

Geography A

Advanced GCE A2 7832

Advanced Subsidiary GCE AS 3832

Mark Schemes for the Units

June 2007

3832/7832/MS/R/07

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Advanced Subsidiary GCE Geography A (3832)

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Mark Scheme 2680
June 2007

INSTRUCTIONS ON MARKING SCRIPTS

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Annotation consists of:

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K knowledge
U understanding
E explanation

Other: Use of 'So' for unfinished logic, 'NAQ' or 'Irr' for not answering Question

Fill in the boxes on the front page of the script.

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- 1 On the 2680, 2681 and 2682/01 papers you will see that questions are marked out of the following maximum marks.

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'High level' answers tend to be:

'detailed'
'good'
'effective'
'developed'
'clearly present'

'Middle level' answers tend to be:

'clear'
'sound'
'reasonable'
'present'
'some'

'Low level' answers tend to be:

'basic'
'little or no'
'lacks substance'
'limited'

The descriptors for 'middle level' answers could include the top of Level 1 in answers marked using only two levels.

Level marking - Questions marked out of a maximum of 4**Level 2: 3-4 marks****Level 1: 0-2 marks****Level 2**

- A **detailed** answer with **good** understanding and knowledge
- Some **development** of ideas
- **Effective** use of geographic terminology
- A **clear** level of written communication

Level 1

- A more **limited** answer with **basic** understanding and knowledge
- **Limited** or **no** development of ideas
- **Basic** use of geographic terminology
- **Limited** level of written communication

Level marking - Questions marked out of a maximum of 6**Level 2: 5-6 marks****Level 1: 0-4 marks****Level 2**

- A **detailed** answer with **good** understanding and knowledge
- **Development** of ideas
- Examples and or data/evidence **clearly integrated** into the answer
- Links are **effectively** made
- **Effective** use of geographic terminology
- **Clear** use of written communication

Level 1

- A **more limited** answer with perhaps **reasonable** knowledge but **basic** understanding
- **Limited** or **no** development of ideas
- **Limited** or **no** integration or use made of examples or data/evidence
- **Limited** or **no** links are made
- **Limited** use of geographic terminology
- **Limited** level of written communication

Level marking - Questions marked out of a maximum 10 or 20**Level 3: 8-10 marks/16-20 marks****Level 2: 5-7 marks/8-15 marks****Level 1: 0-4 marks/0-7 marks****Level 3**

- A **detailed** answer with **good** understanding and knowledge
- Both description and explanation **clearly present**
- **Development** of ideas
- Examples/data/evidence are **clearly integrated** into the answer
- Links are **effectively** made
- **Effective** use is made of geographic terminology
- A **clear** use of written communication

Level 2

- A **clear/sound** answer with perhaps **reasonable** knowledge but **less convincing** understanding
- Both description and understanding are **present**
- **Some development** of ideas
- **Little use** of examples/data/evidence
- **Some attempt** at linkage is made
- **Some use** of appropriate geographic terminology
- A **reasonable level** of written communication is present

Level 1

- The answer **lacks substance** and offers **only basic or unconvincing or no** knowledge/understanding
- **Only one** of description or explanation is present
- **Little or no development** of ideas
- **No use** made of examples/data/evidence
- **Basic or no** links made
- **Little or no use** of appropriate geographic terminology
- **Basic level** of written communication

Hydrological Systems

- 1 (a) (i) Study Fig. 1, a storm hydrograph. Identify the characteristics **A**, **B** and **C**. [3 marks]

A = lag time

B = descending limb/recessional/falling/declining

C = peak discharge

- (ii) State and explain **two** reasons why afforestation might increase the lag time. [6 marks]

Level 1 (0-4 marks): candidates state one or two ways in which afforestation affects the lag time. One factor done well can reach the top of level one. At the bottom of the level there might not be any development of the answer. Increasingly inaccurate use of geographical terminology towards the bottom of this level. If no explanation then max level 1.

Level 2 (5-6 marks): candidates state and explain in some detail two ways in which afforestation will increase the lag time of a hydrograph. Accurate use of geographical terminology.

Indicative content:

- Afforestation would increase the coverage of the canopy, this in turn increases the amount of interception.
- The amount of throughfall is increased and there is a delay of water reaching the surface and/or the soil store.
- Increased roots, stalks and stems as a physical barriers slow runoff or effect infiltration.
- Increased humus and leaf litter slows runoff.

- (b) State and explain **two** ways in which human activities might affect the stores of water in a named drainage basin. [6 marks]

Level 1 (0-4 marks): Candidates state one or two ways without explanation. Reference to an example at the top of this level. One way done well can achieve top of this level. There is less detail and accuracy in this level.

Level 2 (5-6 marks): clear reference to a named example – Max 5 if not named. Two ways are given and developed well. Accurate explanation. Clear links to specific stores referred to.

Indicative content:

Human activities include: afforestation, deforestation, urbanisation, agriculture, dams, exploitation of aquifers can all affect the stores of water in drainage basin.

- (c) Fig. 2 shows details of two drainage basins, the River Dart in the south west of England and the River Meon, in the south of England.

Using Fig. 2, explain why the hydrographs for the Rivers Meon and Dart differ after a similar rainfall event. [10 marks]

Level 1 (0-4 marks): candidates describe the hydrograph. Identification of relevant factor. There is no explanation. At the top of this level there might be limited use of the information provided and/or some comparison. Inaccurate use of geographical terminology.

Level 2 (5-7 marks): candidates use some of the information from Fig. 1. Explanation is present although not very detailed. Reasonable use of geographical terminology.

Level 3 (8-10 marks): candidates use the information in Fig. 1 effectively and explains differences in the hydrographs. A single factor well developed can achieve at this level. There is good use of the information and understanding of the comparison is very clear. Accurate use of geographical terminology.

Indicative content:

- The geology is very different. Dart is mostly granite and so would expect a rapid response to a storm event as granite is impermeable and is not porous. This would lead to a short lag time and a high peak discharge on the storm hydrograph.
- The Meon is predominantly chalk and so this lengthens the lag time and reduces the peak discharge as chalk is porous.
- The Dart catchment is more 'mountainous' and so would increase amount of runoff compared to the Meon.

[Total 25 marks]

Ecosystems

2 Fig. 3 shows a cross section through a sand dune sequence.

- (a) State and explain **two** ways in which the growth of vegetation may modify the environment found in sand dunes. [6 marks]

Level 1 (0-4 marks): candidates state and there is some development of the points given. One factor done very well can achieve top of this level. Geographical terminology is used increasingly more accurately towards the top of this level.

Level 2 (5-6 marks): candidates state and clearly explain two ways in which vegetation will modify the sand dune environment. Understanding is clear and accurate use of geographical terminology.

Indicative content:

- Vegetation can decrease the pH of the sand dunes due to humification and chelation.
- The % of organic matter will increase due to decomposition of vegetation.
- The presence of vegetation will encourage deposition as greater frictional drag leads to less competent winds.
- Shelter.
- Growth of vegetation effects competition between species.
- Stability increases as roots trap sand.
- Interception of precipitation increases.
- Increased habitats for wildlife that in turn effects dunes.
- May refer to vegetation in fig.2 eg Golf course.

- (b) Describe and explain **two** ways in which vegetation has adapted to the sand dune environment. [6 marks]

Level 1 (0-4 marks): candidates identify one or two adaptations and there is some explanation, although not full explanation. One adaptation done well can achieve top of this level.

Level 2 (5-6 marks): candidates identify two adaptations and clearly explain these adaptations in relation to the sand dune environment.

Indicative content:

- Marram grass is the best example to use.
- It has long roots to stabilise itself and to tap fresh water sources.
- It is able to grow quickly to survive inundation by sand.
- Its leaves are rolled and face into the wind to lower transpiration which is an adaptation for the arid environment of sand dunes.
- Pores are found on the inside of this rolled leaf which raises humidity and therefore reduces transpiration.
- Accept other valid types of vegetation and adaptations.

- (c) (i) What is meant by the term 'plagioclimax'? [2 marks]

Indicative content:

This is where the climatic climax or equilibrium of vegetation is prevented from being reached or stopping of succession (1) due to human activity (1).

- (ii) What is meant by the term 'dominance'? [2 marks]

Indicative content:

Having the major influence, ability to out compete, taking over etc for 1. Some development for 2.

- (d) For a named sand dune ecosystem, describe and explain the impact of human activities on the soil and vegetation. [10 marks]

Level 1 (0-4 marks): candidates describe the impact of human activities for soil and/or vegetation but there is no explanation. Inaccurate use of geographical terminology.

Level 2 (5-7 marks): candidates describe and go some way to explain the impact of human activities on soil and/or vegetation. Explanation is present but not full and there is reasonable use of geographical terminology. Single activity max level 2. If either soil or vegetation missing then max level 2.

Level 3 (8-10 marks): candidates describe and explain the impact of human activities on both the soil and the vegetation. Explanation is clear and there is accurate use of geographical terminology. There is a clear sense of place for max.

Indicative content:

- Human activities include trampling, fire, farming, recreation, leisure, replanting, conservation, tourism, afforestation.
- Impact on soil: on the grey dunes the soil can be deepened and the A horizon increased through artificial fertilisers being used. Soil can also be reduced due to trampling and erosion or the removal of the surface and an impermeable surface replacing sand.
- Vegetation: can be reduced in content by trampling and replaced by other types of vegetation.
- Some type of vegetation will affect the type of soil and soil development. For example, afforestation of a coniferous plantation will lead to podsol developing.

[Total 26 marks]

Atmospheric Systems

3 Fig. 4a and Fig. 4b show incoming and reflected solar radiation and albedo of different surfaces.

(a) (i) Using Fig. 4a, describe what happens to incoming solar radiation. [4 marks]

Level 1 (0-2 marks): candidates describe some parts of the diagram. There is limited/no use of the figures from the diagram. Geographical language is inaccurate and the description is thin.

Level 2 (3-4 marks): candidates give a comprehensive description and/or manipulation of the figures from the diagram. There is good use of geographical language and the description is clear.

Indicative content:

- Of the 100% incoming shortwave radiation:
- 51% is absorbed by the earth, either directly or by scattered radiation.
- 30% in total is reflected back into the atmosphere.
- 19% is absorbed by the atmosphere and clouds.

(ii) Using Fig. 4b, describe and explain how albedo might influence local energy budgets. [6 marks]

Level 1 (0-4 marks): candidates describe and there is considerable detail at the top end of this level. There may be explanation of albedo. Use of the data is absent and geographical terminology is inaccurate.

Level 2 (5-6 marks): candidates describe in detail and explanation is present. Clear appreciation that it is a budget (relationship of reflection to absorption). This will be convincing at the top end of this level. There is good use of the table in figure 3b. Accurate use of geographical terminology.

Indicative content:

- An ice surface will not absorb as much incoming radiation and due to its light colour it will reflect a greater proportion leading to low surface temperature (a low budget).
- Conversely, a dark surface such as a forest will absorb more incoming solar radiation and so changes the budget (a high budget).
- Cumulonimbus clouds reflect up to 90% of incoming solar radiation.
- Fresh snow reflects 80-90%.
- Water bodies such as lakes, rivers and seas will reflect as little as 6%.

- (b) Suggest two ways in which the local energy budget differs between night and day. [4 marks]

Level 1 (0-2 marks): candidates suggest one difference and there may be further development.

Level 2 (3-4 marks): candidates suggest two differences and there is some development of one or both differences.

Indicative content:

- There is no incoming solar radiation at night time.
- Therefore the night is a time of loss with outgoing radiation exceeding incoming radiation.
- The subsurface supply of heat to the surface is important at night time with there being more longwave radiation.
- More condensation at ground level during the night time (release of latent heat).
- There is some longwave radiation emitted from the earth's surface during the day time.

- (c) Using examples, describe and explain how human activity can alter local energy budgets. [10 marks]

Level 1 (0-4 marks): Largely descriptive of how human activity modifies energy budgets. Examples of human activities are lacking and there is inaccurate use of geographical terminology. Max level 1 if scale incorrect.

Level 2 (5-7 marks): Explanation is offered of how human activity modifies energy budgets. Examples of human activities are given but are not well developed. Reasonable use of geographical terminology.

Level 3 (8-10 marks): candidates describe, explain and make clear the impact on the local energy budgets. The answer is detailed and well referenced examples are given. Accurate use of geographical terminology.

Indicative content:

- Urbanisation, agricultural practices, industrial, energy production, construction of walls can all lead to an alteration of the energy budget.
- Warming in urban areas due to building materials, heating of buildings, use of vehicles. Increased sensible heat transfers due to the wind tunnelling effect that can occur. Smudge pots and cloches are ways of trapping outgoing terrestrial radiation and so warming the ground to encourage plant growth and to protect from frost.
- Walls will retain heat and provide shelter and so prevent frost.

[Total 24 marks]

Lithosphere

4 Study Fig. 5, which shows a clay cliff at Criccieth Beach, North Wales.

(a) (i) What is meant by the term mass movement? [2 marks]

This is transport or movement of slope material downslope (1) by gravity/under its own weight/without the aid of a moving force (1).

(ii) What type of mass movement is likely to have happened in Fig. 5?

Slide/slip; landslide; rockfall; creep; flow; slump. [1 mark]

(iii) Suggest why mass movement has occurred on the cliff. [6 marks]

Level 1 (0-4 marks): candidates attempt to explain but not in any great detail. Answers are more general with less reference to the photograph and no reference at the bottom of this level. Increasingly accurate use of geographical terminology towards the top of this level.

Level 2 (5-6 marks): candidates explain clearly why mass movement has occurred. The answer is clearly related to the photograph. Accurate use of geographical terminology.

Indicative content:

- Cliff is made of soft, weak clay.
- The clay will absorb water and will swell when wet and contract when dry.
- This creates planes of weakness in the clay which can act as shear planes.
- The shear stress exceeds the strength and there is mass movement.
- The removal of material at the base can cause steepening of the gradient which may mean that greater stress is placed on the slope and lead to its movement.
- Role of weathering.
- Lack of vegetation to bind clay.
- Steepness of slope – beyond stability.
- The trigger of movement is important and should be credited.

(iv) Biological action and wetting-drying are two weathering processes active on the cliff. Explain these processes. [6 marks]

Level 1 (0-4 marks): one process might be done well or both processes considered but lacking in detail and/or accuracy. The use of geographical terminology is inaccurate.

Level 2 (5-6 marks): both processes are explained. The explanation is in the right context. There is accurate use of geographical terminology.

Indicative content:

- Biological action will occur with the presence of vegetation (and animals) and this could be physical or chemical.
- The growth of vegetation could force rocks apart and so expose weaknesses.
- The presence of vegetation could lead to chelation occurring and so the roots exchange hydrogen ions with the soil and it breaks down.
- Wetting and drying: as material is wetted it will expand. During the drying phase the material will contract and crack.

- (b) **Using examples, describe and explain how human activity can influence slope stability.** [10 marks]

Level 1 (0-4 marks): candidates describe human activities but explanation is lacking. Inaccurate use of geographical terminology.

Level 2 (5-7 marks): candidates use examples. Description and some explanation is given of how people can influence slope stability. Max level 2 for one activity. Reasonable use of geographical terminology.

Level 3 (8-10 marks): candidates use good examples and description, explanation and clear reference to the influence of more than one human activities on slope stability is made. Accurate use of geographical terminology.

