

## Theme B: Contrasts in World Development

AVAILABLE  
MARKS

- 2 (a) (i) Mali [1]
- (ii) MEDC [1]
- (iii) Why poor countries have a low life expectancy
- Award [1] for a basic valid statement, e.g. People minimal access to medical care.
- Award [2] for a statement that has some explanation to its relevance to measuring development e.g. if people don't live long, it shows they lack medical care as doctors can help people survive diseases.
- Award [3] for a valid elaborated point, or several listed valid statements with some elaboration, e.g. if people don't live long, it shows they lack medical care as doctors can help people survive diseases also it might mean that the poor population can't afford food and might die at a young age of starvation. [3]
- (iv) HDI  
Also award [1] if the candidate has circled or otherwise indicated the correct answer. [1]
- (v) List two factors that hinder development.  
Award [1] for each correct factor, such as historical factors, politics, debt, environmental problems, dependence on primary activities – although they could be specific such as regular droughts. [1]x2=[2]
- (b) (i) Meaning of globalisation.
- Award [1] for a partially correct definition  
e.g. The way the world is becoming more connected.  
Award [2] for a full definition  
e.g. The way the world is becoming more connected through trade, technology and ideas [2]
- (ii) 1 A named LEDC or NIC e.g. India [1]
- 2 One way it has helped.  
Award [1] for a valid statement e.g. it has made people richer.  
Award [2] for a fuller description e.g. In India foreign investors have been encouraged as it linked more strongly to places like the UK. This has helped the economy of India grow, which is a help to development as people become wealthier and living standards increase. [2]

- 3 One way it has hindered.  
Award [1] for a valid statement e.g. It has increased unrest in the country.  
Award [2] for a full description e.g. the uneven wealth globalisation has created in India means that some rebel groups are now attacking wealthy areas, creating unrest and putting people's lives at risk. [2]

- (c) (i) Meaning of Fair Trade  
Award [1] A partial definition  
e.g. A trade where producers get more money for their goods.  
Award [2] A full definition that refers to money and LEDC location of producers  
e.g. a type of trade where producers in a poor country get a fair living wage for their product. [2]
- (ii) Award [0] for any named food product not from Fig 4.  
Award [1] for either bananas or sugar [1]
- (iii) Answers will most likely focus on the economic gains, some may discuss the idea that it helps local farmers to produce a product that can be from a small scale production rather than relying on TNC interference.  
Award [1] for a simply stated advantage of Fair Trade e.g. farmers can get more money for their product.  
Award [2] for a stated advantage with some elaboration e.g. Farmers get a stable price for their product which is often above the open market price.  
Award [3] For two stated advantages with some elaboration or one well explained advantage.  
e.g. Farmers get a stable price for their product which is often above the open market price, this might allow them to send their children to school, something they couldn't afford otherwise, or e.g. Farmers get a stable price for their product which is often above the open market price, this might allow them to send their children to school also they might get money to help conserve a type of tree that is endangered, so it might protect the local environment. [3]
- (d) Use of appropriate technology within a development project.

### Level 1 ([1]–[2])

Candidates briefly outline or describe a project with appropriate technology or fully explain use of technology in a development project – but not an appropriate technology.  
e.g. Fishermen get given new boats that allow them to catch more fish in a LEDC.

Candidates present some relevant information in a form and using a style of writing which suits its purpose. The text is reasonably legible. Spelling, punctuation and the rules of grammar are used with some accuracy so that the meaning is clear. A limited range of specialist terms is used appropriately.

**Level 2 ([3]–[4])**

Candidates explain how one type of appropriate technology has been used to promote sustainable development.

e.g. Fishermen in SW India were taught how to make a more modern fishing canoe using traditional carpentry skills on a new material – fibreglass. These boats will last longer than traditional ones (7–10 years) and travel longer distances, so fishermen can continue to have a guaranteed livelihood, allowing them to earn more money to stimulate a local market that will last for generations without deforesting the local forests.

Candidates present and organise efficiently, relevant information in a form and style of writing which suits its purpose. The text is fluent and legible. Spelling, punctuation and the rules of grammar are used with almost flawless accuracy so the meaning is clear. A wide range of specialist terms is used skilfully and with precision. [4]

AVAILABLE  
MARKS

Theme C: Managing Our Resources

AVAILABLE  
MARKS

3 (a) (i)

COUNTRY	ANNUAL CONSUMPTION OF ENERGY PER PERSON (kg)
Ireland	2,001–5,000
U.S.A.	More than 5,000
Brazil	100–1,000
Namibia	Less than 100 (given)

[3]

(b) (i) Explain why the use of oil varies across the world.

**Level 1 [1 mark]**

A basic statement

e.g. Some countries have more cars.  
Some places use more electricity.

**Level 2 [2 marks]**

A statement and a consequence

e.g. Some countries have more cars/vehicles on the road and therefore require more oil. Cars are needed for everyday use or e.g. Some places use more electricity as there are lots of businesses and homes.

**Level 3 [3 marks]**

A statement, consequence and elaboration. For Level 3 look for differences between LEDC/MEDCs.

e.g. Rich countries such as the U.S.A. and the U.K. (MEDCs) have millions of cars on the road. These require a lot of diesel or petrol whereas poorer countries such as Namibia (LEDC) don't have the same demand for oil as there are fewer cars there. [3]

(ii) **Underline** the type of resource that oil is an example of.

Non-renewable

[1]

(iii) Using one MEDC case study of a renewable energy source, state fully one problem that it brought.  
Name of MEDC : Any Valid MEDC e.g. Northern Ireland (or part of it e.g Co.Antrim). [1]

Renewable energy source : e.g. Wind, solar etc [1]

Problem (This can relate to people or the environment)

**Level 1 [1 mark]**

A basic statement

They ruin the landscape. [1]

**Level 2 [2 marks]**

A statement and a consequence

They ruin the landscape because they are so big. Some people think they are ugly causing visitors/tourists to avoid the area. [2]

**Level 3 [3 marks]**

A statement, consequence and elaboration. One case study fact should be included.

They ruin the landscape because they are so big. Some people think they are ugly. Some research has shown that there can be up to a 40% drop in tourist numbers as people avoid the area. This could be disastrous for hotels and B&B's in Tyrone and Fermanagh where most of these turbines are found. [3]

(c) (i) Using **Fig. 7** state the name of the region with the least number of tourists in 2005.

**South Asia** [1]

(ii) Using **Fig. 7 underline** the total amount of tourists who travelled in 2005.

995,000,000 [1]

(d) (i) Arrows to match correct statements.

AVAILABLE  
MARKS

Table 6

CULTURAL IMPACT	STATEMENT	ECONOMIC IMPACT
	Jobs are created in the area. →	(given)
←	Tourism helps us see how other people live.	
←	Tourists may disrespect local customs.	
	Money gets invested into an area. →	

[1 mark each] [3]

(ii) Explain **one** reason why tourism has grown globally since 1950.

Reasons may include increased leisure time, increased income, cheap flights/cheaper holidays, increased health and wealth of pensioners or any other valid reason.

