



**General Certificate of Secondary Education
(Short Course)
June 2012**

Geography A

40304F

(Specification 4031)

**Unit SC1: Physical and Human Geography
(Foundation)**

Post-Standardisation

Mark Scheme

Mark schemes are prepared by the Principal Examiner and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation events which all examiners participate in and is the scheme which was used by them in this examination. The standardisation process ensures that the mark scheme covers the candidates' responses to questions and that every examiner understands and applies it in the same correct way. As preparation for standardisation each examiner analyses a number of candidates' scripts: alternative answers not already covered by the mark scheme are discussed and legislated for. If, after the standardisation process, examiners encounter unusual answers which have not been raised they are required to refer these to the Principal Examiner.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of candidates' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

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GENERAL GUIDANCE FOR GCSE GEOGRAPHY ASSISTANT EXAMINERS

Quality of Written Communication

Where candidates are required to produce extended written material in English, they will be assessed on the quality of written communication.

Candidates will be required to:

present relevant information in a form and style that suits its purpose;
ensure that text is legible and that spelling, punctuation and grammar are accurate;
use specialist vocabulary where appropriate.

Levels Marking - General Criteria

Where answers are assessed using a level of response marking system the following general criteria should be used.

Level 1: Basic

Knowledge of basic information
Simple understanding
Little organization; few links; little or no detail; uses a limited range of specialist terms
Reasonable accuracy in the use of spelling, punctuation and grammar
Text is legible.

Level 2: Clear

Knowledge of accurate information
Clear understanding
Organised answers, with some linkages; occasional detail/exemplar; uses a good range of specialist terms where appropriate
Considerable accuracy in spelling, punctuation and grammar
Text is legible.

Annotation of Scripts

One tick equals one mark, except where answers are levels marked (where no ticks should be used). Each tick should be positioned in the part of the answer which is thought to be credit-worthy.

Where an answer is levels marked the examiner should provide evidence of the level achieved by means of annotating 'L1', 'L2' or 'L3' in the left hand margin.

Ticks must not be used where an answer is levels marked.

Examiners should add their own brief justification for the mark awarded e.g. *Just L3, detail and balance here.*

Where an answer fails to achieve Level 1, zero marks should be given.

The following is a list of the unit-specific annotations available on the CMI+ system:

| | | | |
|------|------------|------|---------------|
| desc | - describe | diff | - differences |
| exp | - explain | cs | - case study |

For levels marked questions, the mark scheme includes specific CMI annotations in bold below each descriptor for the level. These annotations are available on the CMI+ (marking system) for examiners to drag and drop into the answer as appropriate. You will not in some cases that the versions of these annotations on CMI+ are shortened or abbreviated versions of those which appear in the Mark Scheme.

General Advice

Marks for each sub-section should be added in the right-hand margin next to the maximum mark available which is shown in brackets. All marks should then be totaled in the 'egg' at the end of each question in the right-hand margin. The totals should then be transferred to the boxes on the front cover of the question paper. These should be totaled. The grand total should be added to the top right-hand corner of the front cover. No half marks should be used.

It is important to recognize that many of the answers shown within this mark scheme are only exemplars. Where possible, the range of accepted responses is indicated, but because many questions are open-ended in their nature, alternative answers may be equally creditworthy. The degree of acceptability is clarified through the Standardisation Meeting and subsequently by telephone with the Team Leader as necessary.

Diagrams are legitimate responses to many questions and should be credited as appropriate. However, contents which duplicate written material or vice versa should not be credited.

Quality of Written Communication (QWC) is part of the award of marks in levels marked answers only. In levels marked answers the quality of the geography is assessed and a level and mark awarded according to the geography. As is sometimes the case, the geography may be sound at a particular level but the examiner may not be sure as to whether there is quite enough to raise the mark within that level. In this case the examiner should consider the QWC of the answer. QWC that fulfils the criteria for the level should lead to the rise in the mark but where the QWC does not fulfil the criteria, the answer should remain at the mark first thought appropriate. In cases where QWC has been used in the award of marks, the examiner should indicate this with QWC and arrows that indicate either an upward or downward trend according to its impact on the final award of the mark.

