

**GCS**

**Geography**

**Summer 2010**

**Mark Schemes**

Issued: October 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>	
Paper 1	1
Paper 2	17
<b>Higher Tier</b>	
Paper 1	33
Paper 2	49





*Rewarding Learning*

**General Certificate of Secondary Education  
2010**

---

**Geography**

Paper 1  
Foundation Tier

**[G3601]**

**MONDAY 14 JUNE, MORNING**

---

**MARK  
SCHEME**

**Theme A: Atmosphere and Human Impact**

AVAILABLE  
MARKS

1 (a) (i) global warming.

**Level 1 ([1])**

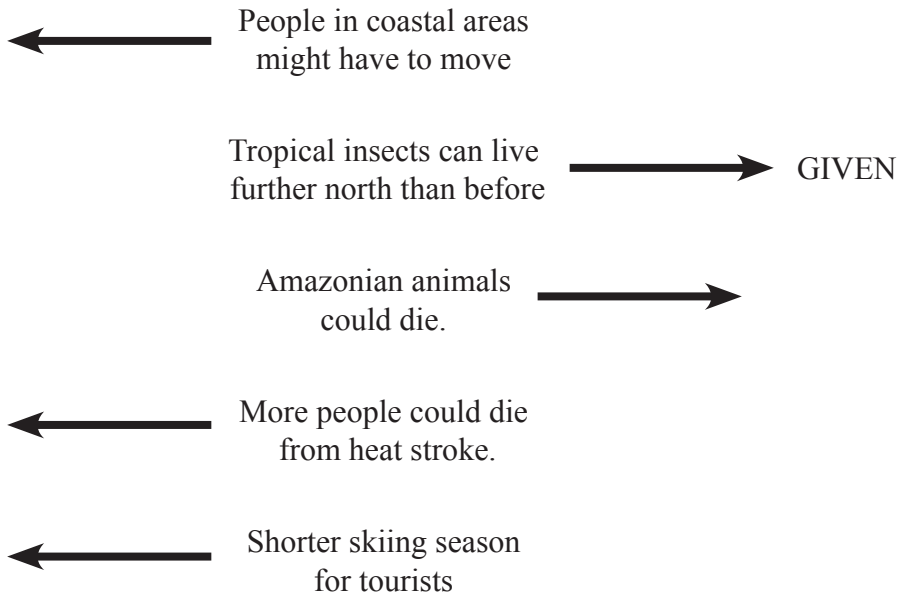
An incomplete definition/ statement  
Eg its when the earth is warming up.

**Level 2 ([2])**

A complete definition  
Eg The increase heating of the atmosphere caused by human activities. [2]

(ii) [1] for drawing the bar to the correct length – 70%  
[1] for shading in the bar [2]

(iii) Sorting statements [2]



[1] per correct arrow = [4]

(iv) Causes of global warming should include ideas relating to human activity such as the burning of fossil fuels.

**Level 1 ([1])**

A stated cause.  
e.g. People burning oil.

**Level 2 ([2])**

A stated cause with an elaboration.  
e.g. People burn oil which releases a greenhouse gas and make the earth heat up.

2 × [2] = [4]



- (v) Answers will be wide ranging and are acceptable from individual action right up to global treaties on carbon dioxide emissions.

**Level 1 ([1])**

A simply stated solution

e.g. Change to energy efficient light bulbs.

**Level 2 ([2])**

A stated solution with an elaboration.

e.g. Reduce the amount of electricity we use by changing to energy efficient light bulbs.

**Level 3 ([3])**

A stated solution with an elaboration and consequence related to global warming.

e.g. Reduce the amount of electricity we use by changing to energy efficient light bulbs, this means less fossil fuel will be burnt and less carbon dioxide will be produced. [3]

- (b) (i) Underline Depression [1]

- (ii) Underline 350km [1]

- (iii) complete the table

Statement	True	False
There is a warm front near to weather station B	✓	
The lowest pressure on the map is 988mb		✓
There is an occluded front over the British isles		✓
It is raining everywhere in the British Isles		given

[1] per correct decision = [3]

- (iv) 28-32 knots [1]

30 knots [1]

SW or SSW [1]

8 oktas [1]

4°C [1]

[4]

- (v) Two changes.  
Two of – it will get drier, then it will get wetter and less windy, less cloudy. [2]

- (i) The meaning of climate.

**Level 1 ([1])**

An incomplete answer

e.g. Whether its raining or warm.

**Level 2 ([2])**

A full definition

e.g. The average weather for a place taken over at least 30 years. [2]

- (ii) 2 climate factors – each is worth [3] marks.

**Level 1 ([1])**

A stated connection to an element of climate.

e.g. Altitude affects temperatures in Europe.

e.g. Latitude also affects temperatures in Europe.

e.g. Prevailing winds can affect how much rain somewhere gets.

**Level 2 ([2])**

A stated connection and consequence.

e.g. Altitude affects temperatures in Europe, as you go up it gets colder.

e.g. Latitude also affects temperatures in Europe, the further north the colder it is.

e.g. Prevailing winds can affect how much rain somewhere gets, coasts get more rain.

**Level 3 ([3])**

A stated connection, consequence and elaboration related to Europe.

e.g. Altitude affects temperatures in Europe, for every 100m you climb it gets 1 degree colder, so mountainous areas of Europe.

Like the Alps are colder.

e.g. Latitude also affects temperatures in Europe, the further north the colder it is. Southern Mediterranean areas get more concentrated rays from the sun, so are warmer than areas at a higher latitude.

e.g. Prevailing winds can affect how much rain somewhere gets, coasts get more rain as maritime air carries moisture over the land, which created clouds and rain. For example England is much wetter than central Spain.  $2 \times [3] = [6]$

(d) (i) Correct statements C & D [1] each

[2]

AVAILABLE  
MARKS

(ii) Name of farming area [1]

e.g. Southern Spain

Do not credit large areas e.g. Mediterranean

How technology reduces impact of climate.

**Level 1 ([1])**

A simple statement of technology.

Irrigation helps water plants.

**Level 2 ([2])**

A statement with a consequence

Eg In Southern Spain the summers are hot and rainfall is very low

- so the Spaniards now irrigate in the summer months, to bulk up the fruit as it ripens.

**Level 3 ([3])**

A statement with a consequence and an elaboration with a specific fact/figure

Although the sunshine of Southern Spain means crops ripen citrus fruits like clementines need water to become sweet and marketable. In order to overcome this climatic problem, the Spaniards now irrigate the citrus orchards in the summer months, to bulk up the fruits as they ripen. [4]

**Theme B: Physical Processes and Challenges**

AVAILABLE  
MARKS

2 (a) (i) Asama [1]

(ii) 7.7 [1]

(iii) Meaning of volcano

**Level 1 ([1])**

A simple statement e.g.

A place where lava comes out.

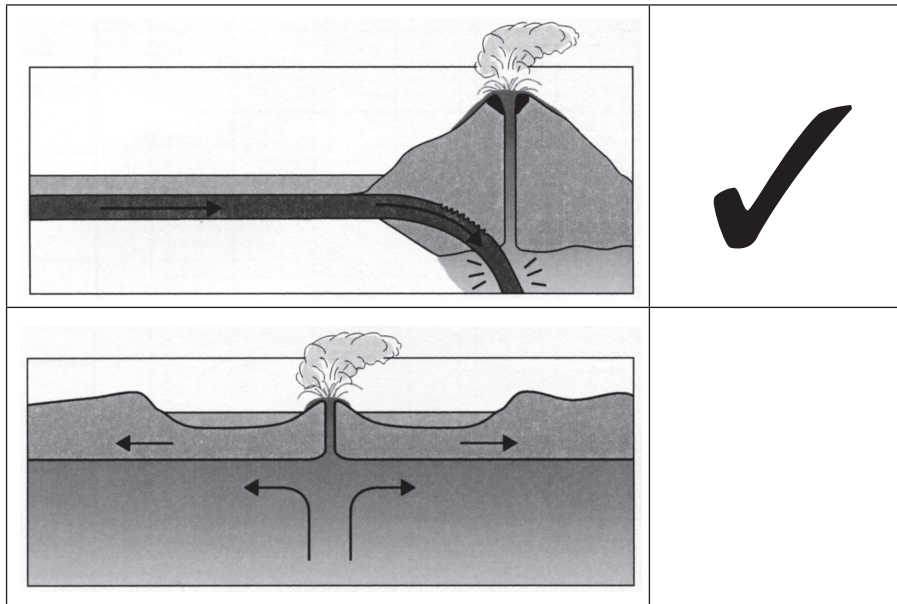
**Level 2 ([2])**

A more detailed statement e.g.

A volcano is an opening in the Earth's crust where lava escapes.

They occur when plates move either towards or away from each other.

(iv) Choose the **one** diagram which matches a destructive boundary.



[1] mark for placing a ✓ in the correct box

[1]

- (v) Explain why earthquakes occur at a destructive plate boundary.

**Level 1 ([1])**

A simple statement e.g.

They occur because plates are moving.

**Level 2 ([2])**

A statement and a consequence e.g.

They occur because plates are moving towards each other. This causes pressure to build up.

**Level 3 ([3])**

A statement, consequence and elaboration required.

They occur because plates are moving towards each other. One plate is forced under the other getting stuck in the process. Pressure begins to build up over time. When the pressure becomes too much the plates move and energy is released in the form of shockwaves. These cause the earth to move. [3]

- (vi) Convective is not a type of plate boundary.

- (vii) Using an earthquake event that you have studied, describe **one** way by which buildings were made safer after the event.

**Name of earthquake**

Any appropriate earthquake from a MEDC or LEDC e.g. KOBE

Candidate needs to name the city. [1]

**Level 1 ([1])**

One strategy noted – with a low level of detail.

After the event new building codes were introduced.

**Level 2 ([2])**

The management response strategy covered well with some elaboration.

Buildings were strengthened after the earthquake so that in future events they would absorb the shockwaves rather than falling down. [2]

- (b) (i) Choose the correct words from the statements below (one has been completed for you).

The correct words are:-

LARGER

BAR

MOUTH

[1 mark each] [3]

- (ii) Explain how erosion causes the load to change in size downstream.