**Level 1 [1 mark]**

A basic statement

e.g. Holidays have become cheaper. [1]

**Level 2 [2 marks]**

A statement and a consequence

e.g. Holidays have become cheaper as people can book their holidays in a variety of ways. [2]

**Level 3 [3 marks]**

A statement, consequence and elaboration.

e.g. Holidays have become cheaper as people can book their holidays in a variety of ways. Cheap air travel has brought once faraway destinations into the reach of many people. The internet has allowed customers to view different holiday destinations. Customers can compare prices easily and book their own holidays on-line. [3]

(e) (i) Underline the correct answer from the statements below. One has been completed for you.

- **Fig. 8** is an example of a line / bar graph
- Recycling rates have increased / decreased over time.
- The highest % of waste recycled is 56%/45%

[3]

(ii) From the list below underline two non-sustainable forms of waste management.

**INCINERATION**  
**LANDFILL**

[2]

AVAILABLE  
MARKS



New  
Specification



*Rewarding Learning*

General Certificate of Secondary Education  
2010

---

## **Geography**

Unit 1:  
Understanding Our Natural World

Higher Tier

**[GGG12]**

**MONDAY 14 JUNE, MORNING**

---

**MARK  
SCHEME**

## Theme A: The Dynamic Landscape

AVAILABLE  
MARKS

1 (a) (i) A = Groundwater flow [1]

B = Precipitation [1] [2]

(ii) Meaning of interception  
Answers which mention absorbing water rather than catching it can be accepted.

**Level 1 [1]** An incomplete definition  
Water on vegetation

**Level 2 [2]** A full definition  
Rainfall which is caught and stored on the leaves and branches of vegetation. [2]

(iii) The idea that heavy rainfall creates high levels of run-off should be noted.

**Level 1 [1]** A simple statement.  
There will be more surface run off.

**Level 2 [2]** A statement with a consequence connecting precipitation to overland flow.  
If it rains heavily then the overland flow will be greater or It might increase overland flow as the soil is waterlogged.

**Level 3 [3]** A statement with consequence and elaboration. Do not need specific terms for level 3 as QWC not marked in this question.  
e.g. If there is heavy rain, e.g. at a front during a thunderstorm, lots of rain falls quickly so the overland flow will be great as infiltration will be reduced because the soil becomes waterlogged and the increased rainfall can not infiltrate the ground. [3]

(b) Formation of a waterfall.

**Award [0] for a response not worthy of credit.**

**Level 1 ([1]–[2])**

Candidates make reference to the process of erosion or describes it.  
e.g. a waterfall is formed as some rock on the river wears away.

Candidates present some relevant information in a form and using a style of writing which suits its purpose. The text is reasonably legible. Spelling, punctuation and the rules of grammar are used with some accuracy so that the meaning is clear. A limited range of specialist terms is used appropriately.

**Level 2 ([3]–[4])**

The answer gives a clear indication that there are a number of stages which lead to the formation of a waterfall, but not all are fully explained.

e.g. The soft rock erodes faster than the hard rock and so a step and waterfall forms. [3]

For [4] some specialist terms must be used e.g. resistant cap-rock or plunge pool.

Candidates present information in a form and using a style of writing which suits its purpose. The text is legible. Spelling, punctuation and the rules of grammar are used with considerable accuracy so that the meaning is clear. A good range of specialist terms is used appropriately.

### **Level 3 ([5]–[6])**

All aspects of formation and development of a waterfall are explained using appropriate terminology. Candidates should name erosional processes for 6 marks.

e.g. When water flows over two layers of rock, it erodes the softer rock faster than the hard rock. The bed of the river gets steeper, and eventually the flow of water at this point becomes steep enough to be considered a waterfall. Water continues to fall against a back wall, which also continues to wear away, undercutting the soft rock and creating an overhang. Enough water moving over the hard rock will undercut it and break it away, and big pieces of rock will collapse and fall into the plunge pool, which makes it even bigger and deeper than before through abrasion and hydraulic action. As hard rock is slowly eroded by the constant flow of water, it falls into the plunge pool and creates a large gorge.

Candidates present and organise efficiently, relevant information in a form and style of writing which suits its purpose. The text is fluent and legible. Spelling, punctuation and the rules of grammar are used with almost flawless accuracy so the meaning is clear. A wide range of specialist terms is used skilfully and with precision. [6]

### **(c) How engineering can reduce flood risk.**

The candidates may discuss either soft or hard measures. Although an example is not required, better answers may refer to a specific river.

#### **Level 1 ([1])**

A statement or description of one strategy or very weak explanation. e.g. levees can reduce the risk of flood. [1]

#### **Level 2 ([2])**

Levees can reduce the risk of flood as they are built along the river banks [2]

#### **Level 3 ([3])**

A statement naming a strategy and clear connection made on how it reduces flood risk.

e.g. Levees are built along side a river channel and so the river must rise to a higher level before it flows onto its floodplain. [3]

- (d) For a named river within the British Isles, describe and explain the physical and human reasons why it flooded.

If a river outside British Isles is used max level 1

**Award [0] for a response not worthy of credit.**

**Level 1 ([1]–[3])**

Causes of a river flooding are stated or described, but without explanation or the answer contains inaccurate or vague information. e.g. It flooded in England due to heavy rain, building and peat extraction.

Candidates present some relevant information in a form and using a style of writing which suits its purpose. The text is reasonably legible. Spelling, punctuation and the rules of grammar are used with some accuracy so that the meaning is clear. A limited range of specialist terms is used appropriately.

**Level 2 ([4]–[6])**

The causes of flooding are described and some explanation is included, but a maximum of one fact or figure is included relating to a river in the British Isles. For Top Level 2 both physical and human reasons must be mentioned.

e.g. In March in England there was flooding. There were several physical causes such as the heavy rainfall at the time of the flood, also there was a lack of infiltration as this rainfall fell onto ground that was almost saturated from previous rainfall events. Human factors also played a part. Areas of the flood plain were being urbanized and this reduced infiltration and increased surface run-off.

Candidates present information in a form and using a style of writing which suits its purpose. The text is legible. Spelling, punctuation and the rules of grammar are used with considerable accuracy so that the meaning is clear. A good range of specialist terms is used appropriately.

**Level 3 ([7]–[8])**

The causes of flooding are described in detail with full explanations referring to both physical and human causes. Two facts or figures relating to a river within the British Isles should be included for level 3. e.g. In March 1999 people near the River Derwent experienced floods. There were several physical causes such as the heavy rainfall at the time of the flood when over 250mm of rain fell on the North York Moors. Also there was a lack of infiltration as this rainfall fell onto ground that was almost saturated from previous rainfall events. Human factors also played a part. Areas of the flood plain were being urbanized, such as the new estate built at Malton, this reduced infiltration and increased surface run-off.

Candidates present and organise efficiently, relevant information in a form and style of writing which suits its purpose. The text is fluent and legible. Spelling, punctuation and the rules of grammar are used with

almost flawless accuracy so the meaning is clear. A wide range of specialist terms is used skilfully and with precision. [8]

AVAILABLE  
MARKS

(e) (i) Why destructive waves erode coasts.