SECTION A

Question 1: The Restless Earth

| | | | |
|------------------|-------------------------------------------------------------------|---|----------------------------------------------------------|
| 1 (a) (i) | There are ocean trenches in the Pacific Ocean. | ✓ | (3 marks) AO2 – 1 AO3 – 2 |
| | There are young fold mountains in Australia. | | |
| | There are young fold mountains on the west coast of the Americas. | ✓ | |
| | There are young fold mountains in Southern Europe. | ✓ | |
| | There are ocean trenches around the African coast. | | |
| | There are always ocean trenches next to young fold mountains. | | |

If more than the 3 boxes are ticked, mark the first three responses.

1 (a) (ii) Deep parts of ocean, often between 3 – 4km, but can be deeper – part of Mariana Trench is almost 11km. They extend in long lines, often off coast of continents, coincide with destructive plate margins, near fold mountains, and steep sided. **(2 marks)**
Any 2 valid points. **AO1 – 2**

1 (a) (iii) Any valid statement that reflects what is happening in each diagram. **(4 marks)**
For example – Rivers erode material from land surface/transport it to sea. Sediment is deposited on ocean floor, layers build up over time. Plates move together (at destructive/collision boundary). **AO1 – 3**
Rocks crumple as a result, forming fold mountains, anticlines and synclines. **AO2 – 1**
4x1

| | | | | |
|------------------|-----------------------------|--------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|----------------------------------------------------------|
| 1 (b) (i) | Characteristic | L'Aquila | Haiti | (3 marks) AO2 – 1 AO3 – 2 |
| | Epicentre | Near/About 7km from L'Aquila | South of/near to/ (20-30km)/at Port-au-Prince | |
| | Area affected by shockwaves | Part of central Italy – around L'Aquila/area east of Rome/ area about 25km from epicentre | Southern half of country | |
| | Fault(s) | Two faults cross over each other | Single fault/ fault running west/east, parallel fault/two broken faults/epicentre on fault line | |

3x1

1 (b) (ii) 1 mark for identifying magnitude of L'Aquila earthquake of 6.3 and the Haiti earthquake magnitude of 7.0. 1-2 marks for noting the difference between these of 0.7 and Haiti stronger and 1-2 marks for saying something about the difference – although only about 1 (on Richter Scale), Haiti earthquake much more (about 10 times) more powerful than L'Aquila. **(3 marks)**

AO1 – 1
AO2 – 1
AO3 – 1

1 (c) The Mercalli Scale measures earthquakes on a scale of I-XII (1-12). It uses written descriptions or pictures to describe what damage an earthquake has caused. As the numbers increase, so too does the impact of the earthquake. A score of I means that the earthquake is hardly felt, whilst a score of 6 can be felt by everyone and there may be some damage, such as chimneys falling. In contrast, XII category results in total devastation with almost all buildings collapsed or damaged. May refer to examples studied in illustration. **(4 marks)**

AO1 – 2
AO2 – 2

Level 1 (Basic) 1-2 marks

Simple, listed points.

Has an idea of what Mercalli Scale is and how it works.

Mercalli Scales uses pictures to show what earthquakes did. Some cause more damage than others on the scale.

Level 2 (Clear) 3-4 marks

Points are developed and linked.

Clearly understands what the Mercalli Scale is and how it works.

The Mercalli Scale has 12 levels – from 1 – XII. The higher the score, the greater the damage. This is shown by using descriptions of the damage caused, e.g. III means that people are partly aware as it is like a heavy truck passing, whilst IX is much more serious with foundations of building being damaged and building collapsing.