EXPLANATION OF EROSION

**Level 1 ([1])**

The load or rocks get smaller

**Level 2 ([2])**

A statement with related consequence

The rocks hit each other, causing erosion

**Level 3 ([3])**

A statement with related consequence and elaboration

As the load travels downstream, rocks hit each other – a process called erosion. This means the edges of some rocks will be broken off, making them smaller and more rounded as they go downstream. [3]

- (iii) State the meaning of the term **deposition**.

**Level 1 ([1])**

A basic statement e.g.

When a river drops of or deposits its load.

**Level 2 ([2])**

A more detailed statement e.g.

When a river drops of its load as it no longer can carry it due to lower velocity. [2]

- (iv) Underline the two human causes of flooding.

DEFORESTATION

URBANISATION

[1 mark each] [2]

(v) Name **one** soft and **one** hard engineering measure.

Any appropriate soft engineering measure e.g. afforestation, natural levees etc [1]

Any appropriate hard engineering measure e.g. dams, channelization, man-made levees etc. [1]

(vi) Using a river management scheme at the national/regional scale that you have studied, state fully **one** negative impact that flooding had on the people.

Most candidates will choose Mississippi river management scheme but any appropriate scheme will suffice for 1 mark. [1]

Answers should relate around loss of life, damage to crops, properties and belongings, health risks due to disease, cost to taxpayer.

**Level 1 ([1])**

A simple statement

Crops were destroyed or area was underwater.

**Level 2 ([2])**

A statement with related consequence

Crops were destroyed with farmers losing money or as the area was underwater many people had to evacuate their homes.

**Level 3 ([3])**

A statement with related consequence and elaboration. Some case study detail should be evident.

In April 2001 the Mississippi river burst its bank causing a large area to become flooded. \$350 million of damage was caused to crops such as maize, cotton and wheat. This caused the farmer to lose a lot of money. [3]

- (c) (i) Name the limestone feature shown in **Fig.**

LIMESTONE PAVEMENT

[1]

- (ii) Explain how chemical weathering has helped form this limestone feature in **Fig.**

**Level 1 ([1])**

A simple statement e.g.

Acids in the water erode the limestone.

**Level 2 ([2]-[3])**

A statement that has some detail e.g.

Rainwater contains acids which easily dissolves the alkaline limestone. [2]

Rainwater contains acids. As limestone is made of calcium carbonate which has an alkaline pH it reacts and begins to erode the limestone pavement. [3]

**Level 3 ([4])**

A full understanding of how chemical weathering operates to create limestone pavement..

Rainwater can become slightly acidic. As limestone is made of calcium carbonate it becomes dissolved in solution due to the acidic nature of the water. The rainwater enters through joints in the limestone and erodes it chemically. This helps form grooves on the limestone surface. [4]

- (iii) Explain how changes in temperature cause rocks to weather.

**Level 1 ([1])**

A basic statement e.g.

The weather breaks down the rocks.

**Level 2 ([2])**

A basic statement and consequence.

Aspects of the weather such as rain, heat and ice over time break the rocks down. The constant exposure to these elements makes the rock weak.

**Level 3 ([3])**

A basic statement and consequence and elaboration. For this level candidate may mention types of mechanical weathering such as freeze-thaw, onion skin or peeling.

Aspects of the weather such as rain, heat and ice over time break the rocks down. The sun continually heats rocks up and as it does this it expands. When the rock cools down it contracts. This constant expansion and contraction makes the the outer layer of the rock weak and over time it peels off and the rock gets smaller. This is known as onion skin or onion peeling. [3]



- (iv) Using **one** limestone environment within the British Isles that you have studied, state fully **one** impact of human activity within that environment.

One mark for limestone area. Most candidates will use the Burren or Co.Clare. Accept any valid limestone area. [1]

Candidates have plenty to choose from, it may be negative – quarrying, potholing, walking, overgrazing – or positive – conservation

**Level 1 ([1])**

A simple statement or description of the activity e.g.  
Tourists visiting limestone areas can upset the balance there.

**Level 2 ([2])**

A stated activity which is affecting limestone with a direct consequence for limestone environment.

Tourists walking over the limestone might wear it away slowly damaging the exposed limestone in the area.

**Level 3 ([3])**

A stated activity which is affecting limestone with a direct consequence and elaboration relating to the limestone environment. As this is a case study some detail should be evident.

The Burren in Co. Clare is 360km<sup>2</sup> and is a popular area for tourists to visit, up to 400,000 annually. This wears away the limestone pavement mechanically as their deep tread walking boots continually damages the exposed limestone in the area, meaning this non-renewable resource is being worn off the area it is needed in to support a fragile ecosystem. [3]

3 (a) (i) Meaning of term, soil

**Level 1 ([1])**

An incomplete definition  
e.g. the stuff plants grow in.

**Level 2 ([2])**

A full definition  
e.g. Material in the top layer of the surface of the earth in which plants can grow  
e.g. Material made of dead organic matter and eroded rock. [2]

(ii) Producer = heather [1]  
Consumer = either rabbit or kestrel [1]

**(iii) Level 1 ([1])**

A simple stated consequence.  
e.g. There will be less heather

**Level 2 ([2])**

A stated consequence and elaboration.  
e.g. There will be less heather, so rabbits will not have as much food to eat.

**Level 3 ([3])**

A stated consequence, elaboration and link to predator.  
e.g. There will be less heather, so some rabbits might starve as they won't have enough food, meaning the kestrels will find it harder to get rabbits to eat. [3]

(iv) TRUE [1]  
TRUE [1] [2]

(v) one way afforestation changes the peatland

**Level 1 ([1])**

A statement about afforestation  
e.g. There will be trees planted on the peatland.

**Level 2 ([2])**

A statement with a consequence.  
e.g. There will be trees planted on the peatland. and so the natural bog plants will disappear.

**Level 3 ([3])**

A statement with a consequence and an elaboration.  
e.g. There will be trees planted on the peatland. and so the natural bog plants will disappear, and animals that eat the plants won't have food. [3]

- (vi) Area of peatland  
 [1] for a correctly identified area of peatland in Northern Ireland  
 e.g. Cuilcagh [1]
- Conservation measure
- Level 1 ([1])**  
 A short statement.  
 e.g. It has been protected by law.
- Level 2 ([2])**  
 A full description of a conservation measure  
 e.g. The area including the peatland has been declared a Geopark,  
 and so the natural vegetation and landscape is protected by law from  
 damage. [2]
- (b) (i) Words in order are – equator, large, Africa, North [1] each [4]
- (ii) Underline            Hot            Wet [2]
- (iii) one way the climate of Tropical rainforests affects the vegetation
- Climate plays an important role influencing the vegetation, so there may  
 be a wide range of answers, covering drip tips, buttress roots, epiphytic  
 lifestyle and heavy leaching.
- Level 1 ([1])**  
 A simple statement .  
 e.g. plants need to protect themselves against the rain.
- Level 2 ([2])**  
 A statement with a consequence.  
 e.g. Plants need to protect themselves against the rain so that their leaves  
 do not rot in the wet conditions.
- Level 3 ([3])**  
 A statement with a linked consequence and elaboration.  
 e.g. Plants need to protect themselves against the rain so that their  
 leaves do not rot in the wet conditions, so some plants like the ficus  
 have developed drip tips to direct raindrops off the leaves and onto  
 the ground. [3]

- (i) two impacts large scale deforestation has on the plants and animals of a named tropical rainforest which you have studied.

[3] for each impact. Level 3 ([5-6] overall) answers must have 2 specific facts /figures within the text.

e.g.

**Level 1 ([1])**

A stated impact

Some plants die.

**Level 2 ([2])**

A stated impact with a consequence.

e.g. The cutting down of trees kills the trees and plants which live on them

**Level 3 ([3])**

A stated impact with a consequence and an elaboration.

e.g. Some endangered trees like the Mahogany may be cut down and the epiphytic plants, like orchids have no suitable habitat.

$$2 \times [3] = [6]$$

- (ii) one way Tropical forests are being protected.

**Level 1 ([1])**

A simple statement

e.g. They turn them into parks.

**Level 2 ([2])**

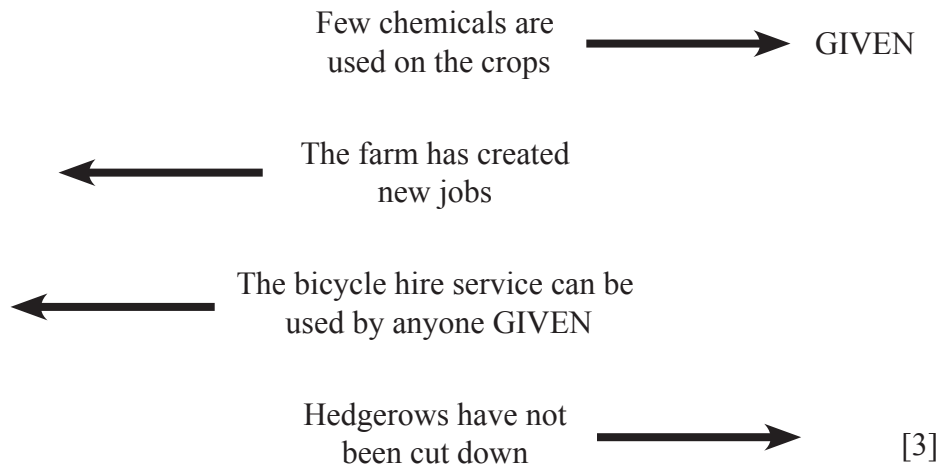
A full description of a conservation measure

e.g. Some areas are being made into reserves where loggers cannot cut down the trees.

e.g. Some areas are being protected by armed guards who patrol the area.

[2]

(d) (i) Draw arrows as follows:



(ii) The meaning of the term ecotourism

**Level 1 ([1])**

An incomplete definition

e.g. A type of tourism that helps the environment.

Accept, for 1 mark, idea of tourists going to see a natural environment

e.g. rainforests/glaciers etc.

**Level 2 ([2])**

A full definition that covers people and environment

Eg. Tourism which involves protecting the environment and the way of life of local people. [2]

(iii) One disadvantage which ecotourism has brought.

**Level 1 ([1])**

A simple statement

e.g. Ecotourists can disturb wildlife by accident.

**Level 2 ([2])**

A statement with consequence

e.g. In Africa ecotourists want to get good views of the wildlife and might stop them hunting.