**Level 1 ([1])** Strong waves cause erosion.

**Level 2 ([2])** A simple description of a destructive wave.

e.g. They have a strong backwash.

e.g. They are frequent and strong (with high crests).

**Level 3 ([3])** An answer with an explanation that elaborates on the erosive effect of having a strong backwash and weak swash.

e.g. They have a weak swash taking material up the beach, but

a strong backwash which scours the beach pulling sand and

pebbles back towards the sea (thus causing erosion). [3]

(ii) Describe either attrition, abrasion/corrosion or hydraulic action.

**Level 1 ([1])** A simple statement about the process, or confusion with fluvial processes.

e.g. abrasion wears away the base of cliffs.

**Level 2 ([2])** A full description of how the erosive process operates.

e.g. abrasion occurs when pebbles crash against the base of

cliffs, slowly chipping away at their surface and wearing it away. [2]

(f) Formation of a spit.

**Award [0] for a response not worthy of credit.**

**Level 1 ([1]–[2])**

Candidates make reference to the movement of sand.

e.g. a spit is formed when sand moves along a beach.

Candidates present some relevant information in a form and using a style of writing which suits its purpose. The text is reasonably legible. Spelling, punctuation and the rules of grammar are used with some accuracy so that the meaning is clear. A limited range of specialist terms is used appropriately.

**Level 2 ([3]–[4])**

Reference is made either to the conditions required for a spit to develop or the process involved, or both with weak elaborations.

e.g. Sand is moved along the beach by longshore drift, this sand or shingle builds up to form a ridge.

Candidates present information in a form and using a style of writing which suits its purpose. The text is legible. Spelling, punctuation and the rules of grammar are used with considerable accuracy so that the meaning is clear. A good range of specialist terms is used appropriately.

**Level 3 ([5]–[6])**

Reference is made to both the conditions required for a spit to develop and to the process which is involved. Need reference to longshore drift for level 3.

if no reference to 'hook' 5 marks.

e.g. Sand is moved along the beach by longshore drift, fuelled by angled waves hitting the coastline. Sand or shingle accumulate and form a narrow ridge where the direction of the coastline changes. All spits need a constant supply of sand to be deposited or they will be washed away. When the spit extends far out into an estuary and meets waves from a different direction it forms a hooked end. [6]

Candidates present and organise efficiently, relevant information in a form and style of writing which suits its purpose. The text is fluent and legible. Spelling, punctuation and the rules of grammar are used with almost flawless accuracy so the meaning is clear. A wide range of specialist terms is used skilfully and with precision.

**(g) (i) How groynes protect the beach.**

**Level 1 [1–2]** A simple statement.

They trap sand [1]

They trap sand that's moving along the beach [2]

**Level 2 [3–4]** A more detailed explanation – which refers to longshore drift for full marks.

They are built at right angles to the beach and trap sand that is being moved along the beach by waves [3]

They are built at right angles to the beach and trap sand that is being moved along the beach by longshore drift [4] [4]

**(ii) Conflict of landuse in the coastal zone.**

**Level 1 [1]** A stated conflict which involves the two groups.

The industrialists might spoil the view for tourists e.g. with oil rigs.

**Level 2 [2]** A stated conflict which involves the two groups with an elaboration on the nature of the conflict or two separately stated conflicts.

e.g. The industrialists might spoil the view for the tourists for example the shipbuilding and shipbreaking industry may result in large unsightly buildings. [2]

**(h) Case Study of a coastal management strategy.**

**Award [0] for a response not worthy of credit.**

**Level 1 ([1]–[3])**

A simple description or evaluation of coastal management which may not name a location or a detailed answer which describes one aspect of a management strategy.

e.g. Groynes were built to protect the village of Mappleton. [1]

Candidates present some relevant information in a form and using a style of writing which suits its purpose. The text is reasonably legible. Spelling, punctuation and the rules of grammar are used with some accuracy so that the meaning is clear. A limited range of specialist terms is used appropriately.

**Level 2 ([4]–[6])**

The coastal management strategy is well described or evaluated, or both aspects of the question are tackled, but lack depth or one element is clearly described and its sustainability is evaluated. [5]  
e.g. The North Sea erodes the coastline very quickly, so a coastal protection scheme was put in place to stop the village disappearing into the sea. Blocks of granite were brought over from Norway and placed at the base of the cliffs beside Mappleton and some were made into two large groynes which trapped sand and protected the coast from wave attack. [5]

Candidates present information in a form and using a style of writing which suits its purpose. The text is legible. Spelling, punctuation and the rules of grammar are used with considerable accuracy so that the meaning is clear. A good range of specialist terms is used appropriately.

**Level 3 ([7]–[9])**

A coastal management strategy is clearly described and its sustainability is evaluated. For the full [9] including two facts or figures relating to a coast within the British Isles.

e.g. Mappleton is a small village in the East of England. The North Sea erodes the coastline very quickly, so a coastal protection scheme was put in place to stop the village disappearing into the sea. Blocks of granite were brought over from Norway and placed at the base of the cliffs beside Mappleton and some were made into two large groynes which trapped sand and protected the coast from wave attack. It is more sustainable than some other protection schemes as it is only designed to protect the village and the B1242- a vital road link on this coast, thus the needs of today's residents are met. Also it encourages managed retreat of the coastline on either side of the village, allowing sand and silt to still be taken by long shore drift to other parts of the coast where they build up to protect towns and cities, so future generations in those places will not face unchecked coastal erosion. [9]

Candidates present and organise efficiently, relevant information in a form and style of writing which suits its purpose. The text is fluent and legible. Spelling, punctuation and the rules of grammar are used with almost flawless accuracy so the meaning is clear. A wide range of specialist terms is used skilfully and with precision.



**Theme B: Our Changing Weather and Climate**

**AVAILABLE  
MARKS**

- 2 (a) (i) Complete **Table 1** by inserting the correct answers in the blank spaces.

**Table 1**

<b>IMAGE OF INSTRUMENT</b>	<b>NAME OF INSTRUMENT</b>	<b>ELEMENT RECORDED</b>	<b>UNIT OF MEASUREMENT</b>
Image of Barometer removed due to copyright issues.	<b>BAROMETER</b>	<b>GIVEN</b>	<b>MILLIBARS/MB</b>
Image of Anemometer removed due to copyright issues.	<b>GIVEN</b>	<b>WIND SPEED OR WIND</b>	<b>GIVEN</b>

Barograph not acceptable

[3 x 1] each

- (b) (i) Polar maritime [1]  
Must have both parts to be awarded the mark.

- (ii) Tropical continental air mass

**Level 1 [1 mark]**

A simple statement

It is hot or it is dry

[1]

**Level 2 [2–3 marks]**

The answer describes both characteristics but or alternatively explains one fully.

It is hot and dry [2]

It is hot as the air is coming from a southerly direction [2]

It is hot as the air is coming from a southerly direction and it also lacks moisture [3]

**Level 3 [4 marks]**

A statement that describes and explains both temperature and moisture.