Indicative content:

- Slopes can be stabilised or destabilised by human activity.
- Lowering the gradient (eg terracing) will decrease the shear stress imposed on the slope and so reduce the amount of mass movement that takes place as the slope is stabilised. The use of gabions or nets will reduce the amount of mass movement that can take place. Afforestation will reduce mass movement. Roots of trees will bind soils together and will reduce the amount of surface run off. This will lower the amount of water in the soil and so reduce pore water pressure.
- Humans create triggers eg cuttings
- Human activity adds weight to slopes eg buildings
- Transport can lead to steeper gradients and so this will increase the amount of mass movement that occurs.
- Deforestation will also expose soil and it will be more readily saturated and so more prone to mass movement.

[Total 25 marks]

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June 2007**

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'Low level' answers tend to be:

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'little or no'
'lacks substance'
'limited'

The descriptors for 'middle level' answers could include the top of Level 1 in answers marked using only two levels.

Level marking – Questions marked out of a maximum of 4

Level 2: 3-4 marks

Level 1: 0-2 marks

Level 2

- A **detailed** answer with **good** understanding and knowledge
- Some **development** of ideas
- **Effective** use of geographic terminology
- A **clear** level of written communication

Level 1

- A more **limited** answer with **basic** understanding and knowledge
- **Limited** or **no** development of ideas
- **Basic** use of geographic terminology
- **Limited** level of written communication

Level marking – Questions marked out of a maximum of 6

Level 2: 5-6 marks

Level 1: 0-4 marks

Level 2

- A **detailed** answer with **good** understanding and knowledge
- **Development** of ideas
- Examples and or data/evidence **clearly integrated** into the answer
- Links are **effectively** made
- **Effective** use of geographic terminology
- **Clear** use of written communication

Level 1

- A **more limited** answer with perhaps **reasonable** knowledge but **basic** understanding
- **Limited** or **no** development of ideas
- **Limited** or **no** integration or use made of examples or data/evidence
- **Limited** or **no** links are made
- **Limited** use of geographic terminology
- **Limited** level of written communication

Level marking – Questions marked out of a maximum 10 or 20

Level 3 : 8-10 marks/16-20 marks

Level 2 : 5-7 marks/8-15 marks

Level 1 : 0-4 marks/0-7 marks

Level 3

- A **detailed** answer with **good** understanding and knowledge
- Both description and explanation **clearly present**
- **Development** of ideas
- Examples/data/evidence are **clearly integrated** into the answer
- Links are **effectively** made
- **Effective** use is made of geographic terminology
- A **clear** use of written communication

Level 2

- A **clear/sound** answer with perhaps **reasonable** knowledge but **less convincing** understanding
- Both description and understanding are **present**
- **Some development** of ideas
- **Little use** of examples/data/evidence
- **Some attempt** at linkage is made
- **Some use** of appropriate geographic terminology
- A **reasonable level** of written communication is present

Level 1

- **The answer** lacks substance **and offers** only basic or inconvincing or no **knowledge/ understanding**
- Only one **of description or explanation is present**
- Little or no development **of ideas**
- No use **made of examples/data/evidence**
- Basic or no links **made**
- Little or no use **of appropriate geographic terminology**
- Basic level **of written communication**

Population

1 Study Fig 1 which shows the population change of the continents of Europe and Asia, 1750-2005.

- (a) Compare the changes in population of Europe and Asia between 1750 and 2005, as shown in Fig 1. [6]

Level 2 (5-6 marks)

A clear description of the two population trends between 1750 and 2005 which compares Europe with Asia. The discriminator from Level 1 is that reference is made to both the similarity (before 1900) and the contrast (after 1900) in the rates of growth. Max 5 marks if no use of dates or figures for both continents.

Level 1 (0-4 marks)

A basic description. Where there is comparison of the population changes of the two continents in terms of absolute numbers only the response may be awarded up to 4 marks. Max 3 marks for answers where there is reference to change for one continent only ie no comparison.

Marks are awarded at the lower end of the mark range (max 2) where there are simple statements such as the population of Asia has grown a lot; the population of Europe has not grown by much.

Indicative content:

- Overall between 1750 and 1900 the rates of population growth for Asia and Europe were similar (the European rate was in fact greater between 1850 and 1900).
- After 1900 Asia experienced a rapidly accelerating rate of growth whereas Europe's rate of growth was relatively slow (including periods of deceleration).
- In particular, since 1950 the population of Asia has almost tripled rising from 1402 millions in 1950 to 3921 millions in 2005 – an increase of 180%. During the same period the population of Europe has increased from 547 millions (1950) to 730 millions (2005) – an increase of only 33%.
- Between 1750 and 1850, although rates of growth are slightly faster in Asia, overall % increase in population is greater in Europe.

- (b) (i) **How does an understanding of the demographic transition model help to explain population change through time?** [6]

Level 2 (5-6 marks)

A clear response in which population change in Europe is explained by reference to appropriate features of the demographic transition model. The discriminator from Level 1 is recognition of the link between population change and birth and death rates/natural increase with reference to at least **two** of the stages in the model.

Level 1 (0-4 marks)

A basic response in which the link between population change and birth and death rates/natural increase is less well understood. Reference to the link between total population and birth and death rates in **one** stage in the model may be awarded up to 4 marks.

At the lower end of the mark range (max 2 marks) there will be simple statements possibly with no reference to the model.

Indicative content:

Population change through time can be linked to the four or five stages of the model:

- Stage 1 – High Stationary – birth and death rates both high – fluctuation in death rate but overall in this period low rate of natural increase – hence low rates of population growth
- Stage 2 – Early expanding – birth rate remained high, death rate began to fall – increasingly high natural increase – population began to grow rapidly
- Stage 3 – Late expanding – although birth rates fell, death rates continued to decline to a low level – population continued to grow rapidly although towards the end of this stage as natural increase began to decrease there was a deceleration in population growth rate
- Stage 4 – Low Stationary – birth and death rates slow with low rate of natural increase – population growth continues to decelerate/slow growth
- Stage 5 – Low declining – death rate exceeds birth rate – natural decrease – population declines.

Population change over the entire period of time can be understood by viewing the model as a whole:

- the changing relationship between birth rate and death rate helps to explain the changes in total population.

(ii) State and explain two limitations of the demographic transition model.

Level 2 (5-6 marks)

A clear response in which there is understanding that the model, based on population change in the UK/other European countries, has limitations in its application to other countries. A Level 2 response will include explanation of at least two limitations of the model.

Level 1 (0-4 marks)

A basic response in which up to 4 marks may be awarded for explanation of one limitation.

At the lower end of this mark range up to 2 marks may be awarded for simplistic basic comments only such as the idea that being a model it is a simplification of reality.

Indicative content:

Specific limitations arise from the differences between countries in terms of:

- The absolute numbers involved in population increase and the relative growth rates. (These were both lower in late 18th and 19th century Europe with no country having an annual growth rate of more than 1%; growth rates have been much greater in many LEDCs)
- The rate of decline in mortality. (This was a gradual process in late 18th and 19th century Europe due to gradual improvements in living conditions whereas in many LEDCs mortality decline has been rapid. This was the result of modern medical techniques being transferred from MEDCs in a relatively short period of time rather than incremental increases in living standards over a longer period)
- Fertility levels. (Fertility levels have remained high in many LEDCs compared with the trend in Europe. The economic advantages of large families remain amongst rural populations. The low status and education amongst women and the survival of traditional cultures in the absence of rapid urbanisation all contribute to high fertility)
- The model ignores differences in population change between areas within a country
- The model does not show the effects of migration
- The model does not show the dramatic effects of political factors (eg anti-natal policies, war) or environmental hazards .

No credit for reference to inaccuracy of data or age-sex structure.

- (c) The term 'total fertility rate' is defined as the average number of children born to a woman during her lifetime. Variations in the total fertility rates of selected countries in 2005 are shown in Fig 2.

Suggest two reasons why these rates differ.

Country	Total fertility rate 2005
Niger	8.0
Nigeria	5.7
Kenya	5.0
Guatemala	4.4
India	3.1
USA	2.0
China	1.7
UK	1.7
Poland	1.2

Level 2 (5-6 marks)

A clear answer which demonstrates understanding of the factors accounting for spatial variation in total fertility rates. A Level 2 response will include explanation of at least two factors, one of which must be linked explicitly to fertility rate.

Level 1 (0-4 marks)

Basic understanding; one developed explanation of a valid factor may be awarded up to 4 marks.

At the lower end of this mark range up to 2 marks may be awarded for simplistic, basic comments only.

Indicative content:

Possible factors/reasons why the rates differ may be economic, social, religious or political, including:

- Family labour requirements in subsistence economies
- Females working later in life and delaying having children in developed economies
- Female literacy
- Status and rights of women
- Expectations of differing religions eg Hindu, Catholic
- Pro-/anti-natal government policies
- Education/family planning
- Infant mortality
- Nutrition
- Wealth.

2 Rural Settlement

Study the 1:25,000 OS map extracts of Hayfield for 1971 and 2004. Hayfield is a rural settlement in Derbyshire; it is situated on the edge of the Pennines, 15 miles from the centre of Manchester.

(a) What is meant by the term counterurbanisation? [2]

Any of the following are worth 2 marks:

- A decrease in the proportion of people living in urban areas
- An increase in the proportion of people living in rural areas
- The net effect of decentralisation of population from urban areas to rural areas

1 mark only for a less precise definition eg a decline in population of large urban areas or a growth in rural population ie just one part of the process.

(b) (i) **With reference to specific evidence from the OS map extracts, describe two changes in the built environment of Hayfield between 1971 and 2004.** [4]

Level 2 (3-4 marks)

A clear description that concentrates on changes in the built environment of the village of Hayfield. A Level 2 response will include explicit comparison between the two dates with reference to map evidence such as place names, features or grid references. The discriminator from Level 1 is the inclusion of two changes.

Max 3 marks if no specific map evidence.

Level 1 (0-2 marks)

A basic description in which there is description of one change in the built environment. Alternatively, comparison is implicit or references to the maps are vague/generalised eg little more than 'there has been growth in the built up area'.

Indicative content:

- Straightening/rerouting of the A624
- Relocation of school
- Loss of railway station (now car park/visitor centre)
- Conversion of rail track to recreational path
- Replacement of factory by housing
- Expansion of the built up area (accept evidence for/terms used in the Hudson model of suburbanised settlements eg infill, adjunct, ribbon).
Allow two separate examples for up to two marks each.
- Services eg Hotel, visitor centre.

- (b) (ii) **Suggest reasons for these changes. Support your answer with evidence from the OS map extracts.**

Level 2 (5-6 marks)

A clear account of Hayfield's growth in which relevant factors are linked to map evidence. A Level 2 response should include explanation of at least two reasons.

Max 5 marks if no reference to map evidence.

Level 1 (0-4 marks)

A basic response. Where one reason is explained and linked to map evidence, up to 4 marks may be awarded. Max 3 marks if no reference to map evidence. At the lower end of the mark range (max 2 marks) the answer will include only brief undeveloped statements.

Indicative content:

- Migration to Hayfield by young working population who are prepared to commute to work in urban areas – (proximity to Manchester 15 miles)
- Natural increase as young working population start families – safer rural environment, scenic landscape, lower levels of noise and other pollution – lower house prices just outside Peak District National Park – proximity to services such as school
- Migration of retired population/those in later stage of life cycle – positive externalities of this rural environment (Pennines/Kinder area) – escaping disadvantages of urban environments – basic services and housing stock in Hayfield
- Relocation of school – possible expansion/improvement of facilities as a result of the increase in children – young commuter families
- Loss of rail link – increase in personal mobility
- Building of improved A624 – improvement in accessibility, reduction of traffic congestion, improvement in safety
- Redevelopment of factory site – regeneration/enhancement of environment – housing requirements met.
- Local employment in the Hayfield area eg in tourism

Other possible reasons for which there is little or no map evidence:

- Teleworking.
- Government planning policy.
- Second home ownership.

- (c) Between 1971 and 2001 the population of Hayfield increased by 21.4% (from 2350 to 2852). During the same period the number of households increased by 37.7% (from 875 to 1205).

Suggest why the number of households has increased at a faster rate than the increase in population. [3]

Indicative content:

Three marks could be obtained by making one well development point such as:

- A decrease in family size (1 mark) with increased demand for housing in this area (1 mark) as a result of:
- An increase in the number of retired people/late stage in life cycle (1 mark) with only one or two people living in the household (1 mark) – children left home and/or possibly loss of spouse (1 mark)
- Greater numbers of young working population/commuters (1 mark) – single or young couples (1 mark) – later age of marriage or delaying start of a family (1 mark)
- Increase in number of single mothers (1 mark)
- Increase in divorce (1 mark).

- (d) **With reference to one or more rural regions in an MEDC, describe and explain the impact of population change in the last 40 years.** [10]

Level 3 (8-10 marks)

Detailed knowledge and convincing understanding of the impact of population change on a rural region or regions. Explicit links are made between population changes and their effects. The discriminator from Level 2 is that at least two different types of impact are explained with credible exemplification including specific knowledge of place and/or population. Appropriate use of geographical terms is expected at this level.

Level 2 (5-7 marks)

Clear knowledge of population change and its impact on a rural region or regions. The two elements are present but the link between population change and its impact tends to be less explicit. Knowledge of both place and population is less secure. There is less emphasis on explanation and more on description especially at the lower end of this mark range. The discriminator from Level 1 is that there is explanation of one type of impact.

Level 1 (0-4 marks)

Basic knowledge of the impact of population change in a rural region or regions. Explanation of the link between population change and its effects is not present or at best is very superficial ie answers offer little more than description. Factual knowledge of place and population is weak.

Indicative content:

This question is open to wide ranging interpretation.

Aspects of population change which may have an impact on rural areas include both loss and gain either resulting from migration or natural increase as well as changes in population structure in terms of age, gender or socio – economic status. It is the nature of the population change which helps to explain the impact on any of the following:

- Provision of shops
- Provision of services
- Provision of housing
- Household size and composition
- Employment
- Environmental issues
- Values and attitudes
- Social problems
- Rural poverty
- Planning policies.

Max 6 marks for responses which are wholly generalised.

3 Urban Settlement

Study Fig. 3 which shows average annual internal migration flows to Cairo, Egypt, 1996-2004.

- (a) (i) **With specific reference to Fig. 3, describe the pattern of migration flows to Cairo.** [4]

Level 2 (3-4 marks)

A clear response which describes the pattern shown on the flow line map. The discriminator from Level 1 is that two characteristics of the pattern are described. Max 3 marks if no specific named locations or figures.

Level 1 (0-2 marks)

A basic response in which only one characteristic of the pattern is described or there is haphazard reference to the lines of migrant flows.

Indicative content:

Characteristics of the pattern of migrant flows include:

- Greater numbers of migrants travel from locations near to Cairo/lower numbers move from more distant locations
- Greatest flows are from the more highly populated areas of the Nile Delta/flood plain/lowest numbers move from the desert areas
- Migrants to Cairo travel from every region in Egypt
- The greatest single provider of migrants is the Sharkia region (24,000/yr) and the smallest number of migrants move from the Red Sea region (2,000/yr)
- The pattern of flow is very unevenly distributed within the country with great contrasts between the more fertile areas and the deserts.
- North/south corridor

- (ii) Suggest two reasons for this pattern. [6]

Level 2 (5-6 marks)

A clear response in which there is explanation of the pattern of migrant flows to Cairo evident in Fig. 4. The discriminator from Level 1 is that two reasons are identified and explained.