1 (d) There is likely to be reference to differences in number of deaths, injured and homeless, buildings damaged and destroyed, effect on communications and people's lives. Content will depend on case studies used. Likely to refer to Kobe, San Francisco, L'Aquila for richer area, and Sichuan, Haiti for poorer but there are other possibilities. **(6 marks)**

AO1 – 4
AO2 – 2

Level 1 (Basic) 1-4 marks

Describes effects of earthquakes. These may be list-like at lower level.

There will be some reference to rich and poor areas. These may be separate.

Lots of people die in earthquakes – thousands in poor places. Buildings collapse and people are buried. They have nowhere to live. Roads and bridges fall. There are no telephones.

Level 2 (Clear) 5-6 marks

Effects are clearly described.

Statements are linked – differences are clear.

There is clear reference to richer and poorer areas studied.

There may be reference to case study/ies.

Lots more people die in poorer countries in earthquakes. Although over 6000 died in Kobe, there were almost 700 000 deaths in Sichuan. Many buildings collapsed here while in Kobe, fire had been a main risk – burning buildings. Although roads collapsed in Kobe, landslides wiped out many roads in Sichuan, yet the damage here was less moneywise than in Kobe - \$220 million versus \$75 million.

Question 2 Water on the Land

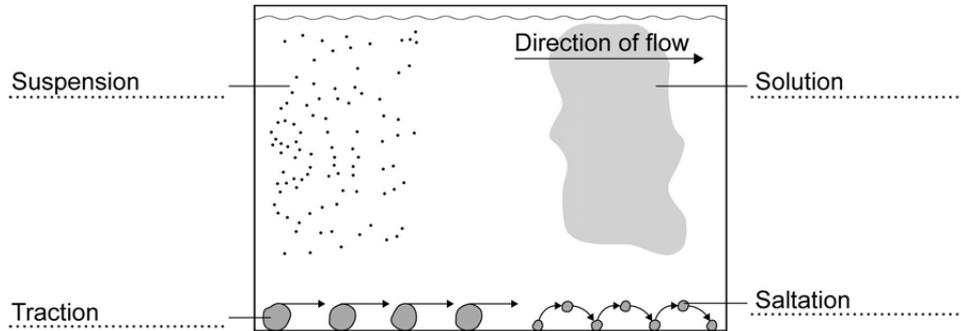
- 2 (a)** From top left clockwise – suspension, solution, saltation, traction. **(4 marks)**
Accept first answer only when 2 or more are given.

4x1

AO1 – 2

AO2 – 1

AO3 – 1



- 2 (b)** Deposition occurs because there is a reduction in speed (1) and so the river has less energy (1). A reduction in the amount of water is also valid (1). There may be reference to where this may occur, e.g. where there is a change in gradient (1) or where the river flows into a lake/sea (1). **(2 marks)**

2x1

AO1 – 2

- 2 (c) (i)** 18 – 22m (units not essential). **(1 mark)**

AO2 – 1

- 2 (c) (ii)** Confluence / a tributary (joins it)/ rivers splitting/ meander/ bridge crosses it. **(1 mark)**

AO3 – 1

- 2 (c) (iii)** 0.5km/half **(1 mark)**

AO3 – 1

- 2 (c) (iv)** The river has a loop/curve/meander (1). Could measure length or comment on neck of meander (1). There are embankment/ levees (1) shown on both sides of the river at times/only one side (1). These are not continuous (1). The area next to the river is very flat (1). This will be the flood plain of the river (1). **(3 marks)**

Maximum 2 for list.

AO1 – 1

AO2 – 1

AO3 – 1

3x1

- 2 (d)** Flood plains form due to both erosion and deposition. Erosion widens the valley taking away the interlocking spurs present nearer the source and creating wide, flat area next to the river. Lateral erosion may be named, (perhaps linked to meander migration) as may some erosion processes. Deposition is also partly responsible for the formation of a flood plain. When the river overflows, material being carried is dropped as speed/energy is lost. Over time, this sediment forms layers on the flood plain, building it up. **(4 marks)**

AO1 – 3
AO2 – 1

Level 1 (Basic) 1-2 marks

Simple statements.