It is hot as the air is coming from a southerly direction and it also lacks moisture as the air mass travels over the land which is dry. No moisture is picked up as this occurs. [4]

(c) (i) High pressure or anticyclone [1]

(ii) Choose any two conditions and explain  
Mark this question as 2x3 marks

### LOW TEMPERATURES

#### Level 1 [1]

A simple statement e.g.

The days are short **or** there are no clouds or low angle of sun

It is cold as it is December.

#### Level 2 [2]

A statement with a consequence e.g.

There are no clouds in the sky so heat escapes quickly.

#### Level 3 [3]

A statement, consequence and elaboration

Due to the lack of cloud cover heat will escape quickly as a result of rapid cooling. This heat loss is caused by radiation.

### CALM CONDITIONS

#### Level 1 [1]

A simple statement e.g.

There is no wind. [1]

#### Level 2 [2]

A statement with a consequence e.g.

There is no wind as the isobars are spaced far apart in an anticyclone. [2]

#### Level 3 [3]

A statement, consequence and elaboration

There is no wind as the isobars in an anticyclone are spaced far apart. There is a gentle pressure gradient as air moves slowly from high to low pressure. [3]

## DRY CONDITIONS

AVAILABLE  
MARKS

### Level 1 [1]

A simple statement e.g.

There is no rain. [1]

### Level 2 [2]

A statement with a consequence e.g.

There is no rain as clouds do not form. [2]

### Level 3 [3]

A statement, consequence and elaboration

There is no rain as air is sinking in an anticyclone. As it sinks the air warms up so condensation can't occur. This means that clouds can't develop so rain doesn't occur. [3]

**Candidates should choose two conditions out of the three listed.**

(d) (i) Definition of global warming.

### Level 1 [1]

The temperature of the atmosphere is increasing. [1]

### Level 2 [2]

Should include the temperatures rising and man's role in it for 2 marks.

The temperature of the atmosphere is increasing. This is due to man's activity such as burning fossil fuels which releases CO<sub>2</sub> into the atmosphere. [2]

(ii) **Natural** cause of climate change

The two main **natural** causes are natural climatic cycles and volcanic activity.

### Level 1 [1]

A simple statement e.g.

Volcanic eruptions causes climate to change.

### Level 2 [2]

A statement and a consequence

A volcanic eruption can cause the climate to become cooler as gases, dust and ash are emitted into the atmosphere.

**Level 3 [3 marks]**

A statement, consequence and elaboration.

A volcanic eruption can cause the climate to become cooler as gases, dust and ash are emitted into the atmosphere. The gases and dust partially block the incoming rays of the sun, leading to cooling. [3]

**Or**

SO<sub>2</sub> from a volcanic eruption forms small droplets of sulphuric acid in the upper atmosphere which reflect sunlight, and screen the ground from some of the energy it would receive from the sun. This decreases the temperature experienced at ground level. [3]

- (iii) Evaluate the sustainability of using alternative sources of energy as a strategy to deal with climate change. (You should refer to places in your answer).

**Level 1 [1–2 marks]**

The answer makes brief reference to alternative energy sources. There is little evidence of evaluation or reference to places. Sustainability is not addressed.

Alternative energy sources produce no pollution. [1]  
Less emissions.

Alternative energy sources such as solar or wind power do not produce any pollution so therefore stops the Earth's atmosphere from heating up. [2]

**Level 2 [3–4 marks]**

The answer makes reference to alternative energy sources. Some evaluation (strengths and weaknesses of alternative energy sources) is evident although may be unbalanced. Sustainability may be lacking. Reference to a place would help achieve Top Level 2. [4]

Alternative energy sources such as solar or wind power do not emit any pollution/greenhouse gases into the atmosphere. This prevents the Earth's atmosphere from heating up and will help solve global warming. These sources however may be unreliable as a continuous source e.g. winds and tidal power may not be available all the time. They may also spoil the landscape as in the case of wind turbines. [3]

Alternative energy sources such as solar or wind power do not emit any pollution/greenhouse gases such as CO<sub>2</sub> into the atmosphere. This prevents the Earth's atmosphere from heating

up and will help solve global warming. These sources however may be unreliable as a continuous source e.g. winds and tidal power may not be available all the time. They may also spoil the landscape as in the case of wind turbines. The U.K. government has set a target of 20% of all electricity to be produced by renewable sources by 2020.

[4]

**Level 3 [5 marks]**

The answer makes reference to alternative energy sources. Evaluation (strengths and weaknesses of alternative energy sources) are evident and there is reference to a place. Sustainability is fully addressed.

Alternative energy sources such as solar or wind power do not emit any pollution/greenhouse gases into the atmosphere. This prevents the Earth's atmosphere from heating up and will help solve global warming. These sources however may be unreliable as a continuous source e.g. winds and tidal power may not be available all the time. They may also spoil the landscape as in the case of wind turbines. The U.K. government has set a target of 20% of all electricity to be produced by renewable sources by 2020. These energy sources are sustainable because future generations will benefit from a cleaner atmosphere and environment.

[5]

Theme C: Restless Earth 2010

AVAILABLE  
MARKS

3 (a) (i) A = mantle  
B = Crust  
(2x[1]) [2]

(ii) Why plates move.  
Plates act as though they are floating on the mantle below [1]  
The core sets up convection currents [1] which makes the mantle  
move, and so also the crust on top of it [1].  
(3x[1]) [3]

(b) (i) igneous [1]

(ii) Formation of basalt columns

Award [0] for a response not worthy of credit.

Award [1]–[2] for a simple explanation linking the formation of  
basaltic columns to volcanic activity. e.g. they are formed when  
lava cools and splits into shapes that look like columns.

Award [3]–[4] for a more detailed explanation. e.g. lava flowed  
through large cracks called fissures. This lava flowed into hollows  
and cooled very slowly into the rock called basalt. On cooling  
it contracted into regular hexagonal and pentagonal columns.  
These were later exposed following coastal erosion. [4]

(c) (i) Meaning of the term epicentre  
Award [1] for a limited definition  
e.g. Where an earthquake hits.

Award [2] for a full definition  
e.g. The point on the earth's surface where the shockwaves from  
an earthquake are first felt.

(ii) Description of earthquake distribution across the world.

Award [1] for a brief description  
e.g. They are in lines or zones  
or  
They are at plate boundaries.

Award [2] for a description which includes one place reference.  
e.g. They are in lines, like the one down the middle of the Atlantic  
Ocean.

Award ([3]–[4]) for a detailed description that includes more than  
one place reference  
For full marks there must be three places noted  
e.g. Earthquakes occur in lines or belts across the earth, there  
are three main belts shown in Fig 3. One encircles the Pacific  
Ocean, One runs down the middle of the Atlantic and Indian

Oceans and the last goes along the coast of the Mediterranean Sea and through Southern Asia. [4]

AVAILABLE  
MARKS

- (d) (i) Earthquake case study in an LEDC.  
Maximum Level 1 MEDC earthquake.

Explanation [3]  
Award [1] for a simple stated cause.  
e.g. The plates moved near Indonesia.

Award [2] for a cause stated with some explanatory detail  
e.g. The earthquake near Indonesia happened because there is a destructive plate margin nearby and the plates moved.