Level 1 (0-4 marks)

A basic response in which the link between identified features of the pattern of migration and appropriate explanation is less explicit. Up to 4 marks may be awarded for clear identification and explanation of one reason.

At the lower end of the mark range (max 2 marks) there will be simplistic, brief comments only with no link to map features.

Indicative content:

- Greater numbers travel shorter distances because – easier access, less travelling time, less expensive, nearer home area/roots
- Smaller numbers travel longer distances since greater number of obstacles to migration eg desert conditions, lack of transport, etc

Care needed in marking the two points above – do not credit ‘mirror answers’ twice.

- Overpopulation of flood plain and delta
- Easier access along the Nile valley
- System of land inheritance reducing size of land holdings.

- (b) State and explain how natural increase contributes to urban growth in LEDCs. [6]

Level 2 (5-6 marks)

A clear understanding of the two main circumstances in which natural increase is a significant factor in causing urban growth. The discriminator from Level 1 is that there is understanding of both natural increase in urban areas and natural increase in rural areas leading to rural – urban migration (or an understanding of the 4th bullet point). Exemplification is not essential but this may help to confirm understanding and hence lead to the award of full marks.

Level 1 (0-4 marks)

Basic understanding. A response in which there is only one explanation of the significance of natural increase (either urban or rural) may be awarded up to 4 marks.

At the lower end of the mark range (max 2 marks) there will be simplistic remarks with limited understanding of the link between natural increase and urban growth.

Indicative content:

- High rates of natural increase in rural areas in LEDCs may lead to rural – urban migration (overpopulation, remittances, seeking spouse etc)
- Youthful populations in LEDC cities including rural migrants may lead to a relatively high rate of natural increase (significant contribution of children to the family income)
- Responses which consider variations in natural increase within urban areas as a result of cultural differences and/or planning policies should also be credited
- In some instances the contribution of urban natural increase may be of less importance than rural – urban migration (eg Sao Paulo 1950-60 rural migrants constituted 72% of total population increase); responses which include this point, often a feature of early growth, are equally valid.

- (c) **With reference to a named urban area in an LEDC, describe and explain the changes in the urban environment arising from rapid population growth.**

[10]

Level 3 (8-10 marks)

A detailed response which concentrates on changes in the urban environment as a result of rapid population growth. An explicit link between rapid population growth and environmental change is established. There will be detailed exemplification with reference to intra-urban place names/physical features/population figures. The discriminator from Level 2 is that two changes in the urban environment are described and explained.

Level 2 (5-7 marks)

A clear response in which the link between rapid population growth and environmental change is evident but knowledge and understanding is less secure. The discriminator from Level 1 is that one change in the urban environment is described and explained. At the lower end of this mark range there is more emphasis on description but the fact that there is some explanation will distinguish the response from Level 1.

Level 1 (0-4 marks)

A basic response in which there is only description of population change and/or environmental change. Understanding of the link between rapid population growth and environmental change is very weak or non-existent. There may be description of environmental problems only or possibly the answer lapses into the causes of rapid population growth. At the lower end of this mark range there will be basic, simplistic comments.

Indicative content:

- Squatter settlements
- Industrial development
- Effects on levels of sanitation
- Impact on water supply
- Loss of natural habitats
- Landslides
- Atmospheric pollution
- Flooding
- Government planning responses to any of the problems eg development of transport systems
- Refuse disposal/landfill sites.

Max 6 marks for responses which are wholly generalised

[Total 26]

**Mark Scheme 2682
June 2007**

INSTRUCTIONS ON MARKING SCRIPTS

All page references relate to the Instructions to Examiner booklet (revised June 2006)

For many question papers there will also be subject or paper specific instructions which supplement these general instructions. The paper specific instructions follow these generic ones.

1 Before the Standardisation Meeting

Before the Standardisation Meeting you must mark a selection of at least 10 scripts. The selection should be drawn from several Centres. The preliminary marking should be carried out **in pencil** in strict accordance with the mark scheme. In order to help identify any marking issues which might subsequently be encountered in carrying out your duties, **the marked scripts must be brought to the meeting.** (*Section 5c, page 6*)

2 After the Standardisation Meeting

- a) Scripts must be marked in **red**, including those initially marked in pencil for the Standardisation Meeting.
- b) All scripts must be marked in accordance with the version of the mark scheme agreed at the Standardisation Meeting.
- d) **Annotation of scripts**

The purpose of annotation is to enable examiners to indicate clearly where a mark is earned or why it has not been awarded. Annotation can, therefore, help examiners, checkers, and those remarking scripts to understand how the script has been marked.

Annotation consists of:

- the use of ticks and crosses against responses to show where marks have been earned or not earned;
- the use of specific words or phrases as agreed at standardisation and as contained in the final mark scheme either to confirm why a mark has been earned or indicate why a mark has not been earned (eg indicate an omission);
- the use of standard abbreviations eg for follow through, special case etc

Scripts may be returned to Centres. Therefore, any comments should be kept to a minimum and should always be specifically related to the award of a mark or marks and be taken (if appropriate) from statements in the mark scheme. General comments on a candidate's work must be avoided.

Where annotations are put onto the candidates' script evidence, it should normally be recorded in the body of the answer or in the margin immediately adjacent to the point where the decision is made to award or not award the mark.

d) Recording of marking: the scripts

- i) Marked scripts must give a clear indication of how marks have been awarded, as instructed in the mark scheme.
- ii) All numerical marks for responses to part questions should be recorded unringed in the right-hand margin. The total for each question (or, in specified cases, for each page) should be shown as a single ringed mark in the right-hand margin at the end of each question.
- iii) The ringed totals should be transferred to the front page of the script, where they should be totalled.
- iv) Every page of a script on which the candidate has made a response should show evidence that the work has been seen.
- v) Every blank page should be crossed through to indicate that it has been seen. (*Section 8a – d, page 8*)

e) Handling of unexpected answers

The Standardisation Meeting will include a discussion of marking issues, including:

- a full consideration of the mark scheme in the context of achieving a clear and common understanding of the range of acceptable responses and the marks appropriate to them, and comparable marking standards for optional questions;
- the handling of unexpected, yet acceptable answers. (*Section 6a, bullet point 5, page 6*)

There will be times when you may not be clear how the mark scheme should be applied to a particular response. In these circumstances, a telephone call to the Team Leader should produce a speedy resolution to the problem. (*Appendix 5, para 17, page 26*)

Additional Guidance

- 1 All scripts are liable to outside scrutiny or a re-mark following a Result Enquiry. It is therefore essential that the marking and comments on the scripts are clear to an observer, sample marker or any re-marking after the grading. Please keep to the conventions outlined by the Principal Examiner and avoid individual idiosyncrasies. Mark in red biro or red ink. (Team leaders mark in red and re-mark in green). Useful abbreviations include:
K knowledge
U understanding
E explanation

Fill in the boxes on the front page of the script.

- 2 Please add helpful comments where they help to explain your decision, but do not express your frustrations, views on the candidate's ability or the competence of their teacher! Under no circumstances should you put sarcastic or derogatory comments on the scripts. Where levels are used you should indicate the highest level achieved and where appropriate the achievement of lower levels.
- 3 Please do not cross out text.
- 4 Add comments where appropriate to indicate the dialogue you are having with the script. Research has identified ticks as a sign of rushed or causal marking so please do not use them.
- 5 Every section of an answer must show evidence of having been read. Do not think that you can 'skim' through irrelevant patches. They may be worthy of some credit. Sometimes candidates add a few lines on extra sheets or at the back of an answer book. If this additional piece gains no marks make sure that you indicate that it has been read. If you get to a marginal decision, at the end of a longer piece of writing, eg is it worth full marks (10) or (9) then take a positive stance and award 10.
- 6 Where the rubric has been infringed you need to mark all of the work and to select the best answer within the rubric. Cancel with a single line any marginal marks that you have to exclude. Make a note of the infringement on the front of the script.
- 7 If you suspect dishonest practice contact your team leader to discuss the issue and then follow the guidelines provided.
- 8 Your checker must follow the instructions on the reverse of the Checker's claim form.

Thank you for following all of these procedures accurately.

Generic Descriptions for Levels Marking

- 1 On the 2680, 2681 and 2682/01 papers you will see that questions are marked out of the following maximum marks.

2
4
6
10
20

- 2 For most questions we will use **LEVEL MARKING** based on **generic descriptors** with clarification on the specific content requirements given on a question-by-question basis. Level marking will always be used for questions marked out of a maximum of 6, 10 and 20 and usually (but not always) for questions marked out of a maximum of 4.
- 3 On the following pages are the generic descriptions for the various maximum marks. Please use these when marking the level marked questions in conjunction with the main mark scheme document.
- 4 You will see that in the generic descriptions there are clear progressions in the standards expected. For example:

'High level' answers tend to be:

'detailed'
'good'
'effective'
'developed'
'clearly present'

'Middle level' answers tend to be:

'clear'
'sound'
'reasonable'
'present'
'some'

'Low level' answers tend to be:

'basic'
'little or no'
'lacks substance'
'limited'

The descriptors for 'middle level' answers could include the top of Level 1 in answers marked using only two levels.

Level marking - Questions marked out of a maximum of 4**Level 2: 3-4 marks****Level 1: 0-2 marks****Level 2**

- A **detailed** answer with **good** understanding and knowledge
- Some **development** of ideas
- **Effective** use of geographic terminology
- A **clear** level of written communication

Level 1

- A more **limited** answer with **basic** understanding and knowledge
- **Limited** or **no** development of ideas
- **Basic** use of geographic terminology
- **Limited** level of written communication

Level marking - Questions marked out of a maximum of 6**Level 2: 5-6 marks****Level 1: 0-4 marks****Level 2**

- A **detailed** answer with **good** understanding and knowledge
- **Development** of ideas
- Examples and or data/evidence **clearly integrated** into the answer
- Links are **effectively** made
- **Effective** use of geographic terminology
- **Clear** use of written communication

Level 1

- A **more limited** answer with perhaps **reasonable** knowledge but **basic** understanding
- **Limited** or **no** development of ideas
- **Limited** or **no** integration or use made of examples or data/evidence
- **Limited** or **no** links are made
- **Limited** use of geographic terminology
- **Limited** level of written communication

Level marking - Questions marked out of a maximum 10 or 20**Level 3 : 8-10 marks/16-20 marks****Level 2 : 5-7 marks/8-15 marks****Level 1 : 0-4 marks/0-7 marks****Level 3**

- A **detailed** answer with **good** understanding and knowledge
- Both description and explanation **clearly present**
- **Development** of ideas
- Examples/data/evidence are **clearly integrated** into the answer
- Links are **effectively** made
- **Effective** use is made of geographic terminology
- A **clear** use of written communication

Level 2

- A **clear/sound** answer with perhaps **reasonable** knowledge but **less convincing** understanding
- Both description and understanding are **present**
- **Some development** of ideas
- **Little use** of examples/data/evidence
- **Some attempt** at linkage is made
- **Some use** of appropriate geographic terminology
- A **reasonable level** of written communication is present

Level 1

- The answer **lacks substance** and offers **only basic or unconvincing or no** knowledge/ understanding
- **Only one** of description or explanation is present
- **Little or no development** of ideas
- **No use** made of examples/data/evidence
- **Basic or no links** made
- **Little or no use** of appropriate geographic terminology
- **Basic level** of written communication

State the title of your Geographical Investigation below.

- 1 (a) Describe the fieldwork data collection techniques you used after developing your sampling strategy. [10 marks]

Indicative content – not all points are required to achieve full marks:

- Instruments and procedures used for measurement of variables
 - *Eg river channel: width, depth, velocity, wetted perimeter, particle size.*
 - *Eg sand dunes: height change, vegetation type, vegetation density, vegetation height, wind speed, soil temperature, air temperature, pH, soil moisture, footpath erosion.*
 - *Eg longshore drift: height of beach material either side of groynes; wind speed; wave height and speed; movement of pebbles.*
 - *Eg urban climate: wind speed and direction, air temperature.*
 - *Eg traffic flows; pedestrian flows.*
- Design of qualitative/visual assessment survey forms
 - *Eg type of land use; type of housing; age of housing; quality of housing; quality of environment.*
- Questionnaire
 - *Eg how the questionnaire content was developed (type, number and content of questions).*
- Recording/preparation strategies
 - Annotation of maps in the field
 - Use of field sketches and photographs
 - Design of data collection tables for use in the field
 - Calibration of equipment

NB: this question is asking for description not justification.

The following skills are applied to each level:

- Level of detail.
- Use of geographical terminology.
- Clarity of the response.
- Discussion relates to the personal enquiry.
- Relevance of the material presented.
- Understanding how to collect data.

Level 3 (8-10 marks)

Fieldwork data collection techniques discussed **in detail**.

The answer is logically ordered.

Level 2 (5-7 marks)

Fieldwork data collection techniques discussed **clearly**.

There are lapses in the logic of the answer.

Level 1 (0-4 marks)

Fieldwork data collection techniques discussed **basically**.

There are considerable gaps and/or errors in the answer.

Max 7 marks if not discussing “in the field” techniques, eg Internet, census material, published maps with no amendments

- 1 (b) Identify the risks involved in collecting your data and outline the strategies used to minimise these risks. [10 marks]

Indicative content – not all points are required to achieve full marks:

- Human factors
 - Personal safety, *eg worked in pairs at all times in case of unwelcome approach by strangers or aggressive response by interviewees. Planned to call police if there was a problem.*
 - Attitude of people, *eg knocked on doors of houses before taking photographs in order to prevent owners' complaining about invasion of privacy. Planned to call police if there was a problem.*
 - Vehicles, *eg someone checked for vehicles coming along road.*
- Physical factors
 - Access to the location, *eg look up the state of the tide before going to the location.*
 - Weather, *eg kept an eye on the weather conditions as it would affect the time taken to carry out the data collection and could affect the ability to collect the data.*
 - Mass movement, *eg wore hard hats due to danger of rock fall.*
 - Cold, *eg danger of cold water currents minimised by wearing warm waterproof clothing and footwear able to grip rocks.*
 - Disease, *eg after heavy rain river water carried the risk of Lymes disease, therefore covered up body.*
- Discussion of “statistical risks” relating to sampling and data collection strategies valid.

The following skills are applied to each level:

- Level of detail.
- Use of geographical terminology.
- Clarity of the response.
- Discussion relates to the personal enquiry.
- Relevance of the material presented.
- Understanding the relevance of risk assessment.

Level 3 (8-10 marks)

Risks are identified and strategies are discussed **in detail**.
The answer is logically ordered.

Level 2 (5-7 marks)

Risks are identified and strategies are discussed **clearly**.
There are lapses in the logic of the answer.

Level 1 (0-4 marks)

Risks are identified **basically**.
Or Only **one** risk and strategy discussed.

There are considerable gaps and/or errors in the answer.

2 An AS Geographical Investigation compared two contrasting slopes at areas A and B shown on Fig. 1, a map extract of part of the Peak District.