Order may jump about.

Sequence may be incomplete.

The river floods and leaves material on the flood plain. This is wide near the mouth. Meanders are found on the flood plain.

Level 2 (Clear) 3-4 marks

Statements are developed and linked.

Sequence and formation of flood plain is clear.

May focus on just deposition or erosion.

The narrow valley is widened as the river begins to erode sideways. The meanders create a wide, flat valley floor which is the flood plain. As the river floods, sediment is deposited on this wide area and its level is built up to form the flat area on either side of the river.

2 (e) (i) **(3 marks)**

| Statement | True | False |
|-----------------------------------------------------------|------|-------|
| Only the longest rivers flooded. | | ✓ |
| Flooding in 2000 affected only areas in northern England. | ✓ | |
| Flooding affected more places in 2007. | ✓ | |

AO1 – 1
AO2 – 1
AO3 – 1

3x1

- 2 (e) (ii)** Response will depend on case study selected and whether it relates to a rich or poor part of the world. Examples likely to refer to various areas in England 2007, Cumbria 2010, Bangladesh, Pakistan. There is likely to be reference to numbers affected, deaths, impact on housing, farmland, businesses, transport routes etc. There may be categorisation in this way – or reference to short and long term. **(6 marks)**

AO1 – 3
AO2 – 3

Level 1 (Basic) 1-4 marks

Describes some effects of flooding, may be list – like at lower end.

Statements may be in a random order and/or separate.

Generic statements.

Lots of people died and many were homeless. There was no clean water and people were ill. Bridges had collapsed. There was raw sewage and rice had been washed away.

Level 2 (Clear) 5-6 marks

Clear description of a range of effects of flooding.

Statements are developed and linked.

Clear, specific reference to case study.

In Bangladesh in 2004, over 600 people died and millions were homeless. Raw sewage led to disease and there was no clean water. The floods wiped out the rice crop in rural areas. In Dhaka, the airport was flooded. Many bridges had been destroyed by the flood. Schools and hospital were badly damaged and the cost was estimated at \$7billion.

Question 3 Coastal Zone

3 (a)

| | | |
|--------------------|--------------------------------------------------|------------------------------------|
| Erosion is | sand and pebbles being thrown against the coast. | (4 marks) AO1 – 4 |
| Hydraulic power is | the dissolving of some rocks by sea water. | |
| Abrasion is | the wearing away of the land. | |
| Attrition is | the force of the water against the coast. | |
| Solution is | the colliding of rock fragments into each other. | |

All correct = 4; 3 correct = 3; 2 correct = 2; 1 correct = 1.
4x1

3 (b) (i) Nature reserve. Allow mud (flats). **(1 mark)**

AO2 – 1

3 (b) (ii) 5.4km – 5.6km = 2 marks; 5.0 – 5.3 or 5.7 – 6.0 = 1 mark. **(2 marks)**

AO3 – 2

3 (b) (iii) Outline should be clear and recognisable – with change in direction and variable width – 1 mark for basic outline +1 for specific detail. Up to 2 for labels such as wider section at the end, narrow middle section, change in direction, sand and mud behind spit, sand and shingle beach along coast, marshland behind start of spit, groynes. **(3 marks)**

AO2 – 1

AO3 – 2

3 (b) (iv) Spits result from transportation and deposition along the coast. Longshore drift carries material in the direction of the prevailing wind. When there is a break in the coast – e.g. a river mouth – or the coast changes direction, the process continues building out a long, narrow ridge of material. Often this is curved at a distance from the coast as it is affected by winds/ waves from a different direction. **(4 marks)**

AO1 – 3

AO2 – 1

Level 1 (Basic) 1-2 marks

Simple statements.

Order may jump about.

Sequence may be incomplete.