Award [3] for a cause stated with good detail, including one fact or figure related to the named case study.  
e.g. The earthquake near Indonesia happened because there is a destructive plate margin nearby where the Australian plate meets the Eurasian plate, the plates had been stuck for some time, and then they moved suddenly in a release of pressure along a 15 metre slippage zone.

- (ii) Describe three impacts the earthquake had. [6]

Award [0] for a response not worthy of credit.  
Maximum Level 2 if use MEDC earthquake.

**Level 1 ([1]–[2])**

One impact is either stated or described in detail or two impacts are only stated.

e.g. Over 1 million people had to move away from the coastline temporarily. [2]

e.g. people were displaced and the coastline was damaged. [2]

Candidates present some relevant information in a form and using a style of writing which suits its purpose. The text is reasonably legible. Spelling, punctuation and the rules of grammar are used with some accuracy so that the meaning is clear. A limited range of specialist terms is used appropriately.

**Level 2 ([3]–[4])**

Two impacts are noted and at least one is clearly described or three impacts briefly stated. [3]

e.g. Over 1 million people had to move away from the coastline temporarily and the energy released by the slippage actually changed the shape of the earth. [4]

Candidates present information in a form and using a style of writing which suits its purpose. The text is legible. Spelling, punctuation and the rules of grammar are used with considerable accuracy so that the meaning is clear. A good range of specialist terms is used appropriately.

**Level 3 ([5]–[6])**

Three impacts are noted and may be described – with detail which includes specific facts and figures to the study area for [6] e.g. Over 1 million people had to move away from the coastline temporarily and the energy released actually changed the shape of the earth and reduced the length of a day by over 2 microseconds. Also a tsunami wave over 30m high hit coastlines on all sides of the Indian Ocean.

Candidates present and organise efficiently, relevant information in a form and style of writing which suits its purpose. The text is fluent and legible. Spelling, punctuation and the rules of grammar are used with almost flawless accuracy so the meaning is clear. A wide range of specialist terms is used skilfully and with precision.

AVAILABLE  
MARKS





New  
Specification



*Rewarding Learning*

General Certificate of Secondary Education  
2010

---

## **Geography**

Unit 2: Living in Our World

Higher Tier

**[GGG22]**

**THURSDAY 17 JUNE, AFTERNOON**

---

**MARK  
SCHEME**

## Theme A: People and Where They Live

AVAILABLE  
MARKS

### 1 (a) (i) World population growth 1700–2150.

Award [0] for a response not worthy of credit.

#### **Level 1 ([1])**

Candidates make a valid description of the trend but use no population figures. e.g.

The population has increased dramatically.

The population has increased dramatically especially in LEDCs.

The population has increased greatly since 1950.

Candidates present some relevant information in a form and using a style of writing which suits its purpose. The text is reasonably legible. Spelling, punctuation and the rules of grammar are used with some accuracy so that meaning is reasonably clear. A limited range of specialist terms is used appropriately.

#### **Level 2 ([2]–[3])**

Candidates identify general trends but must use just one population figure. e.g. The world population grew steadily until 1950 when it increased dramatically reaching 6.1 billion in 2000. It is expected to peak at around 10 billion around 2150. [2]

For top L2 answer will include a statement on LEDCs and/or MEDCs.

The world population grew steadily until 1950 when it increased dramatically reaching 6.1 billion in 2000. The greatest increase is predicted to be in the LEDCs. [3]

Candidates present relevant information in a form and using a style of writing which suits its purpose. The text is legible. Spelling, punctuation and the rules of grammar are used with considerable accuracy so that meaning is clear. A good range of specialist terms is used appropriately.

#### **Level 3 ([4])**

Candidates mention the trend, i.e. steady growth of world population up to 1950 when there was a population explosion. Future estimates are mentioned. The difference between MEDCs and LEDCs is addressed and at least 2 population figures are included in the answer e.g.

The world population grew steadily from 1700 to 1950 when it exceeded 2 billion. Since then the population has increased dramatically reaching 6.1 billion in 2000. The greatest increase is in the LEDC as the maximum MEDC population around 2025 is around 1 billion. The MEDC is expected to decline slightly from this up to 2150. In contrast the total population is predicted to even out around 10 billion meaning that the LEDC population will be around 9 billion. [4]

Candidates present, and organise effectively, relevant information

in a form and style of writing which suits its purpose. The text is fluent and legible. Spelling, punctuation and the rules of grammar are used with almost faultless accuracy so that meaning is clear. A wide range of specialist terms is used skilfully and with precision. [4]

- (ii) Reasons why the world's population increased rapidly since 1950.

Award [0] for a response not worthy of credit.

**Level 1 ([1]–[2])**

Candidates provide a list of reasons with no consequence or elaboration, e.g. health care, standard of living, fall in death rate. Alternatively candidates may provide one reason with consequence e.g. better health care meant that people lived longer.

Candidates present some relevant information in a form and using a style of writing which suits its purpose. The text is reasonably legible. Spelling, punctuation and the rules of grammar are used with some accuracy so that meaning is reasonably clear. A limited range of specialist terms is used appropriately.

**Level 2 ([3]–[4])**

Candidates identify two reasons with consequences e.g. better health care meant that people lived longer or fewer babies died meaning that more people survived.

Candidates present relevant information in a form and using a style of writing which suits its purpose. The text is legible. Spelling, punctuation and the rules of grammar are used with considerable accuracy so that meaning is clear. A good range of specialist terms is used appropriately.

**Level 3 ([5]–[6])**

Candidates provide a full explanation covering two reasons and detailing consequence and elaboration e.g. more people were surviving and living longer because of better medicines, including vaccines, and hospital care so the population continued to grow.

The death rate in many countries has fallen dramatically as many of the diseases which commonly caused death such as smallpox was eradicated or controlled owing to improved medicine and sanitation.

Parents were still having large families because of a lack of awareness of contraception available therefore the birth rate remains high and the population continues to grow. [6]

Candidates present, and organise effectively, relevant information in a form and style of writing which suits its purpose. The text is fluent and legible. Spelling, punctuation and the rules of grammar

are used with almost faultless accuracy so that meaning is clear. A wide range of specialist terms is used skilfully and with precision. [6]

**(b) GIS**

- (i)** The pattern of the percentage of migrants into Northern Ireland from the A8 countries in 2007.  
If candidates produce a list max Level 1.

Award [0] for a response not worthy of credit.  
Any valid description of the pattern of migrants from the A8 countries into Northern Ireland.

Award [1] for a brief description e.g. each Local Government District has a different percentage of migrants.

Award [2] for a description which includes at least one fact/figure from Table 2 e.g. The highest number of migrants is in Belfast, 5000 migrants, and the lowest is in Carrickfergus.

Award [3] for a detailed description which includes reference to places and figures from Table 2. Two facts/figures need to be used. e.g. There is a great variation in the percentage of migrants in Local Government Districts. The highest is Belfast where 5000 of the population are from the A8 countries and the lowest is Larne where 100 are from A8 countries. [3]

- (ii)** One other facility available on an on-line GIS

Award [1] for an appropriate GIS facility e.g. producing graphs, choropleth mapping, comparing variables etc.  
Accept maps/Accept bar chart. [1]

- (iii)** Advantage of using a GIS

Award [0] for a response not worthy of credit.