(a) With reference to Fig. 1, state and explain two factors that might have been taken into account when choosing these two contrasting areas. [10 marks]

Indicative content – not all points are required to achieve full marks:

- Impact on strategy and outcomes
 - Areas selected to meet the requirements of the investigation.
 - Height above sea level: eg accumulation of water at lower heights; type/density of vegetation.
 - Aspect: eg drier and wetter slopes; type/density of vegetation.
 - Position on hill side (bottom, middle, top): eg accumulation of water down slope.
 - Type of vegetation (rough grassland, scrub, coniferous): eg surface runoff and infiltration.
 - Other characteristics (loose rock): eg surface runoff.
 - Angle of slope: eg expect steeper to have faster infiltration; type/density of vegetation.
- Practical implications
 - Height above sea level/position on hill side: distance to walk with equipment.
 - Type of vegetation (rough grassland, scrub, coniferous)/loose rock/angle of slope: ease of walking over landscape.
 - Loose rock: ability to take measurements.
 - Access: distance from paths and roads.

Area	Height	Aspect	Position	Vegetation	Other	Slope
A	>390m	SW	Towards top of hill	scrub, rough grassland	loose rock	steep - moderate
B	>250m	NE	From base - near top of hill	coniferous	-	steep

The following skills are applied to each level:

- Level of detail.
- Use of geographical terminology.
- Clarity of the response.
- Discussion relates to the resource.
- Relevance of the physical factors chosen.
- Understanding of how control is needed when selecting/comparing 2 locations.

Level 3 (8-10 marks)

One factor stated and explained **in detail** and **other** factor **in detail or clearly**.

There is reference to Fig.1.

The answer is logically ordered.

Level 2 (5-7 marks)

Two factors are stated and explained **clearly**.

Or One factor stated and explained **in detail** and **other** factor **basically or absent**.

There may be reference to Fig. 1.

There are lapses in the logic of the answer.

Level 1 (0-4 marks)

Factors are stated **basically**.

There is unlikely to be reference to Fig. 1.

There are considerable gaps and/or errors in the answer.

- 2 (b) With the aid of a labelled sketch diagram, describe and justify the type of sampling and the sample size that might have been used to investigate these slopes. [10 marks]

Indicative content – not all points are required to achieve full marks:

- Type of sampling
 - Systematic grid along and up the slope.
 - Gains full coverage of all parts of slope, whereas random would not.
 - Stratified according to vegetation type could be justified.
 - Pragmatic sampling, eg benefits of accessibility, safety, site characteristics.
- Sample size
 - Appropriate for the chosen type of sampling.
 - Reference to human resources available.
 - Gains full coverage of all parts of slope within time and resource constraints.
- Credit rejection of alternative method and size.
- Credit problems with selected method and size.

The following skills are applied to each level:

- Level of detail.
- Use of geographical terminology.
- Clarity of the response.
- Discussion relates to the resource.
- Relevance of the sampling type and size.
- Justification of how to select the appropriate sampling type and size.

The following content is applied to each level:

Level 3 (8-10 marks)

Description and justification of **one of sampling or sample size** discussed in detail and the **other in detail or clearly**.

Bottom of level: imbalance between type of sampling and sample size.

The answer is logically ordered.

Level 2 (5-7 marks)

Either Description and justification of type of **sampling and sample size** discussed **clearly**.

Or **One** of type of **sampling or sample size** discussed in detail and the **other basically or absent**.

There are lapses in the logic of the answer.

Level 1 (0-4 marks)

Description of type of **sampling and/or sample size** discussed **basically**.

There are considerable gaps and/or errors in the answer.

Max 7 marks if no sketch diagram or no text

3. In 2006 a group of AS students investigated the ethnicity and the type of housing in a city. Fig. 2 shows the variation in ethnicity at ward level based on the 2001 Census and the method that they used to collect the type of housing data.

(a) Describe and justify a technique to show the spatial distribution of ethnicity. [10 marks]

Indicative content – not all points are required to achieve full marks:

- Ethnicity
 - Preferably place on the map.
 - Choropleth map: able to make visual assessment of differences between wards; easy to draw; data represents whole ward.
 - Pie chart showing composition at each sample site (ethnic/non-ethnic proportions): able to make visual assessment of differences between wards; easy to draw; will fit into ward boundaries on map easily.
 - Mann-Whitney: differences between wards grouped into 2 sets of data (eg north versus south of city) (typically L1).

The following skills are applied to each level:

- Level of detail.
- Use of geographical terminology.
- Clarity of the response.
- Discussion relates to the resource.
- Relevance of the technique suggested.
- Understanding of why this technique is appropriate for assessing ethnicity.

The following content is applied to each level:

Level 3 (8-10 marks)

Description and justification of technique are discussed **in detail**.

The answer is logically ordered.

Level 2 (5-7 marks)

Either **Description and/or justification** of technique are discussed **clearly**.

Or **One of description or justification** of technique is discussed **in detail** and the **other basically or not at all**.

Max top Level 2 if chosen technique could be located spatially but not specified, eg 8 pie/bar charts.

There are lapses in the logic of the answer.

Level 1 (0-4 marks)

Description of technique is discussed **basically**.

There are considerable gaps and/or errors in the answer.

- 3 (b) Why might it be difficult to examine the relationship between the data for type of housing and ethnicity? [10 marks]

Indicative content – not all points are required to achieve full marks:

Ethnicity	Housing
Ward level basis	4 transects
Averages over the ward area	Intermittent data (every 1 km) along transects
100% sample (in reality it is less)	Much less than 100% sample
Collected in 2001	Collected in 2006
Data from throughout whole area	Only sampling on main roads
	Only collected on one side of road
	Different number of transects passing through wards

- This means that cannot:
 - Conduct a statistical test of association.
 - Use a single graphical technique to examine the relationship.
- Credit geographical theory.
- Responses may relate to housing and ethnicity separately
 - Census data is out of date or may not be accurate.
 - Housing data not representative of whole ward.
- **NOT responses purely relating to data collection as already collected, eg large quantity of data to analyse.**

The following skills are applied to each level:

- Level of detail.
- Use of geographical terminology.
- Clarity of the response.
- Discussion relates to the resource.
- Understanding of different sampling and measurement schemes.

The following content is applied to each level:

Level 3 (8-10 marks)

Difficulties are discussed **in detail**.

The answer is logically ordered.

Level 2 (5-7 marks)

Difficulties are discussed **clearly**.

Max top Level 2 if refer to housing and ethnicity separately.

There are lapses in the logic of the answer.

Level 1 (0-4 marks)

Difficulties are discussed **basically**.

There are considerable gaps and/or errors in the answer.

**Mark Scheme 2683
June 2007**

INSTRUCTIONS ON MARKING SCRIPTS

All page references relate to the Instructions to Examiner booklet (revised June 2006)

For many question papers there will also be subject or paper specific instructions which supplement these general instructions. The paper specific instructions follow these generic ones.

1 Before the Standardisation Meeting

Before the Standardisation Meeting you must mark a selection of at least 10 scripts. The selection should be drawn from several Centres. The preliminary marking should be carried out **in pencil** in strict accordance with the mark scheme. In order to help identify any marking issues which might subsequently be encountered in carrying out your duties, **the marked scripts must be brought to the meeting.** (*Section 5c, page 6*)

2 After the Standardisation Meeting

- a) Scripts must be marked in **red**, including those initially marked in pencil for the Standardisation Meeting.
- b) All scripts must be marked in accordance with the version of the mark scheme agreed at the Standardisation Meeting.
- c) **Annotation of scripts**

The purpose of annotation is to enable examiners to indicate clearly where a mark is earned or why it has not been awarded. Annotation can, therefore, help examiners, checkers, and those remarking scripts to understand how the script has been marked.

Annotation consists of:

- the use of ticks and crosses against responses to show where marks have been earned or not earned;
- the use of specific words or phrases as agreed at standardisation and as contained in the final mark scheme either to confirm why a mark has been earned or indicate why a mark has not been earned (eg indicate an omission);
- the use of standard abbreviations eg for follow through, special case etc

Scripts may be returned to Centres. Therefore, any comments should be kept to a minimum and should always be specifically related to the award of a mark or marks and be taken (if appropriate) from statements in the mark scheme. General comments on a candidate's work must be avoided.

Where annotations are put onto the candidates' script evidence, it should normally be recorded in the body of the answer or in the margin immediately adjacent to the point where the decision is made to award or not award the mark.

d) Recording of marking: the scripts

- i) Marked scripts must give a clear indication of how marks have been awarded, as instructed in the mark scheme.
- ii) All numerical marks for responses to part questions should be recorded unringed in the right-hand margin. The total for each question (or, in specified cases, for each page) should be shown as a single ringed mark in the right-hand margin at the end of each question.
- iii) The ringed totals should be transferred to the front page of the script, where they should be totalled.
- iv) Every page of a script on which the candidate has made a response should show evidence that the work has been seen.
- v) Every blank page should be crossed through to indicate that it has been seen. (*Section 8a – d, page 8*)

e) Handling of unexpected answers

The Standardisation Meeting will include a discussion of marking issues, including:

- a full consideration of the mark scheme in the context of achieving a clear and common understanding of the range of acceptable responses and the marks appropriate to them, and comparable marking standards for optional questions;
- the handling of unexpected, yet acceptable answers. (*Section 6a, bullet point 5, page 6*)

There will be times when you may not be clear how the mark scheme should be applied to a particular response. In these circumstances, a telephone call to the Team Leader should produce a speedy resolution to the problem. (*Appendix 5, para 17, page 26*)

Generic Mark Scheme**AO1 Knowledge (0-11 marks)**

Section A		Section B
6-7	Level 3 Substantial knowledge of themes, processes, concepts, environments, and where appropriate specific examples.	4
4-5	Level 2 Sound knowledge of themes, processes, concepts, environments, and where appropriate specific examples.	2-3
0-3	Level 1 Basic knowledge of themes, processes, concepts, environments and examples.	0-1

AO2 Critical Understanding of Content (0-10 marks)

Section A		Section B
4	Level 3 Authoritative understanding of concepts, theories and content including examples where appropriate.	5-6
2-3	Level 2 Sound understanding of concepts, theories and content including examples where appropriate.	3-4
0-1	Level 1 Basic understanding of concepts, theories and content and examples where appropriate.	0-2

AO3 Application of knowledge and critical understanding to unfamiliar contexts (0-12 marks)

Section A		Section B
3	Level 3 Clear application of relevant knowledge and understanding to the question set.	8-9
2	Level 2 Sound application of relevant knowledge and understanding to the question set.	5-7
0-1	Level 1 Limited application of relevant knowledge and understanding to the question set.	0-4

AO4 Skills and techniques including communication skills (0-12 marks)

Section A		Section B
5-6	Level 3 Clear structure and organisation. Communication is clear with maps, diagrams, statistics, if appropriate. Confident use of geographical terms.	5-6
3-4	Level 2 Sound structure and organisation. Communication is sound with maps, diagrams, statistics, if appropriate. Some accurate use of geographical terms.	3-4
0-2	Level 1 Poor structure and organisation. Much inaccuracy in communication and limited and/or ineffective use of different forms. Little confidence in the use of geographical terms.	0-2

Group A Options**Option 1: Coastal Environments**

1. (a) Describe the influence of lithology (rock type) and structure on the plan of the coast. [20]

(b) Explain how the rate of cliff retreat is the result of the interaction of a variety of factors. [25]

(a)

The term lithology is explicitly used in the Spec. where it is linked directly with coastal morphology. The dictionary definitions have lithology as referring to the composition of rock, its hardness and relative susceptibility to weathering and erosion. Geological structure includes bedding planes, joints, faults and folds. The focus on plan is clear.	
AO1+ AO2	<ul style="list-style-type: none"> • bays and headlands - discordant • uninterrupted sweeps of coastline - concordant • smaller scale features such as geos and other indentations – mention of this scale point is a likely indicator of a Level 3 response • stacks + stumps as viewed from above • shore platform - width • responses that focus on cross-sections will not go beyond Level 1 in AO2
AO3	<ul style="list-style-type: none"> • responses that focus on cross-sections will not go beyond Level 1 • responses that include comments about the scale of plan features are likely to be Level 3
AO4	<ul style="list-style-type: none"> • see generic mark scheme

(b)

This sub-part partly builds on the first and also extends it into cliff profiles. The focus is on cliff retreat but with an emphasis on the inter-action of several factors.	
AO1+ AO2	<ul style="list-style-type: none"> • geology – lithology and structure • sub-aerial processes • wave energy • relief • changing sea level • human activities
AO3	<ul style="list-style-type: none"> • bottom of Level 2 where interaction is implicit • either a breadth or depth approach is appropriate and can reach Level 3 • comments regarding the balance between marine and sub-aerial more likely to indicate Level 3
AO4	<ul style="list-style-type: none"> • see generic mark scheme

- 2 (a) Describe the impact of human activities on coastal systems. [20]
- (b) Explain the role vegetation plays in the development of coastal landforms. [25]

(a)

Human activities are explicitly mentioned in the Spec along with some exemplification that moves beyond just management.	
AO1+ AO2	<ul style="list-style-type: none"> • if answered solely in terms of management top of Level 2 in AOs 1+2 • recreation • farming • industry • housing • fishing • transport
AO3	<ul style="list-style-type: none"> • responses using a systems approach likely to be Level 3 • if answered solely in terms of management Level 2 is the maximum
AO4	<ul style="list-style-type: none"> • see generic mark scheme

(b)

The coastal ecosystem is a major heading in this Option with sand dunes, salt marsh and mud flats explicitly mentioned. The emphasis is on the role vegetation plays in coastal landform development.	
AO1+ AO2	<ul style="list-style-type: none"> • vegetation has a stabilising effect, both on wind and water velocities, allowing sediment to be deposited and accumulate; a response that acknowledges a cause/effect issue here is likely to be at Level 3 in AO2; also impact on processes eg creep • vegetation succession leading to sediment accumulations • vegetation exacerbating weathering and erosion through chelation/root growth • identification of the key species + their role in succession might indicate a top Level 2/bottom Level 3 response in AO1+2
AO3	<ul style="list-style-type: none"> • a response that does not link explicitly vegetation and landform development will not exceed bottom of Level 2 • responses indicating that vegetation is only one of several factors likely to be at top of Level 2 minimum
AO4	<ul style="list-style-type: none"> • see generic mark scheme

Option 2: Fluvial Environments

- 3 (a) Describe the ways in which water flow varies in channels of different cross - section and plan? [20]
- (b) Explain how riffle and pool sequences are related to the development of meanders. [25]

(a)

The flow of water in stream channels can be either laminar (extremely rare) or turbulent. Comments about different velocities of flow are also relevant here. References to field course material might be valuable and can be reflected in any of the AOs as appropriate.	
AO1+ AO2	<ul style="list-style-type: none"> without turbulent Level 1 maximum x-section or plan only of a meander, Level 2 max laminar – layers of water slipping past each other. Associated with approximately semi-circular cross-sectional channels. turbulent – increasing mixing of water with flow in the form of eddies + vortices. Often associated with shallow channels with many obstructions along the channel as in upland areas. helical – spiralling core of maximum velocity associated with cross-section around a meander ie asymmetrical variations in velocity relevant e.g linked with hydraulic radius a Level 3 indicator, especially in AO2, might be mention of variations in flow pattern under different discharge conditions eg high + low
AO3	<ul style="list-style-type: none"> without turbulent Level 1 maximum x-section or plan only of a meander, Level 2 max the link between water flow and channel type needed for Level 3
AO4	<ul style="list-style-type: none"> see generic mark scheme