Deposition occurs along the coast. Longshore drift carries material along the coast. This builds a spit out to sea.

Level 2 (Clear) 3-4 marks

Statements are developed and linked.

Sequence and formation of spit is clear.

Longshore drift carries sediment along the coast. The swash is how the material is carried up the beach and the backwash takes it back down. In this way, material is moved along the coast in the direction of the prevailing wind. If the coast changes direction, sediment continues to be dropped in the same direction. In this way, a long, thin ridge of material is deposited – this is the spit. Further out to sea, the end of the spit is often curved due to waves approaching from a different direction.

- 3 (c)** A bar occurs when a line of deposition extends from one piece of land to another (usually across a bay) (1). Thus the bar is attached at both ends – whilst a spit is attached at its start only (1). The end is in the sea (1). **(2 marks)**
Allow offshore bar.
2x1 – For 2 marks the difference must be clear. **AO1 – 2**
- 3 (d)** Any valid label for each of X, Y and Z such as: **(3 marks)**
X – sand exposed/low lying/(patchy) grass **AO2 – 2**
Y – grass present/more species in this area. **AO3 – 1**
Z – shrubs present/taller vegetation/denser vegetation/green.
3x1 Maximum one mark for reference to colour.
- 3 (e)** Content will depend on coastal habitat used – sand dunes and salt marshes are likely choices. Conservation may refer to designation of sites as National Nature Reserves or Sites of Special Scientific Interest – these designations give rise to the monitoring of species to check on well-being of habitat. Often organisations such as English Heritage are involved who are committed to conservation. Access is restricted – often along clearly marked paths and designated trails. Information is supplied via leaflets that seek to inform users of species present and encourage them, via education, to care for the area. Often, there is involvement with local schools in an outdoor classroom and various other facilities. There may be reference to coastal management and efforts to protect the coast as in the Keyhaven Marsh, Hampshire. **(6 marks)**
AO1 – 3
AO2 – 3

Level 1 (Basic) 1-4 marks

Describes how area has been conserved – may be list-like at the lower end.

Statements may be in a random order. Coastal management is one possible strategy which if included on its own limits the response to level 1.

Information is general.

People are not allowed to walk everywhere. Organisations teach people about birds. The area is protected by big rocks. Species are counted.

Level 2 (Clear) 5-6 marks

Clearly describes how area has been conserved.

Statements are linked and developed.

Case study is clearly used.

Saltfleetby – Theddlethorpe dunes are a National Nature Reserve. This is run by English Heritage. Species are monitored by them to see how the habitat is doing. Paths are provided for people to walk on – these are clear to see and stop people from walking over all the area and damaging it. Leaflets are published and visitors can learn about the species and habitat from information boards. This encourages them to look after the area

SECTION B

Question 4: Changing Urban Environments

4 (a) (i) 2x1 (2 marks)
1 mark for correctly completed columns and 1 mark for correct shading.

4 (a) (ii) There should be a consideration of push and pull factors but reference could also be made to high rates of natural increase. (4 marks)

Level 1 (Basic) 1-2 marks

Simple statements which do not relate to the increase in urbanisation in the Poor World.

People move in from the countryside. Better medical facilities in the town. High birth rate. Younger people move to towns.

Level 2 (Clear) 3-4 marks

Linked statements which expand the basic ideas into reasons for the higher rate of urbanisation in the Poor World.

People are attracted to the town because of the better range of facilities found in urban areas. People move to the towns to find jobs. Drought and failure of the farming in the countryside mean that people are forced to move to the towns. Higher birth rate due to selective migration to urban areas.

4 (b) (i) 3x1 (3 marks)
Arrows must clearly show what is being identified. No arrows/lines then no credit.



4 (b) (ii) 4x1 (4 marks)
There has been improved sewage disposal so there is less danger of the spread of disease.
The roads have been widened and public transport has been improved so the inhabitants can get to work more easily.
Street lightening has been installed to reduce the danger from crime.
The banks of the River which flows through Kolkata have been raised so that there is less danger of the squatter settlement being flooded.