**Level 3 ([3])**

A statement with a consequence, elaboration with a specific fact/figure

e.g. On the Savannah of the Masai Mara ecotourists want to get good views of the wildlife and bus drivers can get to close to animals like lions and they may not be able to hunt. [3]





*Rewarding Learning*

**General Certificate of Secondary Education**

**2010**

---

**Geography**

Paper 2  
Foundation Tier

**[G3602]**

**THURSDAY 17 JUNE, AFTERNOON**

---

**MARK  
SCHEME**

**Theme D: Population and Resources**

AVAILABLE  
MARKS

1 (a) (i) Population density of Wales 140 [1]

(ii)

STATEMENT	TRUE/FALSE
Population densities vary from country to country in the U.K.	<b>TRUE (given)</b>
Scotland has the lowest population density	FALSE [1]
Scotland's population density is twice as big as Wales'	FALSE [1]
Population density is measured in people per sq metre	FALSE [1]

(iii)

HIGH DENSITY	PLACE	LOW DENSITY
	Amazon rainforest	→ (given)
	Sahara desert	→ [1]
←	New York	[1]
	Mourne Mountains	→ [1]



(iv) State the meaning of the term **underpopulation**.

**Level 1**

A basic statement

Few people in an area [1]

**Level 2**

A statement relating to population and resources

A place that has few people for the resources available [2]

(b) (i) Population in 2100 = 11 billion [1]

(ii) Choose the correct statements

- Between 1950 and 2000 there was **moderate/rapid** growth.
- In 1750 there was a **high/low** rate of natural increase.
- The population of the world is likely to be **four/six** times greater in 2050 than in 1950.

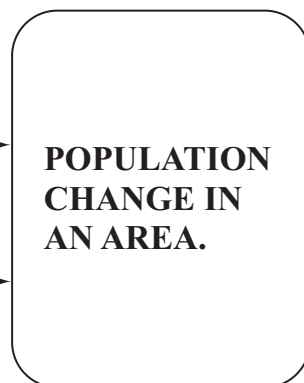
3 × [1] each [3]

(iii) Complete **Fig. 3**, by filling in the different ways that the population can change in an area some have been completed for you.

**Increase in population**

Births  
(given)

IN-MIGRATION  
Or  
IMMIGRATION



**Decrease in population**

DEATHS

Out-migration  
(given)

2 × [1] each [2]

(iv) State the meaning of the term **population change**.

**Level 1 (1 mark)**

A basic statement

It is how the population changes [1]

**Level 2 (2 marks)**

A more detailed definition

It is how a population changes in relation to its birth and death rates over time. [2]

(v) Using a case study of population change in a MEDC that you have studied, describe how the birth rates have changed over time and state fully why they have changed.

Any appropriate MEDC [1]  
No mark if LEDC is named, but credit to max Level 2 (2) for change and reason.

**Change in Birth rate**

**Level 1 (1 mark)**

A simple statement

It has gone down

**Level 2 (2 marks)**

A trend with a figure

Italy's birth rate has fallen to 9 per thousand

**Level 3 (3 marks)**

A trend with 2 figures

Italy's birth rate has fallen from 16 per thousand in 1970 to 9 per thousand in 2005. [3]

**Reason for change**

**Level 1 (1 mark)**

A simple statement

People are having fewer children

**Level 2 (2 marks)**

A statement with a consequence

People are having fewer children as family planning is available

**Level 3 (3 marks)**

A statement, consequence and elaboration

People are having fewer children as family planning is available. This means people can prevent pregnancies by using contraceptives such as the pill. This helps reduce the number of babies born and therefore lowers the birth rate. [3]

(c) (i) North west [1]

(ii) Maria is NOT an international migrant [1]

(iii) **Underline** the name of the country which borders Mexico to the South.

**Honduras**      **U.S.A.**      **Belize** [1]

(iv) **Underline** the correct word below which describes people of different races, colour and religions living in an area.

**Multinational**      **Multi-storey**      **Multicultural** [1]

(v) Meaning of migration

**Level 1**

People move to a different area

**Level 2**

It is the permanent movement of a person to a different place [2]

(vi) One negative impact of migration.

**Level 1 (1 mark)**

A simple statement

It causes racial tension.

**Level 2 (2 marks)**

A statement and a consequence

As people move into an area they take the jobs of locals which causes racial tension.

**Level 3 (marks)**

A statement, consequence and elaboration

As people move into an area they take the jobs of locals which causes racial tension such as verbal harassment or violence. This leads to mistrust as the migrant population become segregated into their own ethnic areas. [3]

- (d) (i) Name one other renewable resource and one non-renewable resource.

Renewable = Solar (Sun), Hydroelectric, Geothermal etc. [1]

**Don't accept wind power** as the question asks for one other

Non-renewable = Coal, Oil, Gas or Fossil fuel [1]

- (ii) 50% target. [1]

**(iii) Renewable energy scheme**

Name of scheme e.g.

Wind power in Northern Ireland or B9 Energy [1]

Accept any valid scheme

If name of energy scheme is left blank mark 'benefit' to maximum of level 2

**Benefit to the environment****Level 1 (1 mark)**

A simple statement

It doesn't harm the environment

**Level 2 (2 marks)**

A statement and a consequence

It doesn't harm the environment as there is no air pollution.

**Level 3 (3 marks)**

A statement, consequence and elaboration. Case study detail should be evident through use of a fact/figure.

B9 Energy has turbines across Northern Ireland e.g. Bessy Bell in Co. Tyrone. These turbines don't emit harmful gases such as CO<sub>2</sub> and SO<sub>2</sub>. This leads to a cleaner atmosphere. [3]

## Theme E: Economic Change and Development

AVAILABLE  
MARKS

### 2 (a) (i) Meaning of fairtrade

**Level 1 [1]** A partial definition

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

**Level 2 [2]** A full definition refers to money and LEDC location of producers

e.g. a type of trade where farmers in a poor country get a fair living wage for their product. [2]

### (ii) Food item

Either sugar or bananas [1] If another item, such as coffee is noted, do not give credit as the question specifies that they use the resource. [1]

### (iii) One advantage of fairtrade to LEDCs.

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.

**Level 1 [1]** A stated advantage

e.g. farmers can get more money for their product.

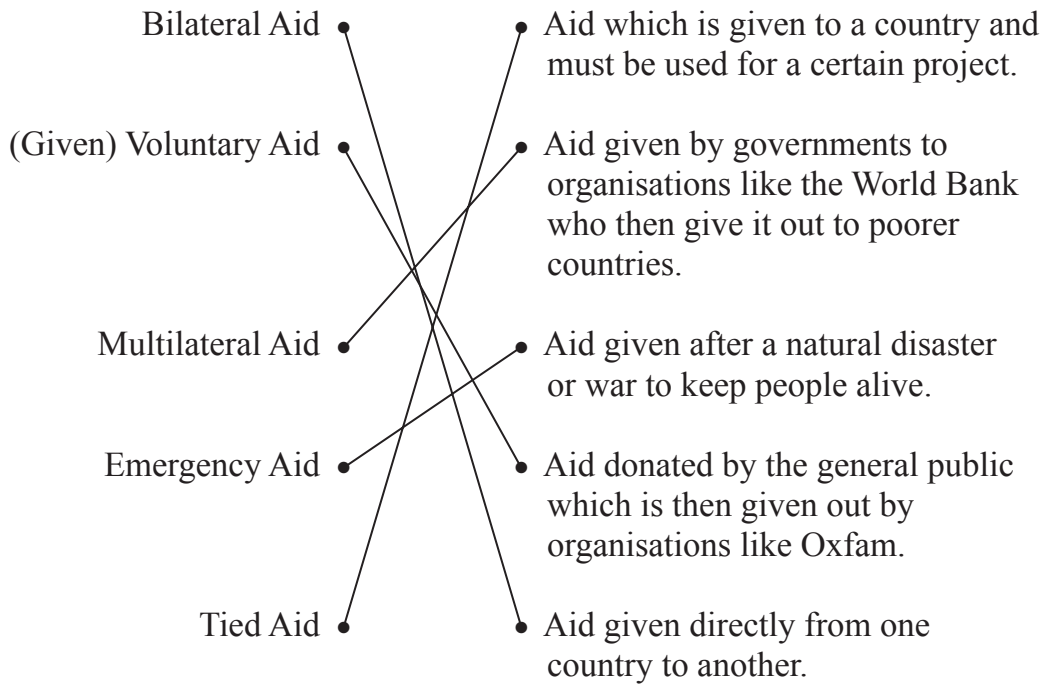
**Level 2 [2]** A stated advantage with a consequence

e.g. Farmers get a stable price for their product which is often above the open market price.

**Level 3 [3]** A stated advantage with a consequence and elaboration.

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]

**(b) (i)** matching tops and tails



[1] per correct arrow

[4]

**(ii)** One reason MEDCs give aid.

Answers may refer to political, economic or even moralistic reasons.

**Level 1 [1]** A simple stated reason.

e.g. MEDCs may want to build on an allegiance with an LEDC

**Level 2 [2]** A stated reason with a consequence.

e.g. For political reasons MEDCs may want to build on an allegiance with an LEDC, especially during war times.

**Level 3 [3]** A stated reason with a consequence and elaboration.

e.g. For political reasons MEDCs may want to build on an allegiance with an LEDC, especially during war times, like America lending Egypt money to ensure they remained an ally during the war with Iraq.

[3]

**(iii)** Problems associated with aid.

Cause more debt and reduce local markets should be circled

[1] for each correctly identified problem.

[2]

**(c) (i)** Underlining

Answers underlined should be- Austria, positive, high, 25%

[1] each

[4]

- (iii)** two reasons why many people cannot read or write in poor countries (LEDCs).  
[3] for each reason, which may include lack of schools, children needed to help on farm and the low status of girls.

**Level 1 [1]** A simple statement  
e.g. there aren't many schools there.

**Level 2 [2]** A stated reason with a consequence  
e.g. there aren't many schools so many children don't get the chance to learn how to read or write.