Award [1] for a brief statement e.g.  
Data is available instantly. [1]  
or  
Percentages are calculated for you. [1]

A statement with elaboration e.g. Data is available instantly. This saves time. [2]

**(c) UK's population by age group.**

- (i)** Changes in the structure of the population of the UK by age group.

Award [0] for a response not worthy of credit.  
Award [1] for a brief description e.g. the number of people over 65 has increased the most.

Award [2] for a description which includes at least one percentage from Table 1 e.g. the number of over 65 year olds has increased the most and is expected to be 16.4 by 2050.

Award [3] for a detailed description which includes reference to at least two age groups and shows the trend by quoting a minimum of two percentages from Table 1 e.g.

e.g. The UK population had a large number of under 19 year olds in 1991 (14.8 million) but this is expected to decrease to 12.5 million by 2050. In contrast the population is developing an age dependency as the over 65 age group was 9.1 million in 1991 and is expected to increase to 16.4 million by 2050. [3]

**(ii) One impact of a large aged dependent population**

Award [0] for a response not worthy of credit.

Any valid impact that a large aged dependent population has on a country e.g. cost of residential care, medical care, pensions, increased taxes, shortage of labour leading to economic decline and reduction in quality of life.

Award [1] for a brief statement only e.g. need lots of residential homes or costs of medical care will increase.

Award [2] for a statement and a consequence e.g. need lots of residential homes and medical care which is expensive to provide or e.g. as the proportion of older people increases there may not be enough people to support the dependents.

Award [3] for a statement, consequence and elaboration e.g. needs lot of care homes and specialised medical care which is expensive to provide and the government will have to raise taxes to pay for them.

**(d) Ordnance Survey extract of Durham**

**(i) One factor which influenced the original choice of site**

Award [0] for a response not worthy of credit.

Suitable answers would be Defensive site, Wet Point site or Bridging Point

Award [1] for valid statement relating to site of Durham e.g.  
Durham is in the bend of the river/on high land  
Durham is on the river  
Durham is a bridging point

Award [2] for valid statement with consequence e.g.  
Durham is on a steep hill/almost entirely surrounded by water so it is easy to defend.  
Durham is a wet point site as it is on a river, a source of water for drinking.  
Durham is a bridging point for trade

Award [3] for a valid statement with consequence and elaboration. e.g.

Durham is a wet point site located within a meander of the River Wear. This would have provided a good water supply for early settlers for drinking, cooking and washing.

Durham is a bridging point for trade. Bridging point settlements are in places where it is easy to cross the river. This was an advantage for defence and trade.

Being in the bend of the River Wear, Durham is almost totally surrounded by water which made it easy to defend from other tribes.

[3]

- (ii) Straight line distance from the park and ride terminus at 308446 to the bus and coach station in the centre of Durham at 268426.

Answer is 4.3 km

Award [1] for answers in the range 4.1 to 4.19 km or 4.41 to 4.5 km

Award [2] for answers in the range 4.2 to 4.4 km

[2]

- (iii) Arrange settlements in order

Rank Order	Settlement
1	Durham (Given)
2	Sacrison
3	Sherburn
4	Edmondsley

Award [1] for each settlement correctly ranked.

[3]

- (iv) State the term

Award [1] for hierarchy/settlement hierarchy

[1]

- (v) Complete Table 3

Settlement	Post Office	Church	Public house	2 or more roads	Bus Station	School	Hospital
Durham	✓	✓	✓	✓	✓	✓	✓
Sacrison	✓	TICK	TICK	✓		TICK	
Edmondsley	✓		✓	✓			

Award [1] per correct TICK for Sacrison

[3]

- (vi) Why there is a variation in the number and variety of services  
Award [0] for a response not worthy of credit.

AVAILABLE  
MARKS

**Level 1 ([1])**

Award [1] for a simple description of the number of services or explanation relating to variety of services. e.g.

Cities have more services

Villages have few services because hardly anyone lives in them

Candidates present some relevant information in a form and using a style of writing which suits its purpose. The text is reasonably legible. Spelling, punctuation and the rules of grammar are used with some accuracy so that meaning is reasonably clear. A limited range of specialist terms is used appropriately.

**Level 2 ([2]–[3])**

Award [2] for a detailed description or [3] for a good description with little explanation. Max of 2 marks if the answer omits all references to the table. e.g.

The smaller settlements such as the village of Edmondsley has fewer services than the larger villages and towns. For example Edmondsley has a public house while Sacriston has five different types of service. Durham, a city has more services and high order services such as a hospital. This is because the city has more residents.

Candidates present relevant information in a form and using a style of writing which suits its purpose. The text is legible. Spelling, punctuation and the rules of grammar are used with considerable accuracy so that meaning is clear. A good range of specialist terms is used appropriately.

**Level 3 ([4])**

Award [4] for a detailed description and geographical explanation. e.g.

Edmondsley a small village has only one service, a public house. Sacriston a larger settlement, has a greater number of services and range of services (five).

However, these are still low order services. The city, Durham has a greater number of services and a wider range. This includes a bus station and hospital, higher order services. This is because the smaller settlements have fewer residents and so high order services cannot meet their threshold value to be able to be sustained.

Candidates present, and organise effectively, relevant information in a form and style of writing which suits its purpose. The text is fluent and legible. Spelling, punctuation and the rules of grammar are used with almost faultless accuracy so that meaning is clear. A wide range of specialist terms is used skilfully and with precision. [4]

(e) Urban population as a percentage of the total population in different areas.

AVAILABLE  
MARKS

- (i) Compare the rates of urbanisation over time  
Award [0] for a response not worthy of credit.

Award [1] for a simple statement on the rates of urbanisation e.g.  
In MEDCs the rate of urbanisation changed little from 1950 to 1990 and between 1990 and 2030.

In LEDCs the percentage of the population living in urban areas increased from 18% to 33% between 1950 and 1990.

The rates of urbanisation have increased.

Award [2] for a more detailed description which mentions both MEDCs and LEDC's and one figure.

e.g. Urbanisation increased in both MEDCs and LEDCs between 1950 and 1990 e.g. it increased from 55% to 73% in MEDCs but it is estimated to slow down in MEDCs between 1990 and 2030 and continue at high levels in LEDCs.

Award [3] for a detailed description which addresses the variation between MEDCs and LEDCs and shows an awareness of the world trend. A minimum of 2 figures should be used in the answer. e.g.

Between 1950 and 1990 the urban population as a percentage of the total population increased by 18% in MEDCs and 15% in LEDCs showing little variation between these types of countries. However, between 1990 and 2030 MEDCs are expected to increase by 11% while LEDCs will increase by 23%.

The rate of urbanisation has therefore dropped dramatically in MEDCs while it continues at a fast rate in LEDCs. [3]

- (ii) Why the rate of urbanisation is increasing in LEDCs.

Award [0] for a response not worthy of credit.

Answer may focus on push or pull factors or high natural increase.

Award [1] for basic statement of a valid reason e.g.