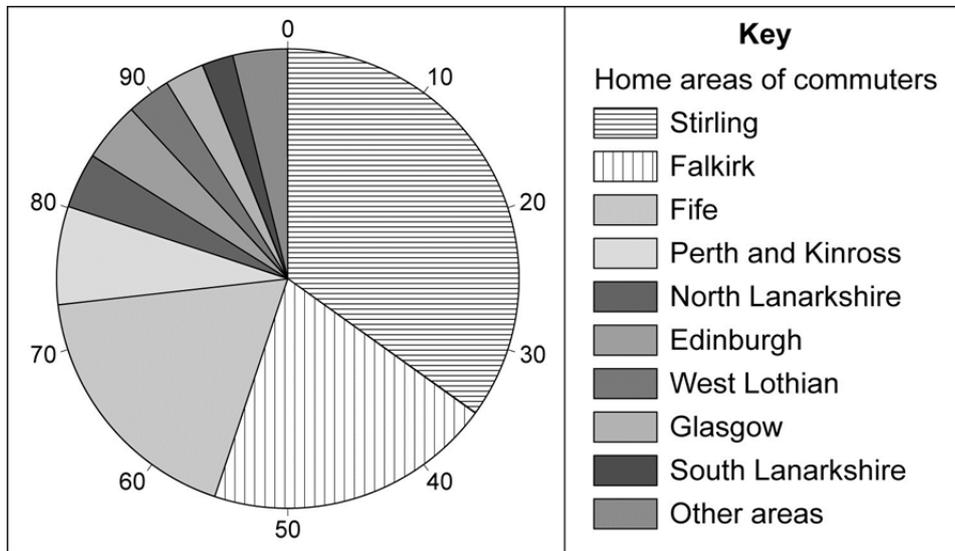
- 4 (b) (iii)** 2x1 **(2 marks)**
Council provided tap/toilet for a group of houses. Council provided electricity/roads for the squatter settlement. Idea of land plots being made available by government/properties at low rents.
- 4 (c)** 2x2 **(4 marks)**
Maximum 1 for list.
There has been increased air pollution due to outputs from factory chimneys. Traffic has increased leading to air pollution. Factories discharge waste into rivers causing water pollution. Growth of squatter settlements as people move to cities for work.
- 4 (d)** **(6 marks)**
The answer can consider sustainable living at different scales – such as a whole settlement such as Curitiba or Dongtan or a smaller scale development such as an individual house or estate.
- Level 1 (Basic) 1-4 marks**
Simple statements without any reference to any case study.
They use renewable energy. There is plenty of public transport. There are plenty of open spaces. People are included in the decision making process.
- Level 2 (Clear) 5-6 marks**
Linked statements with at least the name of a case study.
In Dongtan there is a way of disposing of waste safely. There is a farming area in the city to provide food. There is open space where people can go riding.

Question 5: Changing Rural Environments

5 (a) (i) 2x1

(2 marks)

1 mark for correctly plotted line dividing the segments and 1 mark for correct shading.



5 (a) (ii)

Answers should concentrate on the greater mobility and affluence of people allowing them to travel distances from home to work.

(4 marks)

Level 1 (Basic) 1-2 marks

Simple statements not really expressing why there has been an increase in commuting.

More cars. Good road system. Want to live outside town. Better off.

Level 2 (Clear) 3-4 marks

Linked statements which develop the point to show why commuting has increased.

People are better off and can afford to pay for season tickets on trains, which allows them to travel long distances from home to work. People wish to live in the more pleasant areas in the village and as most people have cars they can travel from there into town for work.

- 5 (b) (i)** 3×1 **(3 marks)**
Arrows must clearly show what is being identified. No arrows/lines then no credit.