**Level 3 [3]** A stated reason with a consequence and elaboration.  
Many LEDCs do not have the money to build many schools, so fewer children have the chance to go to school and learn how to read and write.

$$2 \times [3] = [6]$$

- (d) (i)** M90 [1]

**(ii)**

Factor	Good point	Bad Point
Remote from other centres of Hi-tech industry		Given
Lots of main roads and Motorways	✓	
High level of pollution in the city of Glasgow		✓
Close to two airports	✓	

[1] per correct tick [3]

- (iii)** Meaning of hi-tech industry

**Level 1 [1]** A simple statement  
e.g. They are industries that make things.

**Level 2 [2]** A complete definition of the term.  
e.g. They are industries that produce microelectronics and use computer technology. [2]

(e) (i) Write out in full what the letters **TNC** stand for

**Level 1 [1]** A partially correct answer.  
e.g. Trans National Cooperation or Company

**Level 2 [2]** A correct answer  
e.g. Transnational Corporation or Trans National Corporation [2]

(ii) One way TNCs are good  
If the candidate chooses an advantage not listed in Fig 5, then  
max [2]

**Level 1[1]** A straight lift from Fig 5  
e.g. Sometimes they provide medical services.

**Level 2 [2]** A stated reason from Fig 5 with a consequence.  
e.g. By providing health care fewer people will become sick

**Level 3 [3]** A stated advantage with a consequence and elaboration  
e.g. By providing health care fewer people will become sick and  
babies may be inoculated meaning they survive rather than die in  
infancy from diseases. [3]

(iii) Factor causing a TNC to relocate from MEDC to LEDC

[1] for naming a TNC [1]

Reason

**Level 1 [1]** A general answer which will allude to one reason.  
e.g. to make the most money [1]

**Level 2 [2]** A statement with a consequence  
e.g. Big companies like Nike prefer LEDCs as they can use local  
people to work for low wages.

**Level 3 [3]** An answer that states fully one reason for a specific  
TNC-including 1 fact/figure/place.  
e.g. Big companies like Nike prefer LEDCs such as Indonesia, as  
labour costs are cheaper there, meaning profits can be increased.[3]



## Theme F: Settlements and Change

AVAILABLE  
MARKS

- 3 (a) (i) One factor which may have influenced the original choice of this site for Durham.

The site of Durham

Suitable answers would be Defensive site, Wet Point site or Bridging Point, Bridge, River, Castle.

1 mark for chosen factor.

[1]

### Level 1 ([1])

A basic statement. 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

### Level 2 ([2])

A statement with consequence. E.g.

- Durham is on a steep hill/river bend 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.

### Level 3 ([3])

A 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) The straight line distance from the park and ride area at 307446 to the bus and coach station in the centre of Durham at 269426.

Answer is 4.3 km

### Level 1 ([1])

Accept answers in the range 4.1–4.19 km or 4.41–4.5 km

### Level 2 ([2])

Answers in the range 4.2 to 4.4 km.

[2]

(iii) One reason why this is a good location for a park and ride area. [2]

Answers could include refer to the site being on the outskirts of the city, close to nearby communications – M1 and A690, on flat land between the major roads, close to suburbs with residents who could avail of the facility etc.

**Level 1 ([1])**

A simple statement. E.g.

- Near a main roundabout
- At edge of built up area

**Level 2 ([2])**

A statement with specific elaboration. E.g.

- It is on the outskirts of the city close to a roundabout on the M1 which meets the A690 so is a good place for drivers coming into the city.
- It is close to the suburbs of Carville and Belmont which means commuters from these areas can easily avail of the facility and reduce the journey time into the city. [2]

(b) Park and ride facilities in Durham.

True or false statements.

Park and ride parks have proved popular with car drivers.

TRUE

The park and ride measure has been successful at reducing congestion in the city.

TRUE

Durham is a less sustainable city because of the Park and Ride scheme.

FALSE

(3 x [1])

[3]

(c) Settlement hierarchy

(i) Arrange the following settlements in order of size beginning with the largest.

Rank Order	Settlement
1	Durham
2	Sacrison
3	Sherburn
4	Edmondsley

(4 x [1])

[4]

(ii) Underline the term

Answer is settlement hierarchy [1]

(iii) Services available in three settlements

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

(4 x [1]) [4]

(iv) Completing the sentences

Correct word is underlined

The larger the settlement the (**fewer/more**) services it will have.

The settlement with the largest sphere of influence is (**Durham/Edmondsley**).

(**Sacrison/Edmondsley**) has the threshold population needed for a school to exist.

Edmondsley is a (**city/town/village**) which provides (**high/low**) order services.

(5 x [1]) [5]

(v) Direction of Sherburn from Sacrison.

Answer is South east [1]

(vi) Approximate area of Sherburn

Answer is 0.75 km<sup>2</sup> [1]

(d) Urban population

(i) Changes in the percentage of the population living in urban areas

**Level 1 ([1])**

A simple descriptive statement. E.g.

- In MEDCs the percentage living in urban areas is not predicted to increase much from 2000 to 2030.
- The rates of urbanisation have increased.

**Level 2 ([2])**

A more detailed description which includes at least one figure. E.g.

- The percentage living in urban areas will increase in both MEDCs and LEDCs between 2000 and 2030 e.g. it went up by 8% in MEDCs.

**Level 3 ([3])**

A detailed description which mentions both MEDCs and LEDCs and uses 2 figures E.g.

- Between 2000 and 2030 MEDCs are expected to increase by 8% while LEDCs will increase by 16% so urbanisation is faster in LEDCs [3]

- (ii) Why many people move into cities in LEDCs.  
Push or pull factors are equally valid.

**Level 1 ([1])**

A valid statement. E.g.

- Lack of services in rural areas
- Natural disasters e.g. drought/floods etc

**Level 2 ([2])**

A 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.
- 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

**Level 3 ([3])**

A valid statement 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.
- 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) Underline the term

Answer is Counterurbanisation [1]

(e) Shanty town in Kolkata, India.

AVAILABLE  
MARKS

**Level 1 ([1]–[2])**

One or two statements of relevant problems. E.g.

- Poor quality roads
- Homes made out of scrap materials
- Pollution
- Dirty water

**Level 2 ([3]–[4])**

Two stated problems with consequence

- Poor quality roads make it difficult for vehicles to move around
- Dirty water means more disease
- Homes made out of scrap collapse easily

**Level 3 ([5]–[6])**

Two stated problems with consequence and elaboration

- Dirty water means water borne diseases like cholera kill babies and poorly laid roads or pavements means transportation is severely limited. [5]
- Dirty water means water borne diseases like cholera kill babies and no tarmac on roads or pavements means it is hard for vehicles to move around, so emergency vehicles and bin lorries cannot access the area for example meaning services are limited. [6]

120

6

Marks are to be allocated to QWC in accordance with the following criteria.

Performance Level	Criteria	Marks
Threshold	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.	0, 1, 2
Intermediate	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.	3, 4
High	Candidates present and organise effectively relevant information in a form and using a 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.	5, 6





*Rewarding Learning*

**General Certificate of Secondary Education  
2010**

---

**Geography**

Paper 1  
Higher Tier

**[G3603]**

**MONDAY 14 JUNE, MORNING**

---

**MARK  
SCHEME**

## Theme A: Atmosphere and Human Impact

AVAILABLE  
MARKS

1 (a) (i) global warming.

**Level 1 ([1])**

An incomplete definition/ statement  
e.g. it's when the earth is warming up.

**Level 2 ([2])**

A complete definition  
e.g. The increase heating of the atmosphere caused by human activities. [2]

(ii) [1] for drawing the bar to the correct length – 70%  
[1] for shading in the bar [2]

(iii) Most of the answers will be negative, but allow positive as well.  
Award Level 1 for answers which identify an effective global warming on the tropical ecosystem in general where the impact on animals may be implicit.

**Level 1 ([1])**

A correct idea stated.  
e.g. They will have nowhere to live.  
e.g. Rising sea levels will reduce the area of rainforest habitat.

**Level 2 ([2])**

A correct idea with elaboration.  
e.g. Temperatures will increase so trees will die and birds will no longer have anywhere to feed, and so may become extinct. [2]

(iv) Causes of global warming should include ideas relating to human activity such as the burning of fossil fuels.

**Level 1 ([1])**

A stated cause.  
e.g. People burning oil.

**Level 2 ([2])**

A stated cause with an elaboration.  
e.g. People burn oil which releases a greenhouse gas and make the earth heat up.

**Level 3 ([3])**

A stated cause with an elaboration and consequence – a specific fact like a named gas is needed.  
e.g. People burn oil to generate electricity, this releases carbon dioxide into the atmosphere which act as a greenhouse absorbing/trapping heat and causing the earth to heat up. [3]



- (v) Answers will be wide ranging and are acceptable from individual action right up to global treaties on carbon dioxide emissions.

**Level 1 ([1])**

A simple statement.

e.g. International agreements about CO<sup>2</sup> levels.

**Level 2 ([2])**

A statement and consequence.

e.g. International agreements about lowering CO<sup>2</sup> levels, where many countries agree to cut emissions.

**Level 3 ([3])**

A statement with a consequence and elaboration.

e.g. International agreements, like the Kyoto Protocol, about lowering CO<sup>2</sup> levels, where many countries agree to cut emissions by changing national policies on things like energy sources and recycling.

$$2 \times [3] = [6]$$

- (b) (i) depression / low pressure system [1]

- (ii) Warm front [1]

- (iii) 28-32 knots [1]  
 SW or SSW [1]  
 8 oktas [1]  
 4°C [1] [4]

- (iv) A should be inside the warm sector within 8 hours.

**Level 1 ([1])**

A simple stated change.

e.g. It will get warmer

e.g. It will get rain.

**Level 2 ([2]-[3])**

A stated change with a brief explanation.

e.g. It will rain as the warm front passes. [2]

e.g. It will get warmer as A moves into the warm sector which has warm tropical air. [3]

e.g. It will rain when the cold front passes because warm & cold air meet and there is condensation.

**Level 3 ([4])**

A precise stated change with a detailed explanation.

e.g. It will get warmer, probably up to 7°C because A will move into the warm sector of the depression that is made up of a tropical maritime airmass.

e.g. There will be rain showers when the cold front passes because warm air will be pushed up by the cold polar maritime air mass and the warm air rises and cools and condensation takes place. [4]

- (v) Reason why weather forecasts are not accurate for long term forecasting. This is a difficult question to pull out A candidates. Answers which refer to the large expanse of ocean to the west and the lack of data available from it are acceptable.

**Level 1 ([1])**

A simple stated correct reason

e.g. The weather is changeable or Britain is an island. Different air masses come or more than a few days is a long range forecast.