(b)

The weaker responses are likely to be those who do not manage to go beyond meander features.	
AO1+ AO2	<ul style="list-style-type: none"> sinuous path of thalweg even in relatively straight sections downstream changes in fast + slow flow leads to erosion + deposition respectively deposition deflects flow against opposite bank initiating erosion, channel curvature and meander formation well developed pools + riffles are typically 5-7 channel widths apart helical flow that is set up partly in response to swinging of thalweg transfers sediment from deepened pool to shallower sections maintaining pool-riffle sequences + aiding establishment of point bar deposits on inside of meanders
AO3	<ul style="list-style-type: none"> the quality of the link between pools + riffles and meander development will be crucial here. A determined effort to link is unlikely to be less than top of Level 2
AO4	<ul style="list-style-type: none"> see generic mark scheme

- 4 (a) Describe the variations in a river's width, depth and gradient from source to mouth. [20]
- (b) Explain how changing water levels within a river channel affects the processes at work. [25]

(a)

Channel shape is a major heading in this Option and is a topic that candidates should know well in the context of downstream changes. It would be very encouraging to read material based on fieldwork in responses.	
AO1+ AO2	<ul style="list-style-type: none"> generally depth increases downstream generally width increases downstream; a possible indication of a Level 3 response is the acknowledgement that width usually increases more rapidly than depth gradient decreases downstream x-section or plan only of a meander, Level 2 max comments about local variations valid eg plunge pools; meander; knick points comments about man's interference in these changes might indicate a Level 3 response
AO3	<ul style="list-style-type: none"> not source to mouth is Level 1 only width or depth or gradient is Level 1
AO4	<ul style="list-style-type: none"> see generic mark scheme

(b)

Rivers as energy systems is a well established theme in the study of Fluvial environments. Changes in the water level in a channel has a direct influence on the processes at work.	
AO1+ AO2	<ul style="list-style-type: none"> as rivers flow they convert potential energy to kinetic some 95% of the kinetic energy expended overcoming the internal friction of water + frictional drag of bed + banks bankfull discharge recognised as principal control on energy as this is when rivers have maximum energy as they move the most sediment + water for the least amount of energy expended. Attempts to discuss bankfull discharge are likely to be not less than Level 2. bankfull not the same as highest flow – latter when rivers flood + much energy is lost through friction as water spreads over floodplain – a Level 3 indicator, especially in AO2. comments about variations in flow across a meander are appropriate comments about Hjulmström curve valid braiding
AO3	<ul style="list-style-type: none"> the quality of the link between water level and processes via energy will be crucial here. A determined effort to link is unlikely to be less than top of Level 2 a response commenting on spatial and or temporal variations likely to indicate top of level 2 at minimum eg short term increase in water level due a thunderstorm; annual changes eg monsoonal flood; differences between upper and lower course
AO4	<ul style="list-style-type: none"> see generic mark scheme

Option 3: Glacial and Periglacial Environments

- 5 (a) Describe the characteristic landforms and landscapes produced by ice sheets. [20]
- (b) Study the 1:25 000 scale OS map of part of the Grampian Mountains in the Scottish Highlands. Explain how ice has produced the distinctive landscape features shown in the OS map extract. [25]

(a)

The landscapes produced by ice sheets are explicitly mentioned in the Spec. and offer an interesting contrast to the study of the impact of valley glaciation.	
AO1+ AO2	<ul style="list-style-type: none"> essentially ice sheets tend to produce landscapes with a lower amplitude of relief, knock + lochan for example ice sheets might lower the landscape in the order of 10 – 100 metres whalebacks – small smoothly eroded landforms a few hundred metres in length; sometimes called rock drumlins roche moutonnée depositional landscapes such as North European till plain, including eskers and drumlins. Comments about till plain aggradation + the smoothing of the landscape eg E.Anglia are relevant and might indicate a Level 3 response a Level 3 response might distinguish between the low-lying landscape of somewhere such as the central Canadian shield and upland plateaux such as west Greenland a response that is focussed solely on valley glaciation will not reach above Level 1
AO3	<ul style="list-style-type: none"> a response that is focussed solely on valley glaciation will not reach above Level 1 a response identifying the contrast between landform and landscape is Level 3
AO4	<ul style="list-style-type: none"> see generic mark scheme

(b)

The 1:25 000 extract is from the Grampians just to the north-west of Fort William. It contains such classic features making up the landscape as corries, arête, troughs, hanging valleys, truncated spurs.	
AO1+ AO2	<ul style="list-style-type: none"> accurate but theoretical explanations of corrie/arête/trough/hanging valley/truncated spur formation will reach Level 2, but those responses containing evidence of referral to this particular map will be at Level 3
AO3	<ul style="list-style-type: none"> the inclusion of some general statements about the effect of ice on this landscape is likely to indicate a Level 3 response, for example the increased amplitude of relief; the straightening of the major valleys those who establish that ice accumulated and moved through a fluvial produced landscape are likely to be Level 3
AO4	<ul style="list-style-type: none"> see generic mark scheme

- 6 (a) Describe the factors that lead to glacial advance and retreat. [20]
- (b) Explain how a glacier can both erode and deposit. [25]

(a)

The glacier as a system is a major heading within this Option and should be well known and understood by candidates.	
AO1+ AO2	<ul style="list-style-type: none"> glacial mass balance – accumulation, ablation and the relationship between the two as regards mass balance details about the range of processes collectively known as accumulation/ablation are appropriate contrast between cold/warm based glaciers are appropriate comments about types of movement are appropriate comments about processes eg climate change leading to the onset of a period of glaciation valid
AO3	<ul style="list-style-type: none"> there need not be an equal treatment of advance or retreat for Level 3 but mention of only one limits the response to Level 1
AO4	<ul style="list-style-type: none"> see generic mark scheme

(b)

Processes of erosion and deposition are explicitly stated in the Spec. but here candidates are invited to move away from the overly simplistic idea that advancing glaciers erode and retreating ones deposit.	
AO1+ AO2	<ul style="list-style-type: none"> glaciers are not one uniform body of ice; the upper parts can be essentially cold-based with downstream stretches warm based. abrasion, crushing, fracturing + joint-block removal are all strongly related to the thermal regime ie warm/cold base ice sub-glacial deposition tends to be present only in warm based glaciers eg undermelt – deposition through melting of underlying ice; basal lodgement – smearing of predominantly fine material on bed when friction retards further movement; basal flowage – partly depositional partly erosional as unconsolidated water soaked debris squeezed into gaps at base and is then streamlined by overriding ice following on behind push moraines at snout lateral moraines glacio-fluvial erosion and deposition can occur in different parts of a glacier eg sub-glacial channels + eskers
AO3	<ul style="list-style-type: none"> there need not be an equal treatment of erosion or deposition for Level 3 but mention of only one limits the response to bottom of Level 2 a simple description of landforms is bottom of level 2 maximum comments about erosion and deposition occurring at different places within the same glacier likely to indicate top of Level 2 at the minimum
AO4	<ul style="list-style-type: none"> see generic mark scheme

Option 4: Hot arid and semi-arid environments

- 7 (a) Describe the various ways in which hot arid and semi-arid environments can be defined. [20]
- (b) Explain the distribution of hot arid and semi-arid environments. [25]

(a)

Definitions of aridity and effective precipitation are explicitly mentioned in the Spec. and we can, therefore, anticipate strong accounts of these.	
AO1+ AO2	<ul style="list-style-type: none"> modern definitions based on concept of water balance, the relationship between input of water as precipitation, evapo-transpiration losses + any changes in storage eg soil, groundwater, lakes and rivers effective precipitation is that part of total precipitation which remains after evaporation and is therefore available for biological activity. In hydrological terms it is the precipitation that will eventually enter a stream channel Thornthwaites general aridity index is likely to be mentioned frequently; when $P = P_{et}$, index is 0; when $P = 0$, index is -100; when P greatly exceeds P_{et}, index is +100. Index values 0 - -20 considered sub-humid; -20 - -40 semi-arid; below -40 arid Meig divided the arid category into two, arid and extreme arid, the latter being a location experiencing at least twelve consecutive months without any rainfall. This point might be a Level 3 indicator. Straightforward statistical definition has arid environments receiving <250 mm of annual precipitation
AO3	<ul style="list-style-type: none"> responses highlighting water's role will be Level 2 + 3
AO4	<ul style="list-style-type: none"> see generic mark scheme

(b)

The location of these environments is explicitly mentioned in the Spec. and should be well known and understood by those studying this specialist Option.	
AO1+ AO2	<ul style="list-style-type: none"> global circulation – sub-tropical high pressure being the downward limb of the Hadley cell. rainshadow effect – prevailing winds in sub-tropics are trade winds blowing from NE in northern hemisphere, SE in southern hemisphere. Barriers such as Andes prevent moisture reaching western slopes. Greater extent of desert where relief barrier in east eg Australia. This point likely to be an indication of a Level 3 response in AO2 linked with trade wind direction is point that where trades blow from sea, their moisture is precipitated on eastern coasts leaving little moisture for mid-continental areas eg Gobi desert and Great Basins and Mojave deserts ocean currents and prevailing winds eg Namib and Atacama deserts a level 3 response in AO2 might be indicated by mention that most deserts are the product of a combination of factors eg Atacama – high pressure; rainshadow and upwelling of cold water
AO3	<ul style="list-style-type: none"> without clear references to location then Level 1 is the maximum mention of the contrast between hot arid and semi-arid indicates a Level 2 response
AO4	<ul style="list-style-type: none"> see generic mark scheme

- 8 (a) Describe the causes of land degradation in arid environments. [20]
- (b) Explain why some locations suffer from land degradation more than others in hot arid and semi-arid environments. [25]

(a)

Land degradation is a complex topic and so for Level 3 we can expect material introducing this complexity. Many responses will use the term 'desertification' which is acceptable here although strictly it is not the same; it is the substance of the response that will determine the Level.	
AO1+ AO2	<ul style="list-style-type: none"> land degradation is process by which soil becomes less productive as a result of both physical factors eg drought and human factors eg overgrazing human intrusion into these environments has increased over the past few decades eg pop. growth + tourism + recreation dynamic equilibrium of these environments is easily disturbed as positive feedback takes over, accelerating change that can lead to degradation climate change desert pavements + crusts very fragile; once broken finer materials eroded + transported by wind (especially flatter areas) + water leading to gully formation over-grazing over-cultivation mis-application of irrigation techniques leading to salinisation deforestation
AO3	<ul style="list-style-type: none"> without clear references to appropriate environments then level 1 maximum responses distinguishing between hot arid and semi-arid are likely to be Level 3
AO4	<ul style="list-style-type: none"> see generic mark scheme

(b)

This sub-part encourages candidates to appreciate the variety of environment and experience of different locations with the general description of 'arid + semi-arid'.	
AO1+ AO2	<ul style="list-style-type: none"> some regions have greater human impact than in others eg parts of North Africa where population growth + increasing density is c.f. Gobi desert some regions are more able to apply technology to solve issues eg MEDCs c.f. LEDCs some regions undergo more recreation impact eg parts of SW USA impact of large scale schemes eg water diversion eg Aral Sea
AO3	<ul style="list-style-type: none"> where the contrast in severity is explicit then top of Level 2 is the minimum responses picking up on contrasts in physical environment are likely to be top of level 2 minimum
AO4	<ul style="list-style-type: none"> see generic mark scheme

Option 5: Applied Climatology

- 9 (a) Study the 1:25 000 scale OS map of part of the Grampian Mountains in the Scottish Highlands. How might the local climates in Squares 38 84 and 43 83 differ? [20]
- (b) Explain how human activities are influenced by variations in topo-climates. [25]

(a)

The climate of slopes and valleys are explicitly stated in the Spec. and this should be the main focus here.	
AO1+ AO2	<ul style="list-style-type: none"> • temperature • precipitation; a likely Level 2 or 3 indicator might be those references to different types of precipitation; Level 3 for those who refer to intensity of precipitation • wind • influence of forest
AO3	<ul style="list-style-type: none"> • Level 2+3 reserved for those who make clear use of the map. • Level 1 for those do not refer to the map but write in a generalised way.
AO4	<ul style="list-style-type: none"> • see generic mark scheme

(b)

The key assessment in this sub-part is the effectiveness of the link made between topographic variations in local climate and human activities. There is no direct reference made to the map extract but candidates are quite at liberty to use this for exemplification.	
AO1+ AO2	<ul style="list-style-type: none"> • settlement – relate to climatic variations due to altitude and aspect • agriculture including forestry – relate to climatic variations due to altitude and aspect • recreation – relate to impact of altitude on activities such as walking and climbing, skiing, gliding, hang gliding • an increase in altitude in some latitudes eg tropics ameliorates climate and makes such locations more attractive to settlement/agriculture
AO3	<ul style="list-style-type: none"> • bottom of level 2 maximum for a response that does not make the link explicit • responses commenting on the advantages an increase in altitude can have at some latitudes are likely to be top of level 2 or above
AO4	<ul style="list-style-type: none"> • see generic mark scheme

- 10 (a) Describe the ways in which human activities make use of shelter belts and wind breaks. [20]
- (b) Explain how size of urban area influences differences in climate between urban and rural areas. [25]

(a)

Most shelter-belts/wind breaks are deliberately generated as they are designed to have a beneficial effect on human activities, most notably agriculture.	
AO1+ AO2	<ul style="list-style-type: none"> shelter for cattle – sometimes these take the form of a tunnel of vegetation in which livestock can shelter eg upland areas wind breaks to reduce wind speed in areas of low relief where arable enterprises are important. At certain times of the year the soil will not have a well developed cover of vegetation and so be susceptible to soil erosion by wind eg Dutch polders, Fens shelter for isolated buildings/small clusters of buildings eg farmsteads on Polders vegetation belts to trap snow for increased soil moisture in summer eg Canadian Prairies
AO3	<ul style="list-style-type: none"> Level 2/3 for those who deal with shelter belts/wind breaks in the context of human activity. Level 1 for those who deal with these features in theoretical terms
AO4	<ul style="list-style-type: none"> see generic mark scheme

(b)

This sub-part links contrasts in factors such as energy budgets with climatic contrasts.	
AO1+ AO2	<ul style="list-style-type: none"> larger urban areas tend to have a more pronounced heat island effect, especially under winter anti-cyclonic conditions. higher temperatures associated with larger urban areas lead to lower local air pressure drawing in air from surrounding areas. higher temperatures associated with larger urban areas lead to increased instability; increased energy in thunderstorm activity larger urban areas tend to produce more condensation nuclei and so higher precipitation might result
AO3	<ul style="list-style-type: none"> with no contrast clear between urban and rural level 1 is the maximum with comments about the size of the urban area top of level 2 is likely as a minimum
AO4	<ul style="list-style-type: none"> see generic mark scheme

Group B Options**Option 6: Agriculture and Food**

- 11 (a) Study the 1:25 000 scale OS map of part of the Grampian Mountains in the Scottish Highlands. Describe the influence of the physical environment such as that shown on the OS map extract on agricultural systems. [20]
- (b) Explain how farmers can modify climates and soils to increase agricultural production. [25]

(a)