- 5 (b) (ii)** 2×2 **(4 marks)**
Accept cheapness of land only once in the two chosen.
e.g. Motorway junction – Close to a settlement so there is need for a junction on open space where the cost of building would be less.
Industrial estate close to good road connections and to a supply of labour in the town.

- 5 (c)** 4×1 **(4 marks)**
There has been an increase in organic farming because people consider it healthier/because chemicals have not been used in producing the food.
Different crops have been introduced because there is a need to cut down on the cost of importing (tropical oils) from abroad.
The demands of the supermarket chains mean that farmers have signed contracts to produce crops of a similar size and weight.
Government try to protect the environment because of the concern about the effect of highly intensive farming.

- 5 (d) (i)** 2×1 **(2 marks)**
Unprofitable farming. Isolation. Lack of services. Unemployment. Drought.
No credit for urban pull factors.

- 5 (d) (ii)** The specification requires that this is of a named area so at least a name is required for consideration of access to Level 2. The question is on effects so no credit for causes. The answer can be concerned with initiatives that have been introduced to try to ameliorate the negative of rural depopulation. **(6 marks)**

Level 1 (Basic) 1-4 marks

Simple statements which show little appreciation of the significance of the effects on the area.

Ageing population. Growth of second homes. Rural poverty Lack of investment.

Level 2 (Clear) 5-6 marks

Linked statements showing how rural depopulation has affected a named area.

In the Lake District increasing cost of houses means there are fewer homes for them and so the population ages. There is a lack of people so less money is invested. Homes are abandoned and many fall into ruins.

Question 6: Tourism

- 6 (a) (i)** 2x1 (2 marks)
1 mark for correctly plotted line dividing the segments and 1 mark for correct shading.
- 6 (a) (ii)** The emphasis of the question is on the global increase in tourism not merely in tourism per se. (4 marks)
- Level 1 (Basic) 1-2 marks**
Simple statements largely concerned with the general growth of tourism.
Increased affluence. Increased amount of leisure time. Improved transportation.
- Level 2 (Clear) 3-4 marks**
Linked statements where there is some appreciation of the increase in *global* tourism.
Relatively cheaper airfares mean that people can get to more remote areas. Many countries in the Poor World are developing their tourist industries as a means of gaining more income. With increased leisure time people are able to have several holidays a year.
- 6 (b) (i)** 3x1 (3 marks)
1st Jungle/tropical rain forests, 2nd Desert/arid, 3rd Polar/Antarctic/Arctic.
- 6 (b) (ii)** 2x2 (4 marks)
Tourists are drawn to these areas because of their emptiness, and they are able to see natural worlds which are totally different from the ones in which they normally live. Many of these tourists are younger and more adventurous and wish to put themselves in a hostile environment where there is an element of danger.
- 6 (c)** 4x1 (4 marks)
One effect an external factor like a terrorist threat can have on the number of tourists coming to the UK is to reduce the number of people coming because they are afraid to fly.
Tourism makes a very important contribution to the UK economy because 30 million visitors came to this country and they spent about £20 billion.
A characteristic of the stagnation phase of the tourist area/resort life cycle model area is increased local opposition to tourism because of crime and vandalism and a reduction in visitor numbers.
Cities have become important tourist areas because they are important areas for shopping, entertainment and historic buildings.
- 6 (d) (i)** 2x1 (2 marks)
Provides a range of jobs. Brings an income into the area. Multiplier effect. Improvement to the infrastructure.

- 6 (d) (ii)** The specification required a named area to be studied so at least a name is required for Level 2. The causes can be environmental, social or economic. Maximum Level 1 for non-tropical example. **(6 marks)**

Level 1 (Basic) 1-4 marks

Simple generic statements without reference to a named area.

There are beaches. There are wild animals. There are cultural differences. Air fares relatively cheap.

Level 2 (Clear) 5-6 marks

Linked statements referring to a named area.

In the game parks of Kenya there are safari tours where it is possible to see the 'Big 5' animals in the wild.