**Level 2 ([2])**

A stated reason with a consequence.

e.g. Weather patterns appear and disappear without warning, it is therefore changeable and so difficult to predict.

e.g. A depression passes quickly over Britain, but an anticyclone will last longer.

**Level 3 ([3])**

A stated reason with a consequence and elaboration.

e.g. Our weather starts over the Atlantic and takes about 3-7 days to reach us, so until a pressure system forms, meteorologists cannot say what our weather will be. Weather is changeable and hard to predict. [3]

- (c) 2 climate factors – each is worth [3] marks.

**Level 1 ([1])**

A stated connection to an element of climate.

e.g. Altitude affects temperatures in Europe.

e.g. Latitude also affects temperatures in Europe.

e.g. Prevailing winds can affect how much rain somewhere gets.

**Level 2 ([2])**

A stated connection and consequence.

e.g. Altitude affects temperatures in Europe, as you go up it gets colder.

e.g. Latitude also affects temperatures in Europe, the further north the colder it is.

e.g. Prevailing winds can affect how much rain somewhere gets, coasts get more rain.

**Level 3 ([3])**

A stated connection, consequence and elaboration related to Europe.

e.g. Altitude affects temperatures in Europe, for every 100m you climb it gets 1 degree colder, so mountainous areas of Europe. Like the Alps are colder.

e.g. Latitude also affects temperatures in Europe, the further north the colder it is. Southern Mediterranean areas get more concentrated rays from the sun, so are warmer than areas at a higher latitude such as northern Norway.

e.g. Prevailing winds can affect how much rain somewhere gets, coasts get more rain as maritime air carries moisture over the land, which created clouds and rain. For example England is much wetter than central Spain.

- Elaboration in terms of comparison of places or lapse rate figures.  
N.B. Must have at least one named European place with figure for lapse rate to reach L3 or two places in Europe confirmed.

$$2 \times [3] = [6]$$

- (d) Case study – state fully **two** ways technology is used to moderate the impact of climate on farming.

**Level 1 ([1])**

A simple statement of technology.

e.g. Irrigation helps water plants.

**Level 2 ([2])**

A statement with a consequence

e.g. In Southern Spain the summers are hot and rainfall is very low - so the Spaniards now irrigate in the summer months, to bulk up the fruit as it ripens.

**Level 3 ([3])**

A statement with a consequence and an elaboration with a specific fact/figure which relates to climate **or** to farming

e.g. Although the sunshine of Southern Spain means crops ripen citrus fruits like clementines need water to become sweet and marketable. In order to overcome this climatic problem, the Spaniards now irrigate the citrus orchards in the summer months, to bulk up the fruits as they ripen.

$$2 \times [3] = [6]$$

## Theme B: Physical Processes and Challenges

AVAILABLE  
MARKS

- 2 (a) (i) State the name of this earthquake and volcanic zone.  
'Pacific ring of fire' or 'ring of fire'  
NOT Pacific Ocean [1]
- (ii) Using **Fig 5**; name the type of plate boundary.  
Destructive or Converging plate boundary [1]
- (iii) Using **Fig 5**; explain how earthquakes and volcanoes have occurred in this part of the world. A well annotated diagram is also credit worthy. Level of marks depend on detail of annotation.

### Level 1 ([1]-[2])

A simple statement that refers to **only** earthquakes **or** volcanoes.  
The answer may also refer to **both** very briefly  
e.g. They are formed because plates are moving together. [1]

e.g. Earthquakes occur because plates are moving and the ground shakes.  
Magma escapes through a volcano because the plates move. [2]

### Level 2 ([3]-[4])

A more detailed description of why both earthquakes and volcanoes occur here. One aspect is covered in more detail than the other.

e.g. Earthquakes occur here because plates are moving. The plates are moving slowly and from time to time they stick. Pressure begins to build up and when the pressure is released shockwaves are released. Volcanoes occur here as magma escapes due to pressure building up. [3]

e.g. Earthquakes occur here because plates are moving. The plates are moving slowly and from time to time they stick. Pressure begins to build up and when the pressure is released shockwaves are released. Volcanoes occur here as magma escapes due to pressure building up. As one plate gets forced under another the heat produced from friction melts the rock into magma and the lava rises to form volcanoes. [4]

### Level 3 ([5])

A very detailed statement on how both earthquakes and volcanoes occur. To achieve this level candidates should make some reference to what happens at a destructive boundary. Some may refer to oceanic crust and continental crust but it is not a necessity.

e.g. Earthquakes occur here because plates are moving towards each other. It is a destructive plate boundary. This enables the plates to move slowly and from time to time they stick. Pressure begins to build up and when the pressure is released shockwaves are released and an earthquake occurs. Volcanoes occur here as magma escapes due to pressure building up. As one plate gets forced under another the heat produced from

friction melts the rock into magma. The lava/magma escapes through a volcano. [5]

- (iv) One impact and one strategy put in place after the event is required in this question.

**Level 1 ([1]–[2])**

A very basic answer that mentions an impact or a strategy. Both may be done but again detail is lacking

One impact noted e.g. Lots of people died or buildings destroyed [1]

One strategy noted e.g. Building codes introduced after the event [1]

Lots of buildings were destroyed so after the earthquake new building codes were introduced. [2]

**Level 2 ([3]-[4])**

A more detailed answer that addresses both parts of the question. However one part may be done in more detail than the other. Answers like this are confined to this level.

e.g. One impact on the people was that lots of people died.

Buildings were strengthened after the earthquake so that in future events they would absorb the shockwaves rather than falling down. [3]

e.g. One impact on the people was that 5,500 people died. This caused people a lot of grief and anguish.

Buildings were strengthened after the earthquake so that in future events they would absorb the shockwaves rather than falling down, this would reduce the overall damage caused by another strong earthquake in a MEDC. [4]

**Level 3 ([5]-[6])**

A top level answer which addresses one impact and one management response with statement, consequence and elaboration. Case study detail is evident with two facts/figures given.

e.g. The Kobe earthquake killed 5,500. Many of these deaths occurred due to the 200,000 buildings that collapsed and burnt down due to fires. Many were built just after the Second World War and had thin walls but a heavy roof made of tiles. Almost half of those who died were elderly people who resided in ground floor apartment and had no time to escape. To overcome this the Japanese government introduced new building codes in 1998 that meant high rise buildings had to have flexible frames so they would sway rather than collapse, thus reducing the possibility of future damage and death. Houses needed to be made of fire resistant materials and built on solid rock. [6]

- (b) (i) Describe how the load changes in size downstream.  
This is a data response question, so information (figures) should be quoted from Table 1. Answers will focus on the fact that the load gets smaller downstream.

**Level 1 ([1])**

A simple statement that doesn't incorporate any figures or doesn't note the trend e.g.

e.g. The load gets smaller downstream [1]

e.g. The smallest load can be found at Site 5. [1]

**Level 2 ([2]–[3])**

A general answer which incorporates some figures from the graph, noting the trend.

For 2 marks one figure should be used.

For 3 marks two figures should be used.

Alternately an answer which just lists figures would achieve this level.

e.g. The river load gets smaller between sites 1 to site 5. The largest load can be found at site 2 at 20cm. [2]

The river load decreases from 20 cm at site 2 which has the largest load to 3 cm at site 5 which is the smallest load size. [3]




**Level 3 ([4])**

An answer that utilises at least 3 figures from the graph, noting trends and may state that Site 1 is a slight anomaly/exception

e.g. The river load decreases from 20 cm at site 2 to 3 cm at site 5. This shows a range of 17cm. As Site 1 has a smaller load size by 1cm than Site 2, this makes Site 1 a slight anomaly as it doesn't fit the expected pattern or Site 2 is larger than expected.

Must recognise **deviation** from expected pattern for [4]. [4]

(ii)

	When particles are held in the flow of water.	
	The sheer force of water breaking up the particles.	
	The rolling of rocks along the river bed.	

$3 \times [1] = [3]$

(iii) State the meaning of the term **deposition**.

**Level 1 ([1])**

A simple statement

e.g. When a river drops of or deposits its load.

**Level 2 ([2])**

A more detailed statement

e.g. When a river drops off its load as it no longer can carry it due to low velocity/energy. [2]

(c) (i) Complete **Fig.** by stating the type of rock.

Granite = Igneous

Limestone = Sedimentary [1] mark each [2]

(ii) State the meaning of the term **metamorphic rock**.

**Level 1 ([1])**

A simple statement

e.g. A rock that has undergone change.

**Level 2 ([2])**

A more detailed statement

e.g. A rock that has undergone change due to intense heat and pressure exerted upon it. The characteristics of the rock change. [2]

(d) (i) Name the limestone feature.

Limestone pavement or pavement. (Accept clints or grykes.) [1]

(ii) Name **one** other limestone feature that can be found underground.

Answers may include cave/cavern, stalactite, stalagmite, pillar, curtains [1]

(iii) Describe the structure of limestone and explain the weathering process of limestone.

Mark structure out of 2.

Mark weathering process out of 3.

**STRUCTURE**

**Level 1 ([1])**

A simple statement

e.g. Limestone is a pervious rock/limestone has joints or limestone has bedding planes.

**Level 2 ([2])**

A statement that has some detail

e.g. Limestone laid down in layers separated by **bedding planes**. There are **joints** within the bedding planes which are weaknesses in the rock. [2]

## WEATHERING PROCESS

AVAILABLE  
MARKS

### Level 1 ([1])

A simple statement

e.g. Acids in the water break up the limestone.

### Level 2 ([2])

A statement that has some detail

e.g. Rainwater contains acids. As limestone is made of calcium carbonate which has an alkaline pH it reacts and begins to dissolve the limestone. This helps form many features.

### Level 3 ([3])

A full understanding of how the weathering process operates.

Candidates may use key terms like dissolved in solution, chemical weathering etc.

e.g. Rainwater can become slightly acidic. As limestone is made of calcium carbonate it becomes dissolved in solution due to the acidic nature of the water. The rainwater enters through joints in the limestone and removes it chemically. This helps form many features such as pavements and cave systems. [3]

(iv) **One** type of mechanical weathering.

Freeze thaw

[1]

(v) This question focuses on a conflict of interest that may arise between groups and how it can be resolved with a solution.

Professional judgement required, accept wide range of possible answers well argued

No mark for naming limestone environment

Groups of people may include tourists, farmers, quarry owners, environmentalists, local people etc.