The influence of the physical environment on agricultural systems is a major sub-heading in this Option. Candidates should have no trouble in identifying the upland and rugged nature of the environment shown on the map extract. The question is clear in using the map extract as an example so material from other upland locations is relevant.	
AO1+ AO2	<ul style="list-style-type: none"> • climate – shorter growing season; higher precipitation with snow common over winter; lower sunshine totals; higher average wind speeds; aspect relevant here • soils – generally thinner; more leached; less fertile • arable very difficult, only possibility is along valley floors – link with steep slopes • animal types restricted to those breeds able to stand harsh conditions
AO3	<ul style="list-style-type: none"> • the degree to which the physical factors are linked with agricultural systems will advise the Level here • responses directly referring to the map are likely to be at level 3
AO4	<ul style="list-style-type: none"> • see generic mark scheme

(b)

There are various approaches farmers can use but the emphasis throughout is on modification of the physical environment. This sub-part is open to any physical environment, not just the type represented in the OS map extract.	
AO1+ AO2	<ul style="list-style-type: none"> • climate – greenhouses; poly-tunnels; plastic sheeting used for raising temperatures (air + soil) and extending the growing season • climate – irrigation and drainage • climate - planting of wind breaks and shelter belts; a Level 3 indicator for both AOs might be the mention of these to trap snow which, when it melts, raises soil moisture eg Canadian prairies; also in relation to protection of livestock might be a Level 3 indicator • soils – fertiliser application + crop rotation • soils – irrigation and drainage
AO3	<ul style="list-style-type: none"> • there need not be an equal treatment of climate or soils for Level 3 but mention of only one limits the response to bottom of Level 2 • the degree to which the modifications are linked with agricultural systems will advise the Level here. A simple description of the modifications limits the response to bottom of Level 2.
AO4	<ul style="list-style-type: none"> • see generic mark scheme

- 12 (a) Describe both the direct and indirect energy inputs into agro-ecosystems. [20]
- (b) Explain why some agricultural systems are more sustainable than others. [25]

(a)

Agro-ecosystems is a major sub-heading in this Option with energy flows explicitly mentioned within this heading.	
AO1+ AO2	<ul style="list-style-type: none"> • direct – solar radiation; a comment about seasonality of this input in areas outside the equatorial regions might indicate a Level 3 response • direct – some agro-ecosystems have much direct human input eg shifting cultivation, others do not eg commercial arable • indirect – fertilisers • indirect – machinery both on the farm and involved in transport to and from the farm, this latter point a likely Level 3 indicator
AO3	<ul style="list-style-type: none"> • without the mention of solar radiation Level 1 is the maximum • mention of only either direct/indirect limits the response to Level 1
AO4	<ul style="list-style-type: none"> • see generic mark scheme

(b)

Sustainability is a heading under Agro-ecosystems and allows points about energy flows and bio-diversity and the stability of agro-ecosystems to be discussed. The term 'efficiency' is banded about with little regard as how to define it; in the context of farming the balance between energy inputs and outputs is a valuable context of looking at sustainability.	
AO1+ AO2	<ul style="list-style-type: none"> • generally arable farming is more efficient than livestock; in UK on average for eg, 0.25% of energy input into potatoes ends up as food whereas for beef production it is 0.02%; comments about degree of machinery use/purchased feed for example are relevant • the losses of energy eg respiration of livestock, heating of glass houses • contrasts with non-commercial agro-ecosystems are interesting here eg shifting cultivation • comment about the need to practice livestock farming in certain areas due to physical restrictions on arable would be appropriate • the contrast amongst agro-ecosystems as regards bio-diversity
AO3	<ul style="list-style-type: none"> • the focus needs to be on sustainability, not just some vague 'eco-babble' • a list of 'problems' will not exceed bottom of level 2 • responses not picking up on the need to compare agricultural systems are limited to top of Level 1
AO4	<ul style="list-style-type: none"> • see generic mark scheme

Option 7: Manufacturing Industry: Location, Change and Environmental Impact

- 13 (a) Describe the environmental impact of contemporary industrialisation on LEDCs and NICs [20]
- (b) Explain how the internal organisation of transnational companies (TNCs) affects their locational pattern. [25]

(a)

This topic is explicitly mentioned in the Spec and the question sets it in a particular spatial context, LEDCs and NICs.	
AO1+ AO2	<ul style="list-style-type: none"> Level 3 should be reserved for those who offer particular details about specific locations rather than vague assertions about 'pollution' Level 3 in AO2 can be reserved for those distinguishing impacts on air, water and land; Level 2 for those managing two of these the degree of knowledge about example(s) will help inform the Level in AO1 comments about the trans-national impact of some forms of impact, eg air + water, might indicate a Level 3 response in AO2 positive impacts eg wealth creation from industry pays for environmental improvements eg clean drinking water/sewage disposal
AO3	<ul style="list-style-type: none"> the focus must be LEDCs and NICs for Levels 2 + 3
AO4	<ul style="list-style-type: none"> see generic mark scheme

(b)

As an industrial location factor the internal organisation of firms is now recognised as having a significant role. The increase in both the numbers and scale of the larger manufacturing enterprise has given much interesting exemplar material.	
AO1+ AO2	<ul style="list-style-type: none"> TNCs are multi-plant with different elements of their organisation in different locations TNCs serving global markets tend to decentralise organisation with control devolved to regional headquarters but with HQ still in overall control eg General Motors; BP TNCs tend to have three key elements in their organisation, HQ for overall decision making located in MEDCs/NICs core regions; R&D also in MEDCS/NICS core regions; branch plants for manufacturing more footloose, NICs + LEDCs; traditional manufacturing locations in MEDCs + NICs; peripheral locations in MEDCs; new industrial locations in MEDCs New Industrial Division of Labour is appropriate here
AO3	<ul style="list-style-type: none"> a general account of industrial location factors will not exceed Level 1 without bullet point 3 above, bottom of Level 2 is the maximum
AO4	<ul style="list-style-type: none"> see generic mark scheme

- 14 (a) Describe changes in the manufacturing industries in MEDCs since 1980. [20]
- (b) Explain how both internal and external economies of scale can influence the location of manufacturing industry. [25]

(a)

Change in manufacturing is in the title of this Option and here candidates are invited to consider change in the context of MEDCs.	
AO1+ AO2	<ul style="list-style-type: none"> • shift away from heavy manufacturing towards the lighter end of the spectrum, especially knowledge based, high technology • increasing dominance of TNCs in many industrial sectors; even industries not normally associated with TNC status are becoming so e.g, steel with Corus for example – this point a likely Level 3 indicator • growth of SMEs in regions not traditionally associated with industry eg East Anglia; Emilia-Romagna, Italy; Metro Denver, Colorado • increasing role of mechanisation especially robotic • increased role of FDI
AO3	<ul style="list-style-type: none"> • focus must be MEDCs for level 2 + 3
AO4	<ul style="list-style-type: none"> • see generic mark scheme

(b)

Economies of scale are explicitly mentioned under the heading of Industrial location factors in the Spec.	
AO1+ AO2	<ul style="list-style-type: none"> • internal – increase in capacity of production processes often increases land demands therefore space becomes an important locational factor eg modern integrated steelworks; modern car plants. Mostly factory buildings are now single storey so land demands higher than they used to be. • internal – achieving these often part of the rationalisation process, ie fewer but larger factories eg brewing + baking • external – role of linkage and agglomeration/localisation economies eg chemical plants on Tees-side or Merseyside • external – urbanisation benefits accruing from developed infrastructure including elements such as banking/education attracts industries to certain regions especially in LEDCs + NICs eg South-East Brazil; Shanghai
AO3	<ul style="list-style-type: none"> • there need not be an equal treatment of internal/external for Level 3 but mention of only one limits the response to bottom of Level 2
AO4	<ul style="list-style-type: none"> • see generic mark scheme

Service Activities: Location, Change and Environmental Impact

15 (a) Describe the main changes in the nature of retailing over the past 40 Years. [20]

(b) Explain why changes in retailing occurred over the past 40 years. [25]

(a)

Changing patterns of retail organisation is a major sub-heading within this Option. There are a number of themes a candidate might explore and they are free to set changes in rural and urban contexts. It is quite possible to generate a Level 3 response using a single detailed case study, eg a town or rural region, but equally a broad approach can also reach the top Level.	
AO1+ AO2	<ul style="list-style-type: none"> • overall decline in numbers • decline in numbers of low order independent retailers eg food • decline in medium order independent retailers eg furniture; electrical goods • growth of national and most recently trans-national chains • increasing scale of retailing eg supermarkets; superstores; hypermarkets; discount warehouses; factory outlets located in fringe areas • growth of diversified retail outlets eg the trend towards non-food items in supermarkets and the combination of petrol with food retailing • redevelopment of central areas eg Bull Ring/Broadmead • internet shopping • 24 hr retailing
AO3	<ul style="list-style-type: none"> • the focus must be on retailing for Level 2 + 3 • Level 3 for those who pick on numbers/types and location • Level 2 if no locational description
AO4	<ul style="list-style-type: none"> • see generic mark scheme

(b)

Explanations are likely to include generic factors but we must also be open to points that might be specific to a particular example.	
AO1+ AO2	<ul style="list-style-type: none"> • role of economies of scale both internal and external; the effective use of the latter eg the benefits of a retail park location might indicate a Level 3 response in AO2 • changes in consumer behaviour eg impact of increasing levels of car ownership; ability to purchase and store larger quantities of food; rising levels of disposable income for some groups • population migrations • improvements in road transport – a point that affects both retail companies and consumers • shopping as a 'leisure activity' (I don't understand this one!) • impact of IT on retailing eg shopping online
AO3	<ul style="list-style-type: none"> • if the response is based solely on either retailers or customers perspectives then bottom of Level 2 is the maximum
AO4	<ul style="list-style-type: none"> • see generic mark scheme

- 16 (a) Describe the behavioural approaches to understanding the location of service activities. [20]
- (b) Explain how central place theory offers both advantages and disadvantages to an understanding of the location of service activities. [25]

(a)

Behavioural approaches are exemplified in the Spec. as decision making and perception studies but anything that falls within the behavioural framework is valid.	
AO1+ AO2	<ul style="list-style-type: none"> • decision making has become a significant element in many aspects of human geography including services • key element is that decision making of the service providers is hardly ever optimal in the sense of optimising profits or minimising resources used • similarly customer behaviour hardly ever matches that undertaken by rational, economic man of neo-classical economic theory – satisficing behaviour; reference could be made to Pred's behavioural matrix – this might be a Level 3 indicator. References to cultural aspects of behaviour are also likely to indicate a Level 3 response. • studies based on probability patterns are relevant here eg Huff's model
AO3	<ul style="list-style-type: none"> • Classic central place theory does include assumptions about behaviour of both suppliers and customers but a response based solely on this will not go beyond bottom of Level 2
AO4	<ul style="list-style-type: none"> • see generic mark scheme

(b)

The context is clear and indeed wide ranging for candidates to draw from. Too often students seem have nothing but criticism of models without appreciating their value.	
AO1+ AO2	<ul style="list-style-type: none"> • advantage – models reality and so simplifies it in order to highlight the essential points • advantage – acts as a guide to ask appropriate questions about service patterns • disadvantage – involves excessive simplification – a range of issues here eg non-rational behaviour; physical influences; changing mobility levels • assumes a static context ie urban growth and decline omitted
AO3	<ul style="list-style-type: none"> • there need not be an equal treatment of advantages/disadvantages for Level 3 but mention of only one limits the response to bottom of Level 2
AO4	<ul style="list-style-type: none"> • see generic mark scheme

Tourism and Recreation and their Environmental Impacts

- 17 (a) Describe how changing social and economic conditions have influenced the development of tourism since the 18th century. [20]
- (b) Explain the role natural resources can play in attracting tourists to particular locations. [25]

(a)

In the section in the Spec. headed 'The development of tourism since the 18 th century' changing social and economic conditions are explicitly stated. The time period is extensive to allow candidates to chart tourism's rise from its beginnings as a significant industry.	
AO1+ AO2	<ul style="list-style-type: none"> • social -filtering down of tourism eg spas from aristocracy and upper class to middle class • social - post 1850 increasing leisure time eg statutory holidays allowing working class to enjoy more leisure time • social - tourism as fashion eg sea bathing and spas in 18th + 19th centuries; eco-tourism and LEDC enclaves in late 20th century • social – increased life expectancy • social – education leading to enhanced perception of potential destinations • social – environmental awareness – eco-tourism • economic - changing economic conditions allowing expectations to rise eg growth in disposable incomes • economic - falling real cost of travel at certain times including ownership of cars • economic – relatively wealthy retirees
AO3	<ul style="list-style-type: none"> • there need not be an equal treatment of social or economic for Level 3 but mention of only one limits the response to Level 1 • a generalised account of the development of tourism without explicit reference to social and economic conditions will not reach beyond Level 1
AO4	<ul style="list-style-type: none"> • see generic mark scheme

(b)

Tourism is a resource based industry and candidates ought to have plenty of material from which they can select appropriate material to generate effective responses here.	
AO1+ AO2	<ul style="list-style-type: none"> • natural resources eg climate; relief; coasts; ecosystems • the question is clear in its expectation of reference to particular locations and the level of detail will be assessed under AO1
AO3	<ul style="list-style-type: none"> • the degree to which the resource is linked with tourism developments will also help inform the Level here; a simple outline of the resources will not reach above bottom of Level 2 • a response could adopt either a broad approach or deal with one location in depth, either of which is capable of reaching level 3
AO4	<ul style="list-style-type: none"> • see generic mark scheme

- 18 (a) Describe the ways in which governments in LEDCs can promote the development of tourism in their respective countries. [20]
- (b) Explain how political changes and political crises can influence international patterns of tourism. [25]

(a)

The context is clear, LEDCs, as is the focus of attention, the role of governments. There is plenty of exemplar material available to candidates	
AO1+ AO2	<ul style="list-style-type: none"> • supra-national eg infrastructural aid for projects such as roads, airports, ports • national eg development authorities charged with increasing employment and through this economic wealth. Use of tourist agencies promoting the country in particular in MEDCs. Infrastructural developments eg tarred roads to enclaves. Policing of tourist areas to reduce crime eg Gambia's tourist police • local eg promotion of western style restaurants eg Gambia; beach zoning for tourists • one possible indicator of Level 3 in AO2 might be the mention of different scales of government
AO3	<ul style="list-style-type: none"> • the role of government must be clear for Level 3
AO4	<ul style="list-style-type: none"> • see generic mark scheme

(b)

Political changes and crises are explicitly mentioned in the Spec. and should be familiar to candidates. The question is deliberately kept wide so as to allow for a breadth of relevant material as regards changes and crises. The context is, however, clear, international tourism.	
AO1+ AO2	<ul style="list-style-type: none"> • positive - tax regimes • positive - environmental improvements eg water quality; beaches • positive - currency value • positive - government sponsored advertising • positive - eg regime change opening up the country eg Czech Republic • negative - tension within a country eg Nepal after assassination of some of their royal family; China after Tiananmen Square incident • negative - tension between countries eg Croatia and Serbia affecting Adriatic coast • negative - tension arising from international terrorism eg Bali
AO3	<ul style="list-style-type: none"> • the focus needs to be international tourism to reach Level 2 • a simple list of political events/crises unrelated to international tourism is a likely indicator of a Level 1 response
AO4	<ul style="list-style-type: none"> • see generic mark scheme

**Mark Scheme 2684
June 2007**

INSTRUCTIONS ON MARKING SCRIPTS

All page references relate to the Instructions to Examiner booklet (revised June 2006)

For many question papers there will also be subject or paper specific instructions which supplement these general instructions. The paper specific instructions follow these generic ones.