People move due to a lack of services such as schools and hospitals [1]

Natural disasters e.g. drought/floods etc

Award [2] for valid reason with a consequence e.g.

e.g. Mechanisation has led to a reduction of jobs available on the land so people move to the cities in search of work/There is a better chance of employment in the city/Increased pressure on the land for example due to the division of land among sons, means that each has too little to live on.

A valid statement with consequence and elaboration e.g.

The traditional land inheritance system in many LEDCs often means a farmer must share his land equally among his sons, so each generation inherits smaller and smaller plots of farmland



which is unable to support a family so people move to the cities in search of work and a better quality of life. [3]

AVAILABLE  
MARKS

**(f) Urban planning scheme**

Name of Inner City Area – not credited with a mark but used to assess the accuracy of the answer. e.g. Titanic Quarter Belfast.

Award [0] for a response not worthy of credit.

**Level 1 ([1]–[2])**

A description of the regeneration scheme without evaluation of its sustainability. e.g. The Titanic Quarter is being redeveloped for offices, businesses and residences. This is a brownfield site and the new development will make it a pleasant place. Two aspects will be described for top level 1.

**Level 2 ([3]–[4])**

Two aspects of the scheme are mentioned with only limited evaluation of sustainability. e.g. The Titanic Quarter contains both residences and places of work so that people do not travel long distances to work and thus save money on fuel. Concrete and bricks from the old factories are reused on site for the new buildings. This makes the project more sustainable.

**Level 3 ([5]–[6])**

Two aspects of the scheme are evaluated for sustainability. e.g.

- The Titanic Quarter's mix of offices, businesses and residences will reduce traffic volume on approach routes such as the Newtownards Road because many residents in Titanic will work in the new businesses. This will reduce CO<sub>2</sub> emissions as there will be fewer cars on the road and will help the scheme to become more sustainable.
- Where possible, construction materials are being recycled thus reducing the need for fresh materials. This helps the construction process become more sustainable.

## Theme B: Contrasts in World Development

AVAILABLE  
MARKS

2 (a) (i) Social indicator – either literacy rate or life expectancy [1]  
Award [0] if social indicator is not on the table

(ii) MEDC [1]

(iii) Why Bangladesh is considered an LEDC

Award [1] for a basic statement which refers to any possible relevant indicator, e.g. People have a short life expectancy in Bangladesh.

Award [2] for a statement that refers to an indicator on the table with some explanation to its relevance to measuring development e.g. people there don't live long, compared to Norway.

Award [3] for an answer which compares to Bangladesh with either UK or Norway including one figure to illustrate their answer e.g. In Bangladesh people have a life expectancy of 65 years compared to 79 years in the UK. [3]

(iv) Human Development Index

Award [1] for a partially correct answer, HDI – only 1 (not full answer).

Award [2] for a correct answer, or Human Development Index. [2]

(b) Candidates should draw from Content element 2(i) so can use a LEDC or a NIC as their case study material to illustrate how globalisation can both help and hinder development.

Award [0] for a response not worthy of credit

### Level 1 ([1]–[3])

Definition only – [1]

A valid answer which may discuss globalisation in general or which may only briefly state information about a place, e.g. Globalisation is how places are becoming increasingly linked by trade and ideas. It has affected many LEDCs, where foreign investors have been encouraged. This has helped people living in LEDCs to become richer and they can buy more things.

Candidates present some relevant information in a form and using a style of writing which suits its purpose. The text is reasonably legible. Spelling, punctuation and the rules of grammar are used with some accuracy so that the meaning is clear. A limited range of specialist terms is used appropriately.

**Level 2 ([4]–[6])**

A valid answer which addresses help or hinder only in relation to a specific place or which addresses help and hinder in general terms and not related to a specific place. e.g. Globalisation is how places are becoming increasingly linked by trade, commerce and ideas. It has affected many LEDCs, where foreign investors have been encouraged. This has helped the economy grow and living standards to increase. However, globalisation has increased wealth unevenly, and the gap between rich city dwellers contrast dramatically to the situation in the countryside.

Candidates present information in a form and using a style of writing which suits its purpose. The text is legible. Spelling, punctuation and the rules of grammar are used with considerable accuracy so that the meaning is clear. A good range of specialist terms is used appropriately.

**Level 3([7]–[8])**

A valid answer which shows understanding of globalisation and applies it to a place, outlining how globalisation may have helped and hindered the country's development. For full marks they should conclude on whether globalisation has been an overall positive or negative thing for their named country, e.g. Globalisation is how places are becoming increasingly linked by trade, commerce and ideas. It has affected many LEDCs, like India. Here foreign investors have been encouraged as it linked more strongly to places like the USA and UK. This has helped the economy of India grow by 7% in 2009-10, which is a help to development as people become wealthier and living standards increase. However, globalisation has increased wealth unevenly, and the gap between rich city dwellers in places like Bangalore contrasts dramatically to the situation in the countryside. Despite such criticisms, it must be acknowledged that the wealth created by global trading should trickle down to the poor, so in overall terms, globalisation must be considered a good thing in helping India's development.

Candidates present and organise efficiently, relevant information in a form and style of writing which suits its purpose. The text is fluent and legible. Spelling, punctuation and the rules of grammar are used with almost flawless accuracy so the meaning is clear. A wide range of specialist terms is used skilfully and with precision. [8]

**(c) (i) Meaning of Fair Trade**

Award [1] A partial definition

e.g. A trade where producers get more money for their goods.

Award [2] A full definition that refers to both money and living standards or the environment e.g. a type of trade where producers in a poor country get a fair living wage for their product.

[2]

- (ii) Answers will most likely focus on the economic gains, some may discuss the idea that it helps local farmers to produce a product that can be from a small scale production rather than relying on TNC interference.  
Award [1] for a simply stated advantage of fair-trade e.g. farmers can get more money for their product.  
Award [2] for a stated advantage with some elaboration e.g. Farmers get a stable price for their product which is often above the open market price.  
Award [3] For one well explained advantage.  
e.g. Farmers get a stable price for their product which is often above the open market price, this might allow them to send their children to school, something they couldn't afford otherwise. [3]

- (d) Use of appropriate technology within a development project.

**Level 1 ([1]–[2])**

Candidates briefly outline or describe a project with appropriate technology.

e.g. Fishermen get given new boats that allow them to catch more fish in a LEDC.

Candidates present some relevant information in a form and using a style of writing which suits its purpose. The text is reasonably legible. Spelling, punctuation and the rules of grammar are used with some accuracy so that the meaning is clear. A limited range of specialist terms is used appropriately.

**Level 2 ([3]–[4])**

Candidates explain in reasonable detail how one type of appropriate technology has been used to promote sustainable development.

e.g. Fishermen in SW India were taught how to make a more modern fishing canoe using traditional carpentry skills on a new material. These boats will last longer than traditional ones and travel longer distances, so fishermen can continue to have a guaranteed income, allowing them to earn more money.

Candidates present information in a form and using a style of writing which suits its purpose. The text is legible. Spelling, punctuation and the rules of grammar are used with considerable accuracy so that the meaning is clear. A good range of specialist terms is used appropriately.