### Level 1 ([1]-[2])

A valid conflict briefly stated or a concise solution

e.g. Quarry owners destroy the limestone. [1]

e.g. Stop quarrying and protect the area. [1]

e.g. Quarry owners need to extract much limestone for the cement works but conservationists want to protect the landscape. [2]

### Level 2 ([3]-[4])

A valid stated conflict and solution at least one of which is partially or fully expanded with a consequence and/or some elaboration

e.g. Conservationists wish to save the landscape in danger of destruction but quarry owners wish to extract it and make a profit.

e.g. The government could reduce the amount of limestone quarried. [3]



e.g. Quarry owners wish to extract the limestone to make a profit as it is needed nearby for the cement works. However, conservationists wish to conserve the landscape for future generations and are opposed to the ugly scars caused by the quarry. The government has made it illegal to quarry from certain areas in the Burren. [4]

### **Level 3 ([5]-[6])**

A valid stated conflict between two groups and a management response put in place.

Case study detail should be evident.

One fact/figure should be given for 5 marks.

Two facts/figures required for 6 marks.

e.g. Quarry owners wish to extract the limestone to maximise their profits and obtain rock for the cement works. This is a lucrative business as 1 730 000 tonnes of limestone are needed annually for the cement works. Conservationists may object to this as the quarrying causes much pollution of the air from dust and works traffic. One management response has been to make quarrying illegal in some parts of the Burren as the limestone is protected under European law. [5]

e.g. Quarry owners wish to extract the limestone to maximise their profits and obtain rock for the cement works. This is a lucrative business as 1 730 000 tonnes of limestone are needed annually for the cement works. Conservationists may object to this as the quarrying causes much pollution of the air from dust and works traffic. This causes the habitats of many rare flowers found only in limestone areas, e.g. the Dense Flowered Orchid. Areas could be established as Special Areas of Conservation (SACs) to further protect these precious landscapes. They could also restrict the area which is permitted to be quarried to protect the environment and manage it in a sustainable way for future generations. [6] [6]

3 (a) (i) Meaning of soil

**Level 1 ([1])**

An incomplete definition

e.g. It's what plants grow in/the material that covers the earth's surface

**Level 2 ([2])**

A complete definition – which should include an element of soil content

e.g. The material which covers the earth's surface. It's formed from minerals and dead organic matter or a full description of contents of soil  
e.g. humus, water, air, mineral particles [2]

(ii) Producer – one of bog cotton, moss, heather [1]

Consumer – one of slug, frog, butterflies, buzzard, rabbit, kestrel [1]

(iii) Role of producers

**Level 1 ([1])**

A simple statement about producers.

e.g. They are the plants

**Level 2 ([2])**

A statement about producers with an elaboration.

e.g. They are the plants and so consumers can eat them

**Level 3 ([3])**

A statement and elaboration about producers and how they link in with either nutrient recycling or energy flow.

e.g. They are the plants which photosynthesise and so produce their own food and therefore consumers can eat them to gain energy. [3]

(iv) Kestrels are one of the top consumers. Answers may focus on any level of the pyramid – naming the species.

**Level 1 ([1])**

A stated impact

e.g. Fewer rabbits will be eaten.

**Level 2 ([2])**

A stated impact with a consequence.

e.g. there will be more rabbits since no so many kestrels will be around to eat them.

**Level 3 ([3])**

A stated impact with linked consequence and elaboration.

e.g. there will be more rabbits since not so many kestrels will be around to eat them. In turn this means that more grass will be eaten by the extra rabbits or more frogs may survive to eat more. [3]

- (v) Human impacts on a named peatland ecosystem. Choice of grazing by sheep/afforestation/peat extraction.

**Level 1 ([1]-[2])**

One stated impact /with a brief description or two stated impacts.

e.g. Farmers drain peatland. [1] too many sheep on peatland [1]  
farmers graze or farmers plant trees [1] or farmers plant large numbers of trees over a large area.

**Level 2 ([3]-[4])**

One stated impact with a clear description or two impacts with only brief description.

e.g. People cut the peat either by using large machines or special spades, this is ruining the peatland in Fermanagh. [3] and draining peat takes out the moisture that the ecosystem depends on. [4]

e.g. Farmers plant a large number of trees of the same species (conifers) over a large area.

**Level 3 ([5]-[6])**

Two impacts are described and two facts/figures related to a specific place are included within the answer.

e.g. People cut the peat in Fermanagh either by using large machines or special spades, and draining peat takes out the moisture that the ecosystem depends on, so plants like moss cannot grow. [5]

e.g. Farmers plant a large number of trees of the same species over a large area (conifers) which reduces the heather moorland & restricts the light to the forest floor so the sphagnum moss cannot grow and the trees take up a lot of moisture from the peat so destroying the water balance in the peat. [6]

- (b) (i) Describe the distribution of rainforest – 5 aspects accurate from map (see below)

**For 5 marks**

5 items correct from map – could be:

- 3 named places (S. America, Africa (central), SE Asia) plus **two** other aspects

e.g. – reference to size  
– reference to tropics  
– reference to equator [5]

- (ii) Climate plays an important role influencing both vegetation and soil in the rainforest, so there may be a wide range of answers, covering drip tips, buttress roots, epiphytic lifestyle and heavy leaching.

**Level 1 ([1])**

A simple statement.

e.g. plants need to protect themselves against the rain.

**Level 2 ([2])**

A statement with a consequence.

e.g. Plants need to protect themselves against the rain so that their leaves do not rot in the wet conditions.

**Level 3 ([3])**

A statement with a linked consequence and elaboration.

e.g. Plants need to protect themselves against the rain so that their leaves do not rot in the wet conditions, so some plants like the ficus have developed drip tips to direct raindrops off the leaves and onto the ground.

Elaboration can be relating to climate or vegetation or soil. [3]

- (iii) Rainforest case study – conservation measure and a benefit.

**Level 1 ([1]-[2])**

A simple statement or two.

e.g. In the Amazon some areas are protected as reserves [1]

**Level 2 ([3]-[5])**

A stated conservation measure or benefit with some discussion or one aspect of the question is addressed fully. It may also be a full answer that lacks the facts and figures. This level is the maximum for answers focussed on 'slash & burn' which is not fully conservation.

e.g. In the Amazon some areas are protected as reserves, Brazil has committed to protecting the forest. These areas cannot be logged, and local people have the right to work and live there [3]

e.g. In the Amazon some areas are protected as reserves. These areas cannot be logged, and local people have the right to work and live there. One benefit of this is to ensure that plants and animals have a habitat in which to live and breed now and in the future. This means endangered animals will not become extinct in the wild. [4]

**Level 3 ([6]-[7])**

A detailed case study which includes two facts/figures about a named Rainforest and which discusses a conservation measure and has a stated benefit with a consequence and an elaboration.

e.g. In the Amazon some areas are protected as reserves, Brazil has committed to protecting 10% of the forest. These areas cannot be logged, and local people have the right to work and live there. One benefit of this is to ensure that plants and animals have a habitat in which to live and breed now and in the future. This means endangered animals like tapirs

and slow growing hardwoods like Mahogany will not become extinct in the wild. [7] [7]

(c) (i) Name one tourist activity.  
Activity could be walking, bird watching, cycling or visiting local attractions [1]

(ii) Sustainability of the local ecosystem.  
Answers may discuss the encouragement of wildlife, support of public transport and organic farming.

**Level 1 ([1])**

A simple statement

e.g. Less use of chemicals allows more variety of insects.

**Level 2 ([2])**

A statement with an elaboration relating to sustainability.

e.g. By keeping hedges, birds will continue to have homes and foods and will be able to survive and breed in the future.

e.g. Less use of chemicals allows a greater variety of insects which will protect the environment and allow insects to live in the future. [2]

(iii) For a named tropical area you have studied, state fully one advantage and one disadvantage which ecotourism has brought.  
Answers may discuss tropical forest or savannah.

**Level 1 ([1]-[2])**

A stated advantage and/or disadvantage

e.g. In a savannah area tourists bring money. [1]

**Level 2 ([3]-[4])**

A advantage and/or disadvantage stated with elaboration

e.g. On the savannah the conservation of large areas as game reserves has meant that large animals can still exist within the ecosystem.

A disadvantage is that the minivans which ferry tourists around the games reserves do not always stick to the set routes and can cause the death of the natural grass. [4]

**Level 3 ([5]-[6])**

Both an advantage and disadvantage is stated and has a detailed consequence and elaboration. Two facts/figures are included which are specific to the named ecosystem.

e.g. On the Massai Mara the conservation of large areas as game reserves has meant that large carnivores like Lions can still exist within the ecosystem as they have large enough territories on which to hunt and they themselves are protected against poachers. A disadvantage is that the minivans which ferry tourists around the games reserves do not always stick to the set routes and can cause the death of the natural grassland which can lead to soil erosion. [6] [6]

AVAILABLE  
MARKS

The assessment of quality of written communication.

Marks are to be allocated to QWC in accordance with the following criteria.

<b>Performance related</b>	<b>Criteria</b>	<b>Marks</b>
Threshold	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.	0, 1, 2
Intermediate	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.	3, 4
High	Candidates present and organise effectively relevant information in a form and using a 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 skillfully and with precision.	5, 6



*Rewarding Learning*

**General Certificate of Secondary Education  
2010**

---

**Geography**

Paper 2  
Higher Tier

**[G3604]**

**THURSDAY 17 JUNE, AFTERNOON**

---

**MARK  
SCHEME**

## Theme D: Population and Resources

AVAILABLE  
MARKS

1 (a) (i) Ethiopia [1]

(ii) 16% [1]

(iii) Meaning of **population structure**

**Level 1 [1]**

A basic statement

It shows how the population is made up.  
or ref to pyramid.

**Level 2 [2]**

A statement which includes age and gender.

It shows the age and gender make-up of the population [2]

(iv) Link between population structure and development.

**Level 1 (1–2 marks)**

A basic statement which describes or explains the population structure.

Ethiopia has a large number of young people. [1]

Japan has a low number of young people. [1]

Ethiopia has no family planning [1]

Ethiopia has a large number of young people and a low number of elderly people. [2]

**Level 2 (3–4 marks)**

A statement that describes or explains the population structure of the population and may address the link to development.

Candidates may focus on only one country. Award Level 2 if some description and explanation is evident.