1 Before the Standardisation Meeting

Before the Standardisation Meeting you must mark a selection of at least 10 scripts. The selection should be drawn from several Centres. The preliminary marking should be carried out **in pencil** in strict accordance with the mark scheme. In order to help identify any marking issues which might subsequently be encountered in carrying out your duties, **the marked scripts must be brought to the meeting.** (*Section 5c, page 4*)

2 After the Standardisation Meeting

- a) Scripts must be marked in **red**, including those initially marked in pencil for the Standardisation Meeting.
- b) All scripts must be marked in accordance with the version of the mark scheme agreed at the Standardisation Meeting.
- c) **Annotation of scripts**

The purpose of annotation is to enable examiners to indicate clearly where a mark is earned or why it has not been awarded. Annotation can, therefore, help examiners, checkers, and those remarking scripts to understand how the script has been marked.

Annotation consists of:

- the use of ticks and crosses against responses to show where marks have been earned or not earned;
- the use of specific words or phrases as agreed at standardisation and as contained in the final mark scheme either to confirm why a mark has been earned or indicate why a mark has not been earned (eg indicate an omission);
- the use of standard abbreviations eg for follow through, special case etc

Scripts may be returned to Centres. Therefore, any comments should be kept to a minimum and should always be specifically related to the award of a mark or marks and be taken (if appropriate) from statements in the mark scheme. General comments on a candidate's work must be avoided.

Where annotations are put onto the candidates' script evidence, it should normally be recorded in the body of the answer or in the margin immediately adjacent to the point where the decision is made to award or not award the mark.

d) Recording of marking: the scripts

- i) Marked scripts must give a clear indication of how marks have been awarded, as instructed in the mark scheme.
- ii) All numerical marks for responses to part questions should be recorded unringed in the right-hand margin. The total for each question (or, in specified cases, for each page) should be shown as a single ringed mark in the right-hand margin at the end of each question.
- iii) The ringed totals should be transferred to the front page of the script, where they should be totalled.
- iv) Every page of a script on which the candidate has made a response should show evidence that the work has been seen.
- v) Every blank page should be crossed through to indicate that it has been seen. (*Section 8a – d, page 6*)

e) Handling of unexpected answers

The standardisation meeting will include a discussion of marking issues, including:

- a full consideration of the mark scheme in the context of achieving a clear and common understanding of the range of acceptable responses and the marks appropriate to them, and comparable marking standards for optional questions;
- the handling of unexpected, yet acceptable answers. (*Section 6a, bullet point 5, page 4*)

There will be times when you may not be clear how the mark scheme should be applied to a particular response. In these circumstances, a telephone call to the Team Leader should produce a speedy resolution to the problem. (*Appendix 5, para 17, page 25*)

Additional Guidance

- 1 All scripts are liable to outside scrutiny or a re-mark following a Result Enquiry. It is therefore essential that the marking and comments on the scripts are clear to an observer, sample marker or any re-marking after the grading. Please keep to the conventions outlined by the Principal Examiner and avoid individual idiosyncrasies. Mark in red biro or red ink. (Team leaders mark in red and re-mark in green). Useful abbreviations include:
K knowledge
U understanding
E evaluation
S synoptic

Fill in the boxes on the front page of the script.

- 2 Please add helpful comments where they help to explain your decision, but do not express your frustrations, views on the candidate's ability or the competence of their teacher! Under no circumstances should you put sarcastic or derogatory comments on the scripts. Where levels are used you should indicate the highest level achieved and where appropriate the achievement of lower levels.
- 3 Please do not cross out text.
- 4 Add comments where appropriate to indicate the dialogue you are having with the script. Research has identified ticks as a sign of rushed or casual marking so please do not use them.
- 5 Every section of an answer must show evidence of having been read. Do not think that you can 'skim' through irrelevant patches. They may be worthy of some credit. Sometimes candidates add a few lines on extra sheets or at the back of an answer book. If this additional piece gains no marks make sure that you indicate that it has been read. If you get to a marginal decision, at the end of a longer piece of writing, eg is it worth full marks (10) or (9) then take a positive stance and award 10.
- 6 Where the rubric has been infringed you need to mark all of the work and to select the best answer within the rubric. Cancel with a single line any marginal marks that you have to exclude. Make a note of the infringement on the front of the script.
- 7 If you suspect dishonest practice contact your team leader to discuss the issue and then follow the guidelines provided.
- 8 Your checker must follow the instructions on the reverse of the Checker's claim form.

Thank you for following all of these procedures accurately.

GENERIC ASSESSMENT CRITERIA**1 Knowledge of content (0-8 marks)**

Level 4	Candidates have detailed knowledge of appropriate themes, processes and specific environments and places. They have detailed knowledge of relevant concepts, principles and theories, and of a wide range of geographical terms. They have detailed knowledge of the connections between different aspects of geography represented in the specification.	7-8 marks
Level 3	Candidates have clear knowledge of appropriate themes, processes and specific environments and places. They have clear knowledge of relevant concepts, principles and theories, and of a range of geographical terms. They have clear knowledge of the connections between different aspects of geography represented in the specification. There must be evidence of synoptic connections with other parts of the specification to achieve more than level 2.	5-6 marks
Level 2	Candidates have sound knowledge of some appropriate themes, processes and specific environments and places. They have sound knowledge of some relevant concepts, principles and theories, and of some geographical terms. They have sound knowledge of some connections between different aspects of geography represented in the specification.	3-4 marks
Level 1	Candidates have basic knowledge of some appropriate themes, processes and environments and places. They have basic knowledge of some relevant concepts, principles, theories, and geographical terms. They have basic knowledge of some connections between different aspects of geography represented in the specification.	0-2 marks

2 Critical understanding of content (0-22 marks)

Level 4	Candidates have detailed critical understanding of the content of the specification and have detailed critical understanding of the connections between the different aspects of geography represented in the specification.	18-22 marks
Level 3	Candidates have clear critical understanding of the content of the specification and have clear critical understanding of the connections between the different aspects of geography represented in the specification. There must be evidence of synoptic connections with other parts of the specification to achieve more than level 2.	12-17 marks
Level 2	Candidates have sound critical understanding of some of the content of the specification and have sound critical understanding of some of the connections between the different aspects of geography represented in the specification.	6-11 marks
Level 1	Candidates have basic critical understanding of some the content of the specification and have basic critical understanding of some connections between the different aspects of geography represented in the specification.	0-5 marks

3 Application of knowledge and critical understanding in unfamiliar contexts (0-22 marks)*

Level 4	Candidates apply their knowledge and critical understanding of the specification content and connections to different aspects of geography represented in the specification, relevantly and where appropriate at a range of scales. They evaluate arguments, ideas, concepts and theories in detail.	18-22 marks
Level 3	Candidates apply most of their knowledge and critical understanding of the specification content and connections to different aspects of 12-17 geography represented in the specification, relevantly and where marks appropriate at a range of scales. They evaluate arguments, ideas, concepts and theories clearly. There must be evidence of synoptic connections with other parts of the specification to achieve more than level 2.	12-17 marks
Level 2	Candidates apply some of their knowledge and critical understanding of the specification content and connections to different aspects of 6- geography represented in the specification, relevantly. They attempt a marks basic evaluation.	6-11 marks
Level 1	Candidates explain contexts using basic ideas and concepts.	0-5 marks

* **Maximum 11 marks for application and 11 marks for evaluation**

4 Communication (0-8 marks)

Level 4	Candidates use an appropriate range of communication skills fluently and in different formats; present information within a logical and coherent structure; where appropriate, synthesise information from a variety of sources; use spelling, punctuation and grammar with a high level of accuracy; and employ geographical terminology with confidence.	7-8 marks
Level 3	Candidates use an appropriate range of communication skills clearly in different formats; present information within an effective structure; use spelling, punctuation and grammar with accuracy; and use a range of geographical terms.	5-6 marks
Level 2	Candidates use a limited range of methods to communicate knowledge and understanding; make some effort to structure their work; and use spelling, punctuation and grammar with some accuracy; and have a basic knowledge of geographical terminology.	3-4 marks
Level 1	Candidates use a limited range of methods to communicate knowledge and understanding; make only a basic attempt to structure their work; use spelling, punctuation and grammar with variable accuracy, and have only sparse knowledge of geographical terminology.	0-2 marks

Option 1: Geographical Aspects of the European Union

1 To what extent have the intentions of the EU's regional policy been met? [60]

AO1 Knowledge of content (0-8 marks)**Level 4 7-8 marks**

Candidates will have detailed knowledge of the regional policy and a range of intentions (political, economic and social) of the policy and appropriate issues and/or blockages being faced. The latter may include regional imbalances, regions lagging behind, regions facing structural difficulties, increased membership, nationalism etc These should be well exemplified.

Level 3 5-6 marks

Candidates will have clear knowledge of the regional policy and of a range of intentions (political, economic and social) of the policy and appropriate issues being faced. These should be exemplified. .

Level 2 3-4 marks

Candidates will have sound knowledge of some of the intentions (political and economic) of the regional policy and a limited range of challenges being faced. These will be limited in exemplification.

Level 1 0-2 marks

Candidates will have limited or vague knowledge of some of the intentions of the regional policy and a limited or vague knowledge of appropriate challenges being faced.

AO2 Critical understanding of content (0-22 marks)**Level 4 18-22 marks**

Candidates will demonstrate detailed understanding of the inter-relationship of intentions of and challenges faced by the regional policy. A clear cause-effect between the nature of the intentions/challenges and the resulting types of policy (eg Structural funds such as ERDF, ESF, EAGGF etc and Cohesion Fund or Objective 1 & 2 funding) can be expected. This may be underpinned by an effective use of concepts or theories (such as the core-periphery model) to explain causes of differences in regional development in the EU.

Level 3 12-17 marks

Candidates will demonstrate a clear understanding of the inter-relationship of intentions of and challenges faced by the regional policy. A cause-effect between the nature of the intentions/challenges and the resulting types of policy can be expected.

Level 2 6-11 marks

Candidates will demonstrate a sound understanding of the inter-relationship of intentions of and challenges faced by the regional policy. A limited, if any, appreciation of the cause-effect between the nature of the intentions/challenges and the resulting types of policy can be expected.

Level 1 0-5 marks

Candidates will demonstrate a limited or vague understanding of the links between the intentions, challenges and the resulting types of regional policy.

**AO3 Application of knowledge and critical understanding in unfamiliar contexts
(0-22 marks)****Level 4 18-22 marks**

Candidates apply their detailed knowledge and critical understanding of the inter-relationship of the EU's intentions and the challenges faced to discuss/evaluate the relative success of the EU's regional policy. Candidates at this level will argue that success varies with location (core v periphery, north v south etc) scale (local, regional, national) or with time/development (eg poorest have made the most rapid progress). At this level candidates should appreciate the conflicts that arise in the regional policies as intentions (and/or challenges) may conflict.

Level 3 12-17 marks

Candidates apply their knowledge and critical understanding of the interrelationship of the EU's intentions and the challenges faced to discuss the relative success of the EU's regional policy. Candidates at this level will argue that success varies with location or with time/development. At this level candidates may appreciate the conflicts that arise in the regional policies as intentions (and/or challenges) may conflict.

Level 2 6-11 marks

Candidates apply some of their knowledge and critical understanding of the inter-relationship of the EU's intentions and the challenges faced to discuss the relative success of the EU's regional policy.

Level 1 0-5 marks

Candidates apply limited or vague knowledge and critical understanding of the inter-relationship of the EU's intentions and the challenges faced to offer a limited discussion. Candidates at this level will offer little, if any, evaluation of the relative success of the EU's regional policy.

Maximum 11 marks for application and 11 marks for evaluation

AO4 Communication (0-8 marks)

Use generic assessment criteria.

- 2 'The EU has responded effectively to the problem of pollution in transnational drainage basins.' Consider the validity of this statement. [60]

The thrust of this question is clearly water pollution but it is perfectly acceptable if candidates examine other forms of pollution but it should relate to transnational drainage basins.

AO1 Knowledge of content (0-8 marks)

Level 4 7-8 marks

Candidates will have detailed knowledge of water pollution problems in one or more transnational drainage basins such as the Rhine or Danube. A single pollution case study could be appropriate eg the Sandoz pollution of the Rhine in 1986. Also detailed knowledge of the range of responses (immediate and longer term, direct and indirect, environmental v political v economic etc) by the EU is expected.

Level 3 5-6 marks

Candidates will have clear knowledge of water pollution problems in one or more transnational drainage basins. A single pollution case study could be appropriate. Also a clear knowledge of the range of responses by the EU is expected.

Level 2 3-4 marks

Candidates will have sound knowledge of water pollution problems in one or more transnational drainage basins. Limited exemplification is expected as is some limited knowledge of the range of responses by the EU.

Level 1 0-2 marks

Candidates will have limited or vague knowledge of water pollution problems in one or more transnational drainage basins and limited, if any, knowledge of the range of responses by the EU.

AO2 Critical understanding of content (0-22 marks)

Level 4 18-22 marks

Candidates will demonstrate detailed understanding of the cause-effect of water pollution and the impact of water resources being transnational (its origin and mobility, ownership, conflicting uses, riparian states etc) on the ability of the EU to control water pollution. A detailed understanding of the effectiveness of the types of response can be expected.

Level 3 12-17 marks

Candidates will demonstrate a clear understanding of the cause-effect of water pollution and the impact of water resources being transnational on the ability of the EU to control water pollution. An understanding of the effectiveness of the types of response can be expected.

Level 2 6-11 marks

Candidates will demonstrate a sound understanding of the cause-effect of water pollution and the impact of water resources being transnational on the ability of the EU to control water pollution.

Level 1 0-5 marks

Candidates will demonstrate a limited or vague understanding of the cause-effect of water pollution and the impact of water resources being transnational on the ability of the EU to control water pollution.

**AO3 Application of knowledge and critical understanding in unfamiliar contexts
(0-22 marks)****Level 4 18-22 marks**

Candidates apply their detailed knowledge and critical understanding of the causes of water pollution and the range of remedial strategies to evaluate the validity of the statement. They may also effectively show how EU responses may be helping or hindering the solution of these problems. At this level a clear focus on the drainage basin as a whole is expected and candidates may recognise that the accuracy of the statement will vary with scale, location eg rural v urban areas, and with the scale/type of pollution incident eg oil v hot water.

Level 3 12-17 marks

Candidates apply their knowledge and critical understanding of the causes of water pollution and the range of remedial strategies to evaluate the validity of the statement. They may also show how EU responses may be helping or hindering the solution of these problems. Candidates may recognise that the accuracy of the statement will vary with location and with the scale/type of pollution incident.

Level 2 6-11 marks

Candidates apply some of their knowledge and critical understanding of the causes of water pollution and the range of remedial strategies to evaluate the validity of the statement. Candidates may recognise that the accuracy of the statement may vary with the scale/type of pollution incident.