**Level 3 ([5])**

Candidates explain in good detail how appropriate technology has been used to promote sustainable development – including 2 fact/figures about a place.

e.g. Fishermen in the Kerala region of SW India were taught how to make a modern fishing canoe using traditional carpentry skills on a new material – fibreglass. These boats last for 7–10 years, which is longer than traditional wooden ones. Also the boats can travel longer distances out from shore, allowing the fishermen to have a guaranteed livelihood, allowing them to stimulate the local market.

This will last for generations without deforesting the local woodland.

Candidates present and organise efficiently, relevant information in a form and style of writing which suits its purpose. The text is fluent and legible. Spelling, punctuation and the rules of grammar are used with almost flawless accuracy so the meaning is clear. A wide range of specialist terms is used skilfully and with precision. [5]

AVAILABLE  
MARKS

## Theme C: Managing Our Resources

AVAILABLE  
MARKS

- 3 (a) Describe and explain the pattern of global energy consumption.

### Level 1 [1–2 marks]

A basic statement which either describes or explains the pattern

e.g. Countries in the north use more oil. [1]

Some countries use more electricity than others. [1]

Countries in the north use more oil because more cars are driven here. [2]

### Level 2 [3–4 marks]

Candidates give a good description and some explanation for the differences in oil usage. Some reference to **Map** is given. For top level 2 some comparison between MEDCs and LEDCs is required.

e.g. Some countries in the northern hemisphere such as the U.S.A., have more cars/vehicles on the road and therefore require more oil. Such countries use more than 2,000 kg of oil per capita. [3]

MEDCs in the northern hemisphere have more cars/vehicles on the road and therefore require more oil. These countries use more than 2,000 kg of oil per capita. LEDCs use much less oil per capita as fewer vehicles are found on the road.

MEDC's need and use a lot more electrical goods. [4]

### Level 3 [5 marks]

Candidates describe the pattern and give valid reason. For Level 3 look for differences between LEDC/MEDCs. Reference to **Map** is necessary by referring to countries/continents and by quoting two figures.

e.g. Rich countries such as the U.S.A. and the U.K. (MEDC) have millions of cars on the road. These require a lot of diesel or petrol and therefore their oil consumption per capita is more than 2,000kg per capita whereas poorer countries such as African countries (LEDCs) don't need the same demand for oil as there are fewer cars there. This would explain why their annual consumption is generally less than 1,000kg per capita. MEDC's also have more electrical goods which require more energy to run e.g. computers, T.V.'s. [5]

- (b) (i) State the meaning of the term **carbon footprint**.

### Level 1 [1]

Candidates give a limited definition.

e.g. the total amount of pollution caused by a person or an event. [1]

### Level [2]

Candidates give a clear definition related to the production of greenhouse gases.

e.g. the total set of greenhouse gases caused by an individual or event expressed as CO<sub>2</sub> emissions. [2]

**(ii) Level [1]**

Candidates offer a simple response on how to reduce carbon footprints  
 e.g. try to use your car less or switch off lights when they are not needed. [1]

**Level [2]**

Candidates offer a simple statement and a consequence for a response.  
 e.g. People try to use their cars less by walking or cycling to places. These cause no pollution. [2]

**Level [3]**

Candidates offer a simple statement, consequence and elaboration. For Level 3 some reference to greenhouse gases required.  
 e.g. People try to use their cars less as vehicle exhausts cause pollution such as nitrous oxide and CO<sub>2</sub>. If less of these greenhouse gases are being produced then a person will have a lower carbon footprint. [3]

**(c) (i)** Using **Fig. 7** state the name of the region with the least number of tourists in 2005.

South Asia [1]

**(ii)** Using **Fig. 7 underline** the total amount of tourists who travelled in 2005.

995,000,000 [1]

**(iii)** Explain why tourism has grown globally since 1950.

Reasons may include increased leisure time, increased income, cheap flights/cheaper holidays, increased health and wealth of pensioners or any other valid reason.

**Level 1 [1 mark]**

A basic statement

Holidays have become cheaper. [1]

**Level 2 [2 marks]**

A statement and a consequence

Holidays have become cheaper as people can book their holidays in a variety of ways. [2]

**Level 3 [3 marks]**

A statement, consequence and elaboration.

Holidays have become cheaper as people can book their holidays in a variety of ways. Cheap air travel has brought once faraway destinations into the reach of many people. The internet

has allowed customers to view different holiday destinations. Customers can compare prices easily and book their own holidays on-line. [3]

**(iv)** Evaluate the economic impacts of tourism.

Answer should focus on the positives and negatives e.g. investment in the area, provision of jobs, poorly paid seasonal employment etc.

If candidate doesn't refer to places or mentions cultural/ environmental impacts then **Max Level 1**.

**Level 1 [1–2 marks]**

The candidate refers to one economic impact. It can be positive or negative.

Tourism brings a lot of jobs to an area. [1]

Tourism brings a lot of jobs to an area in the many bars, restaurants, hotels and clubs. People can earn a wage to help support their families. [2]

**Level 2 [3–4 marks]**

The candidate refers to the economic impacts. Both positives and negatives are addressed but one may be covered in more detail than the other. A place must be mentioned to achieve a top level 2.

Tourist destinations earn enormous amounts of money through tourism. It creates jobs in bars, hotels and restaurants generating income for the locals who may find it difficult to get work. However the drawback of this is that jobs may only be seasonal. [3]

Tourist destinations e.g. Spain earn enormous amounts of money through tourism. It creates jobs in bars, hotels and restaurants generating income for the locals who may find it difficult to get work in other sectors of the economy. However the drawback of this is that jobs may only be seasonal with profits going overseas to the many foreign travel companies. [4]

**Level 3 [5 marks]**

Candidates give the positive and negative economic impacts and makes reference to place(s) in their answer and supports their answer with a minimum of one fact/figure.

Tourist destinations e.g. Spain earn enormous amounts of money through tourism. In 2007 Spain earned £40 billion from tourism, which can be used by the government to improve the infrastructure of the economy. It creates jobs in bars, hotels and restaurants generating income for the locals who may find it difficult to get work in other sectors of the economy. However the drawback of this is that jobs may only be seasonal and poorly paid with much of the profits going overseas to the many foreign travel companies. [5]



**(d) (i) Describe the trend in recycling rates in Fig. 8****Level 1 [1 mark]**

A simple trend or no figures quoted  
e.g. Recycling rates have increased over time.

**Level 2 [2 marks]**

A trend is quoted and one figure is quoted or a list of figures with no trend would be Level 2.  
e.g. Recycling rates have risen over time reaching a maximum of 45%

**Level 3 [3 marks]**

A trend is quoted and at least two figures quoted.  
e.g. Recycling trends have risen over the period, reaching 30% between July and September 2006. It fell slightly until March 2007 before rising to 45% between July and September 2007.

- (ii)** One sustainable method could be to advise residents to REDUCE or REUSE products. Also accept COMPOSTING. Some may mention case study material such as MECHANICAL BIOLOGICAL TREATMENT. [All 1 mark]

Unsustainable methods of waste management include LANDFILL or INCINERATION. [1]