Japan is a rich country as it has a small number of 0-14 yr olds at 10%. This means that people are having fewer children as family planning is available. [3]

To access Level 2 candidate must describe both areas of population or explain one aspect only of the country's population. MEDC/ LEDC contrast.

Japan is a rich country. A characteristic of this is it has a small number of 0-14 yr olds at 10% and a large number of aged dependents. This means that people are having fewer children as family planning is available. Health care is excellent so people live



longer, this is why they have a high percentage of aged dependents at 20%. If no figs are utilised max L2. [4]

### Level 3 (5–6 marks)

A detailed statement which fully describes or explains the link between development and the dependent populations. Figures are utilised from the table. Level 3 answers will compare MEDCs to LEDCs and examples from Table 1 are utilised.

To achieve L3 pupils must compare MEDC to LEDC (named countries). They must give a full description or explain one reason for aged and one for youth. Figs will be used.

Japan is a rich country. A characteristic of this is that it has a large number of aged dependents at 20% and a low number of youth dependents at 10%. People here live longer as there is excellent health care. Fewer children are born as people can plan their families whereas Ethiopia has a high number of youth dependents at 50%. Children are needed to work the land so the birth rate is much higher here. [5]

Japan is a MEDC. A characteristic of this is that it has a large number of aged dependents at 20% and a low number of youth dependents at 10%. People here live longer as there are excellent health care and medical facilities. Fewer children are born as people can plan their families whereas in LEDCs such as Ethiopia there are a higher number of youth dependents at 50%, children are needed to work the land so the birth rate is much higher here. There are fewer aged dependents here at 2% as there is a lack of medical facilities with diseases and malnutrition the largest killers. Life expectancies are low as a result. [6] [6]

#### (v) Signs of in-migration

##### Level 1 [1]

Usually more young adults migrate.  
There are more young people.  
Pyramid will bulge.

##### Level 2 [2]

An answer which mentions both age and pyramid shape. Accept any age range that would fall in the working population category i.e. 15-64. Must have an age to access Level 2 more than one cohort.

As it is mostly young adults (aged 15–44) who migrate this will result in a bulge in the pyramid for these age groups. [2]

(b) (i) 8.1 million [1]

(ii) Why MEDC's population remains the same?

**Level 1 [1]**

A simple statement

Birth rates remain low.

**Level 2 [2]**

A statement with a consequence

Birth rates remain low as people choose to have few children so the population remains low. [2]

**Level 3 [3]**

A statement, consequence and elaboration.

Accept answers that elaborate on either births or deaths.

Birth rates remain low as people choose to have few children.

Death rates are also low so natural increase is small. The population remains low. [3]

[3]

(iii) Underpopulation or population deficit. [1]

(iv) Population change in LEDC

Accept any valid LEDC

If no named country or a MEDC max L2.

**Level 1 [1]**

A simple trend stated

Birth rates fall

[1]

Death rates fall

[1]

**Level 2 [2–3]**

A statement stating a trend and one figure related to the LEDC for 3 marks.

Birth rates and death rates have both fallen over time

[2]

In Mexico the birth rates have fallen to 20 per thousand. Death rates have also fallen.

[3]

**Level 3 [4]**

For Level 3 specific figures must be used for births and deaths.

In Mexico over time the birth rates have fallen to 20 per thousand.

Death rates have also fallen to a low 5 per thousand.

[4]

(c) (i) North west [1]

(ii) Maria is NOT an international migrant [1]

(iii) One negative impact of migration.

**Level 1 [1]**

A simple statement

It causes racial tension.

**Level 2 [2]**

A statement and a consequence

As people move into an area they take the jobs of locals which cause racial tension. [2]

**Level 3 [3]**

A statement, consequence and elaboration

As people move into an area they take the jobs of locals which cause racial tension such as verbal harassment or violence. This leads to mistrust as the migrant population become segregated into their own ethnic areas. [3]

(d) Population density in a E.U. country.

Do not credit high density.

Accept any valid E.U. country

Low density areas may include desert areas, mountainous areas, rural areas or peripheral areas etc. within that country.

No named E.U. country or UK/Ireland max L1.

**Level 1 [1–2]**

A simple statement which mentions either a physical or economic factor. Case study detail will be lacking. If candidates focus on areas of high density then max Level 1.

Parts of Spain have a harsh/poor climate. [1]

Some areas of Spain have no industry. [1]

Mountainous areas mean that people can't build homes on the steep slopes. [2]

Areas of Spain don't have industry so people can't get jobs. [2]

**Level 2 [3–4]**

Candidates address both physical and economic factors. Case study detail is evident. An answer which focuses on one factor more than another would be Level 2.

AVAILABLE  
MARKS

The Maseta area around Madrid has a poor climate with extremes of temperature and a lack of rainfall which makes it difficult for people to make a living. [3]

The Maseta area around Madrid has a harsh climate with extremes of temperature and a lack of rainfall which makes it difficult to make a living from the land. This discourages industry from setting up here. The lack of work means people move to the larger areas of Madrid/ Barcelona for work. [4]

### Level 3 [5–6]

A statement, consequence and elaboration on each factor.  
Specific case study detail should be evident with 2 fact/figures present.

The Maseta has a harsh climate with extremes of temperature at up to 50°C and a lack of rainfall less than 100mm which makes it difficult to farm the land and make a living. The standard of living is generally lower meaning people tend to migrate from the region.

The inaccessibility of the region due to a lack of infrastructure means that companies don't want to set up here. [5]

The Maseta has a harsh climate with extremes of temperature at up to 50°C and a lack of rainfall less than 100mm which makes it difficult to farm the land and make a living. The standard of living is generally lower meaning people tend to migrate from the region.

Companies don't want to set up here due to the inaccessibility and lack of infrastructure. Transport costs are increased and they can't be competitive with companies situated in the larger urban areas. This means that they will not be as profitable as they could. [6]

(e) (i) One other renewable resource.

No mark awarded for wind  
Accept solar, tidal, HEP, geothermal etc [1]

(ii) Meaning of resource depletion

#### Level 1

A simple statement

Resources are being used up. [1]

#### Level 2

A more detailed statement.

Some resources are finite and non-renewable so can be used up or run out such as coal, oil. [2]

**(iii) Sustainable energy use in Denmark.**

If no reference to **Fig. 3** then maximum Level 1

**Level 1 [1–2]**

A simple statement

Wind power is renewable.

Wind power is renewable and is good for the environment [2]

**Level 2 [3–4]**

A statement with a consequence. Reference to **Fig. 3** is evident.

Wind power can power 440,000 homes. Wind power is renewable and doesn't harm the environment. This is good as less fossil fuels need to be burned. [3]

Wind power can power 440,000 homes. Wind power is renewable and doesn't harm the environment as fossil fuels cause air pollution by CO<sub>2</sub> and SO<sub>2</sub>. The fact that so many homes are using wind power is good as less fossil fuels need to be burned. [4]

**Level 3 (5 marks)**

A statement with a consequence and elaboration. Reference to **Fig. 3** is evident and sustainability is addressed.

Wind power can power 440,000 homes. Wind power is renewable and doesn't harm the environment as fossil fuels cause air pollution by CO<sub>2</sub> and SO<sub>2</sub> when burned. The fact that so many homes are using wind power is good as less fossil fuels need to be burned. This means that future generations can benefit from a cleaner environment and a more efficient use of resources. [5]

## Theme E: Economic Change and Development

AVAILABLE  
MARKS

- 2 (a) (i) Meaning of fairtrade  
**Level 1 [1]** A partial definition  
e.g. A trade where producers get more money for their goods.
- Level 2 [2]** A full definition that refers to both money and improved lifestyle or environment  
e.g. a type of trade where producers in a poor country get a fair living wage for their product and which promotes environmental protection. [2]
- (ii) Food item  
Either sugar or bananas [1] If another item, such as coffee is noted, do not give credit as the question specifies that they use the resource. [1]
- (iii) One advantage of fairtrade to LEDCs  
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.
- Level 1 [1]** A stated advantage  
e.g. farmers can get more money for their product.
- Level 2 [2]** A stated advantage with a consequence  
e.g. Farmers get a stable price for their product which is often above the open market price.
- Level 3 [3]** A stated advantage with a consequence and elaboration.  
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]
- (b) (i) Knowledge about types of aid.  
The question specifies it should be from the figure, so if they name a different type, like emergency aid, this can achieve a maximum of level 2 [2] for the description.  
Each description should be marked out of [3]
- Level 1 [1]** A simple outline of the type of aid.  
e.g. Bi-lateral aid is given from one country to another.
- Level 2 [2]** A more detailed description of the type of aid  
e.g. Bi-lateral aid is money, technical support or expertise given from one country to another.

**Level 3 [3]** A detailed description which may include an example.  
e.g. Bi-lateral aid is money, technical support or expertise given from one country to another, for example when the UK government provides money to help build a dam in Turkey.  
 $2 \times [3] = [6]$

**(ii)** One reason MEDCs give aid.

Answers may refer to political, economic or even moralistic reasons.

**Level 1 [1]** A simple stated reason.

e.g. MEDCs may want to build on an allegiance with an LEDC

**Level 2 [2]** A stated reason with a consequence.

e.g. For political reasons MEDCs may want to build on an allegiance with an LEDC, especially during war times.

**Level 3 [3]** A stated reason with a consequence and elaboration.

e.g. For political reasons MEDCs may want to build on an allegiance with an LEDC, especially during war times, like America lending Egypt money to ensure they remained an ally during the war with Iraq. [3]

**(iii)** Problems associated with aid.

There are many possible answers here, aid not reaching the needy, creating more debt, undermining local producers, creating dependence, being unsuitable or tied might all come up.

[1] for each correctly identified problem. [1] x 3 = [3]

**(c) (i)** Country with the lowest literacy rate

Niger [1] [1]

**(ii)** Describe the graph

**Level 1 [1]** A description that simply notes the trend or quotes one set of figures but no trend.

e.g. The rate of literacy seems to depend on the GNP, as one goes up so does the other. e.g. Austria has almost 100% literacy and a GNP of about \$37,500. [1]

**Level 2 [2–3]** A description that notes the trend and has figures. A list of about 3 places will achieve 2 marks

e.g. Austria has almost 100% literacy and a GNP of about \$37,500, India has 62% Literacy rates and a GNP of about \$3,000 whilst Niger has the lowest literacy of 29% and a GNP of under \$1000. [2]

If describes relationship + gives anomaly with figs [2]

e.g. The rate of literacy seems to depend on the GNP, as one goes up so does the other. For example Austria has almost 100% literacy and a GNP of about \$37,500. [3]

**Level 3 [4]** A full description with the trend noted and at least 2 sets of figures to illustrate this trend. (May also refer to an anomaly) e.g. There is a positive relationship between GNP and literacy rate in these countries. Austria has almost 100% literacy and a GNP of about \$37,500, India has 62% Literacy rates and a GNP of about \$3,000 whilst Niger has the lowest literacy of 29% and the lowest GNP of under \$1000. [4]

**(iii) Classify the indicators**

GNP is an economic indicator [1]  
Literacy rate is a social indicator [1] [2]

**(iv) The importance of using both social and economic indicators.**

**Level 1[1]** A brief statement  
E.g. To get a true picture of the development of a country

**Level 2[2]** A statement with a consequence  
e.g. Both are needed because a country can be wealthy but have a low level of social development

**Level 3[3]** A statement, with a consequence and elaboration  
e.g. An economic indicator may show how some people are wealthy, but this is an average and many people may not be able to read and write which means a country is not socially developed, thus both are needed for a true picture of a country's development. [3]

**(d) (i) M90 [1] [1]**

**(ii)** The reasons shown on the map do not include university location, so if they use this background knowledge they can still access level 3 marks as in this case the question does not specify that candidates must use the resource material.

**Level 1 [1]** A stated reason  
e.g. There are lots of motorways in the area.

**Level 2 [2]** A stated reason with a consequence or limited detail  
e.g. There are lots of motorways in the area like the M9 and M8.

**Level 3 [3]** a stated reason with a consequence/detail and an elaboration  
e.g. There are lots of motorways in the area like the M9 and M8, these would allow workers to easily access the factory.  
Must have lots of evidence from Fig 7 and link it to accessibility for 3 marks. [3]



**(iii)** Meaning of hi-tech industry**Level 1 [1]** A simple statement

e.g. They are industries that make things.

**Level 2 [2]** A complete definition of the term.

e.g. They are industries that produce microelectronics and use computer technology. [2]

**(e)** Factors causing a TNC to relocate from MEDC to LEDC  
No mark for name of TNC.**Level 1 [1–2]** A general answer which will allude to one or two reasons.

e.g. to make the most money [1]

e.g. to get cheap labour and make more money. [2]

**Level 2 [3–4]** An answer that either states fully one reason or which covers two possible reasons without full elaborations.

e.g. Big companies like Nike prefer LEDCs as they can use local people to work for low wages which lets the company make more money. [3]

e.g. Big companies like Nike prefer LEDCs as they can use local people to work for low wages and maybe have a cheaper factory site which lets the company make more money. [4]

**Level 3 [5–6]** An answer that states fully two reasons for a specific TNC-including 2 facts/figures/place.

e.g. Big companies like Nike prefer LEDCs such as Indonesia, as labour costs are cheaper there and factory sites can be leased at less than half the price of MEDC locations, meaning profits can be increased. [5]

e.g. Big companies like Nike moved to LEDCs such as Indonesia in the late 1980s. Labour costs are cheaper there, workers can be paid as little as \$1.60 per day to work a 12 hour shift. Also factory sites can be subcontracted at less than half the price of MEDC locations, both factors mean profits can be increased. [6] [6]

## Theme F: Settlements and Change

AVAILABLE  
MARKS

### 3 (a) (i) The site of Durham

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

1 mark for chosen factor.

[1]

#### Level 1 ([1])

A basic statement. 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

#### Level 2 ([2])

A 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.

#### Level 3 ([3])

A 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) The straight line distance between the park and ride facility and the bus/coach station in Durham.

Answer is 4.3 km

#### Level 1 ([1])

Accept answers in the range 4.1 to 4.19 km or 4.41 to 4.5 km

#### Level 2 ([2])

Answers in the range 4.2 to 4.4 km.

[2]

### (iii) Why this is a good location for a park and ride

Answers could include reference to the site being on the outskirts of the city, close to nearby communications – A1(M) and A690, flat land between the major roads, close to suburbs with residents who could avail of the facility etc.

**Level 1 ([1])**

A simple statement. E.g.

- Near a main roundabout
- At edge of built up area

**Level 2 ([2])**

A statement with specific elaboration. E.g.

- It is on the outskirts of the city close to a roundabout on the A1(M) which meets the A690 so is a good place for drivers coming into the city.
- It is close to the suburbs of Carville and Belmont which means commuters from these areas can easily avail of the facility and reduce the journey time into the city. [2]

- (b) (i)** Explain how the ‘Park and Ride’ facilities help control traffic in the centre of Durham.

Candidates should consider that making park and ride facilities available should result in reduced traffic volumes in the city centre. This will lead to less congestion.

**Level 1 ([1])**

A statement that relates to traffic control. This may be a direct lift from the resource e.g.

- There are 1000 less cars in the city centre
- There are fewer cars in the city.

**Level 2 ([2])**

A statement with a consequence. E.g.

- Providing 1000 parking spaces on the outskirts of Durham has led to less cars going into the city centre.
- Cheaper parking at the park and ride reduces the number of drivers travelling into the city.

**Level 3 ([3])**

A statement with a consequence and elaboration that relates to traffic control. E.g.

- It helps reduce congestion because the drivers can park cheaply on the outskirts of Durham and travel in on the buses reducing the number of vehicles in the city centre.
- There is now easier access to the city centre at peak hours as many cars are left on the outskirts at the park and ride facility improving traffic flow and reducing congestion.

Must have reference to Fig 8 to achieve L3. [3]

- (ii)** How the Park and Ride facilities help Durham become a more sustainable city.

There will be a variety of answers here. Use discretion. Candidates may discuss future generations, ability to travel, pollution levels and use of park and ride buses as a type of public transport.

**Level 1 ([1])**

A simple reason that may be a repeat of Level 1 above. E.g.

- There are 1000 less cars in the city centre
- Less petrol is used.

**Level 2 ([2])**

A reason with some elaboration. E.g.

- There is less traffic in central Durham as more drivers are using the park and ride facility.
- Fewer people will be using private transport for their full journey so less petrol will be used up.

**Level 3 ([3])**

A reason that has an elaboration relating to sustainability. E.g.

- Traffic must flow well to allow a city to be sustainable and thus resources to be used efficiently, so by reducing the number of cars in the city centre, total volumes of traffic are reduced and those that are left will move more efficiently. The park and ride improves traffic flow into the city at rush hours and reduces congestion within the city. [3]

(iii) Arranging settlements in order of size.

Rank Order	Settlement
1	Durham
2	Sacrison
3	Sherburn
4	Edmondsley

(4 x [1]) [4]

(iv) Term to describe the arrangement of settlements.

Hierarchy/Settlement Hierarchy. [1]

(v) Completion of table showing services.

Settlement	Post Office	Church	Public house	2 or more roads	Bus Station	School	Hospital
Durham	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sacrison	<input type="checkbox"/>	TICK	TICK	<input type="checkbox"/>		TICK	
Edmondsley	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>			

(3 x [1]) [3]

(vi) Why there is a variation in the number and variety of services.

**Level 1 ([1–2])**

A simple description or explanation. E.g.

- Cities have more services
- Villages have few services because hardly anyone lives in them.

**Level 2 ([3–4])**

A detailed description or good description with little explanation.

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 and post office 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.

If order of service used – award up to 4 marks.

**Level 3 ([5])**

A detailed explanation and geographical explanation. E.g.

- Edmondsley a small village has a public house and a post office. Sacriston a larger settlement, has a greater number of services and range of services (5). 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 orders services cannot meet their threshold value to be able to be sustained.

order + threshold for Level 3.

[5]

(c) (i) Rates of Urbanisation over time

**Level 1 ([1])**

A simple descriptive statement referring to either LEDCs or MEDCs.

- In MEDCs the rate of urbanisation changed little.
- The rates of urbanisation have increased.

**Level 2 ([2]–[3])**

A more detailed description which mentions both MEDCs and LEDCs. 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.

**Level 3 ([4])**

A detailed description which addresses the variation between MEDCs and LEDCs. A minimum of 2 figures should be used in the answer to describe the trend in both MEDCs and LEDCs.

- 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**. [4]

**(ii) Reason for urbanisation in LEDCs.**

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

**Level 1 ([1])**

A simple statement of a valid reason. E.g.

- Extreme physical conditions e.g. dense vegetation
- Lack of services such as schools and hospitals
- Natural disasters e.g. drought/floods etc

**Level 2 ([2])**

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

**Level 3 ([3])**

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]
- Jobs → more money → better quality of life [3]

**(d) Evaluation** of two measures used to improve an inner city.

Name of inner city area e.g. Laganside/Stranmillis/Holylands residential areas No Mark

**Level 1 ([1–2])**

One or two valid improvements stated E.g.

- Quality of the River Lagan improved
- Improvements have been made to roads and railways
- New apartments and housing built
- Green areas have been introduced
- New amenities such as the Odyssey have been built

**Level 2 ([3–4])**

Two valid statements with consequence. E.g.

- The road infrastructure was improved for example the M3 Lagan road bridge now links the M1 and M2 with the Newtownards Road. Almost 400 apartments have been constructed in Laganside at different prices to provide homes for a mix of people.

**Level 3 ([5–6])**

Two statements with consequence and elaboration. Answer must include evaluative comment. For 6 marks.

- The road infrastructure was improved e.g. the Lagan Road Bridge now links the M1 and the M2 with the Sydenham by-pass and the Newtownards Road. This road with the cross harbour rail link between Larne and Belfast has been very successful as it has reduced the amount of traffic in the city centre. Almost 400 apartments have been constructed in Laganside at different prices to provide homes for a mix of people for example in the Mays Meadow area. However, many of the apartments are still too expensive for local people who have had to find homes in other areas.

[6]

If candidates give 2 well developed adv with 2 F/F then award (5 marks)

AVAILABLE  
MARKS

120

6

Marks are to be allocated to QWC in accordance with the following criteria.

Performance Level	Criteria	Marks
Threshold	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.	0, 1, 2
Intermediate	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.	3, 4
High	Candidates present and organise effectively relevant information in a form and using a 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.	5, 6