Level 1 0-5 marks

Candidates apply limited or vague knowledge and critical understanding of the causes of water pollution and the range of remedial strategies to offer a limited or vague evaluation of the statement.

Maximum 11 marks for application and 11 marks for evaluation

AO4 Communication (0-8 marks)

Use generic assessment criteria.

- 3 For **either** a former mining area **or** a declining manufacturing region in the EU evaluate the effectiveness of the strategies used to regenerate the area. **[60]**

The stress is on a single area case study – if more than one area is discussed it is self penalising. The terms 'area' and 'region' are open to wide interpretation.

AO1 Knowledge of content (0-8 marks)

Level 4 7-8 marks

Candidates will have detailed knowledge of one area of regeneration such as South Yorkshire (former mining area) or Ruhr (former mining or declining manufacturing area) together with a range of the strategies (such as those under the European Regional Development Fund and European Social Fund Objective 1 programme, FDI, national v trans-national strategies), and their relative success, used to regenerate the area.

Level 3 5-6 marks

Candidates will have a clear knowledge of one former mining area or a declining manufacturing area together with a range of the strategies, and their relative success, used to regenerate the area.

Level 2 3-4 marks

Candidates will have a sound knowledge of one former mining area or a declining manufacturing area together with at least two of the strategies used to regenerate the area.

Level 1 0-2 marks

Candidates will have limited or vague knowledge of one former mining area or a declining manufacturing area together with vague knowledge of the strategies used to regenerate the area.

AO2 Critical understanding of content (0-22 marks)

Level 4 18-22 marks

Candidates will demonstrate detailed understanding of how and why these strategies (such as the EU's Objective 1 programme, national strategies, local strategies) act to regenerate an area, possibly supported with models or concepts eg multiplier, and why such efforts are needed. A clear cause-effect will be demonstrated between strategy and impact. A clear understanding of what regeneration means is expected.

Level 3 12-17 marks

Candidates will demonstrate a clear understanding of how and why these strategies act to regenerate an area and why such efforts are needed. Cause-effect will be demonstrated between strategy and impact. An understanding of what regeneration means is expected.

Level 2 6-11 marks

Candidates will demonstrate a sound understanding of how and why these strategies act to regenerate an area and why such efforts are needed. Some limited cause-effect will be demonstrated between strategy and impact.

Level 1 0-5 marks

Candidates will demonstrate a limited or vague understanding of how and why these strategies act to regenerate an area. Some vague, if any, cause-effect will be demonstrated between strategy and impact.

**AO3 Application of knowledge and critical understanding in unfamiliar contexts
(0-22 marks)****Level 4 18-22 marks**

Candidates apply their detailed knowledge and understanding of the strategies' impacts to evaluate whether the impact (negative or positive) on regenerating the area is effective. Some appreciation that this will vary with scale, location (within an area/region or the geographical such as remoteness), and how this may vary with individual communities/aspects (eg young void) can be expected at this level. There will be a clear evaluation of the comparative effectiveness of the strategies.

Level 3 12-17 marks

Candidates apply their knowledge and understanding of the strategies' impacts to evaluate whether the impact (negative or positive) on regenerating the area is effective. An appreciation that this may vary with individual communities/aspects can be expected at this level. There will be a clear evaluation of the comparative effectiveness of the strategies.

Level 2 6-11 marks

Candidates apply some of their knowledge and understanding of the strategies' impacts to evaluate whether the impact (negative or positive) on regenerating the area is effective. There will be a limited evaluation of the comparative effectiveness of the strategies.

Level 1 0-5 marks

Candidates apply limited or vague knowledge and understanding of the strategies' impacts to produce a limited evaluation of the impact on regenerating the area.

Maximum 11 marks for application and 11 marks for evaluation

AO4 Communication (0-8 marks)

Use generic assessment criteria.

Option 2: Managing Urban Environments

- 4 'The rapid growth of large cities in LEDCs creates more problems than benefits.' How far do you agree with this statement? [60]

This may refer to either the process of urbanisation or the end product – large cities.

AO1 Knowledge of content (0-8 marks)**Level 4 7-8 marks**

Candidates will have detailed knowledge of examples of the urbanisation process and the resulting (physical, economic, social and political) problems (eg pollution, congestion, unemployment, higher prices) and benefits – (eg creates jobs, economies of scale, increased demand, increased social mobility, democratisation) based on one or more large cities in the LEDC. Knowledge of appropriate models and concepts such as core-periphery model, multiplier etc may be expected.

Level 3 5-6 marks

Candidates will have clear knowledge of examples of the urbanisation process and the resulting problems – (environmental and human) and benefits – (largely human) based on one or more large cities in the LEDC. Knowledge of appropriate models and concepts such as core-periphery model, multiplier etc might be expected.

Level 2 3-4 marks

Candidates will have sound knowledge of examples of the urbanisation process and the resulting problems – (environmental) and benefits – (human) based on one or more large cities in the LEDC.

Level 1 0-2 marks

Candidates will have only limited or vague knowledge of the urbanisation process and resulting impacts. Knowledge of appropriate examples may be vague or missing.

AO2 Critical understanding of content (0-22 marks)**Level 4 18-22 marks**

Candidates will demonstrate detailed understanding of the causal links between the rapidity of urban growth (and its size) and the resulting impacts positive and negative – on the physical (sprawl, water supplies, pollution, micro-climate etc) and human (employment, housing, transport, services, health etc) environments for both the cities and the non-city areas.

Level 3 12-17 marks

Candidates will demonstrate a clear understanding of the causal links between the rapidity of urban growth (and its size) and the resulting impacts on the physical and human environments for cities.

Level 2 6-11 marks

Candidates will demonstrate a sound understanding of the causal links between the rapidity of urban growth (and its size) and at least two of the resulting impacts on the physical and human environments for the cities or city.

Level 1 0-5 marks

Candidates will demonstrate limited or little understanding of the causal links between urban growth and its impacts.

**AO3 Application of knowledge and critical understanding in unfamiliar contexts
(0-22 marks)****Level 4 18-22 marks**

Candidates apply their detailed knowledge and critical understanding of why large cities have rapid growth and in turn why/how this impacts on a variety of physical and human aspects, of both the city and the surrounding rural area, to evaluate the statement. At this level a cost-benefit analysis would be appropriate but also an appreciation that the impact will vary with scale, location eg rural v urban, over time (there is a cycle effect) and will vary between groups eg rich v poor.

Level 3 12-17 marks

Candidates apply their knowledge and critical understanding of why large cities have rapid growth and in turn why/how this impacts on a variety of physical and human aspects of the city.

Level 2 6-11 marks

Candidates apply some of their knowledge and critical understanding of why rapid growth impacts on physical and human aspects of the city, to offer a limited evaluation of the statement.

Level 1 0-5 marks

Candidates apply limited or vague knowledge and understanding of why rapid growth impacts on cities to offer a vague, if any, evaluation of the statement.

Maximum 11 marks for application and 11 marks for evaluation

AO4 Communication (0-8 marks)

Use generic assessment criteria.

- 5 Discuss the implications of the changing demand for housing in MEDCs. [60]

Candidates may approach this question from a housing stock view point or from a spatial view point such as inner/outer urban areas. Implications may include social, economic, political and spatial aspects.

AO1 Knowledge of content (0-8 marks)

Level 4 7-8 marks

Candidates will have detailed knowledge of various types of housing stock (eg bed-sits, flats, large detached, council) and a detailed knowledge of the changing volume and type of demand (eg second homes, single person households, wardened accommodation) together with a range of implications. Detailed examples are expected from one or more urban area demonstrating knowledge of the relative balance of demand and supply.

Level 3 5-6 marks

Candidates will have clear knowledge of various types of housing stock and a clear knowledge of the changing volume and type of demand together with a variety of implications. Clear exemplification is expected from one or more urban areas demonstrating knowledge of the relative balance of demand and supply.

Level 2 3-4 marks

Candidates will have a sound knowledge of various types of housing stock and the demand for housing. Exemplification is expected from one or more urban areas demonstrating knowledge of the relative balance of demand and supply. Some limited implications are known.

Level 1 0-2 marks

Candidates will have limited or vague knowledge of various types of housing stock and the demand for housing. Exemplification will be limited or missing.

AO2 Critical understanding of content (0-22 marks)

Level 4 18-22 marks

Candidates will demonstrate a detailed understanding of the cause-effect relationship between the changing economic, social and political demands/situations (eg more home ownership, rising prices, more divorce, selling off of council housing, increased mobility) that have led to a mismatch of demand and supply. An understanding of models or concepts such as the life cycle model, housing stock may be expected.

Level 3 12-17 marks

Candidates will demonstrate a clear understanding of the cause-effect relationship between the changing economic and social demands/situations that have led to a mismatch of demand and supply. An understanding of models or concepts such as the life cycle model, housing stock might be expected.

Level 2 6-11 marks

Candidates will demonstrate a sound understanding of the cause-effect relationship between the changing demands/situations and supply of housing that have led to a mismatch of demand and supply.

Level 1 0-5 marks

Candidates will demonstrate a limited or vague understanding of the cause-effect relationship between the demand for and supply of housing.

AO3 Application of knowledge and critical understanding in unfamiliar contexts (0-22 marks)**Level 4 18-22 marks**

Candidates apply their detailed knowledge and critical understanding of the causes of mismatches in the changing demand and supply of housing to discuss the implications such as whether demand does exceed supply in terms of volume or type (eg size, price, with garages/gardens etc). Some appreciation that the implications may vary over location eg inner v outer urban, scale, time or even between groups eg wealthy v single parent or planners v property developers, and in a range of social, economic and environmental aspects.

Level 3 12-17 marks

Candidates apply their knowledge and critical understanding of the causes of the mismatches in the demand and supply of housing to evaluate the possible types of implications. An appreciation that there is a range of implications and that these may vary over location eg inner v outer urban, between groups eg wealthy v single parent is expected.

Level 2 6-11 marks

Candidates apply some of their knowledge and critical understanding of the causes of the mismatches in the demand and supply of housing to offer a limited evaluation of the resulting implications for urban and rural fringe areas.

Level 1 0-5 marks

Candidates apply only limited or vague knowledge and critical understanding of the causes of the mismatches in the demand and supply of housing to offer a limited or vague evaluation of a limited and superficial range of implications.

Maximum 11 marks for application and 11 marks for evaluation

AO4 Communication (0-8 marks)

Use generic assessment criteria.

- 6 'Traffic congestion is the greatest threat to the urban environment in the 21st Century.'
Consider the validity of this statement with reference to **either** LEDCs **or** MEDCs. [60]

AO1 Knowledge of content (0-8 marks)

Level 4 7-8 marks

Candidates will demonstrate a detailed and well exemplified knowledge of the problems posed by traffic congestion (eg pollution, accidents, land use, parking) in urban areas together with an appreciation of the other physical (eg pollution), economic (eg land prices) and social (eg violence) 'threats' to the urban environment. At this level candidates may know the direct and indirect threats as well as a range of other threats to the urban environment (such as rapid population gain in LEDCs or rapid population loss in MEDCs).

Level 3 5-6 marks

Candidates will demonstrate a clear and soundly exemplified knowledge of the problems posed by traffic congestion in urban areas together with an appreciation of the other 'threats' to the urban environment.

Level 2 3-4 marks

Candidates will demonstrate a sound and exemplified knowledge of the problems posed by traffic congestion in urban areas together with some appreciation of the other 'threats' to the urban environment.

Level 1 0-2 marks

Candidates will have limited or vague knowledge of the process of problems posed by traffic congestion in urban areas.

AO2 Critical understanding of content (0-22 marks)

Level 4 18-22 marks

Candidates will demonstrate detailed understanding of how and why traffic congestion threatens the urban system/environment (a systems approach could be used to show impact on flows/transfers). A clear grasp of cause-effect relationships is expected as is an understanding of the relative threats posed by other factors such as population growth, industrialisation, urban growth etc

Level 3 12-17 marks

Candidates will demonstrate clear understanding of how and why traffic congestion threatens the urban system/environment. A grasp of cause-effect relationships is expected and an appreciation of the relative threats posed by other factors.

Level 2 6-11 marks

Candidates will demonstrate a sound understanding of how and why traffic congestion threatens the urban system/environment (probably via pollution) and a superficial appreciation of the relative threats posed by other factors.

Level 1 0-5 marks

Candidates will demonstrate limited or vague understanding of how and why traffic congestion threatens the urban system/environment.

**AO3 Application of knowledge and critical understanding in unfamiliar contexts
(0-22 marks)****Level 4 18-22 marks**

Candidates apply their detailed knowledge and critical understanding of the threats posed by traffic congestion to evaluate whether they are the 'greatest' compared to other threats in the 21st century. At this level some appreciation of scale eg large cities v market towns, location and variations over time (has it always been a threat?) can be expected. A clear evaluation of the viewpoint is expected.

Level 3 12-17 marks

Candidates apply their knowledge and critical understanding of the threats posed by traffic congestion to evaluate whether they are the 'greatest' compared to other factors in the 21st century. At this level some appreciation of differences between locations and variations over time can be expected. An evaluation of the viewpoint is expected.

Level 2 6-11 marks

Candidates apply some of their knowledge and critical understanding of the threats posed by traffic congestion to evaluate whether they are the 'greatest' compared to other factors in the 21st century.

Level 1 0-5 marks

Candidates apply limited or vague knowledge and critical understanding of the threats posed by traffic congestion and offer little, if any, evaluation.

Maximum 11 marks for application and 11 marks for evaluation

AO4 Communication (0-8 marks)

Use generic assessment criteria.

Option 3: Managing Rural Environments

- 7 'Modern intensive farming has a greater impact than traditional farming on rural landscapes.' How far do you agree with this view? [60]

AO1 Knowledge of content (0-8 marks)**Level 4 7-8 marks**

Candidates will have detailed knowledge of the nature of modern intensive farming (monoculture, use of agri-chemicals, large hedgeless fields, high mechanisation) and traditional farming (polyculture + arable, rotations, smaller units/fields) as well as their impacts (positive and negative) on a range of rural landscapes. Detailed exemplification is expected.

Level 3 5-6 marks

Candidates will have clear knowledge of the nature of modern intensive farming and traditional farming as well as their impacts on a range of rural landscapes. Sound exemplification is expected.

Level 2 3-4 marks

Candidates will have sound knowledge of the nature of modern intensive farming and traditional farming as well as at least two of their impacts on rural landscapes. Brief exemplification is expected.

Level 1 0-2 marks

Candidates will have limited or vague knowledge of the nature of modern intensive farming and traditional farming as well as any of their impacts on rural landscapes. Exemplification will be limited or missing.

AO2 Critical understanding of content (0-22 marks)**Level 4 18-22 marks**

Candidates will demonstrate detailed understanding of how the characteristics of these two types of farming impact on rural landscapes eg intensive leads to loss of habitats, drainage, removal of hedges/trees, soil erosion, visual, pollution and how landscapes, the physical and human, (eg loss of village communities) are changed by these contrasting farming practices. (Probably intensive is seen as having negative impacts whilst traditional is positive as it has small hedged fields, natural inputs, rotations)

Level 3 12-17 marks

Candidates will demonstrate clear understanding of how the characteristics of these two types of farming impact on rural landscapes and how landscapes (the physical and human) are changed by these contrasting farming practices.

Level 2 6-11 marks

Candidates will demonstrate sound understanding of how the characteristics of these two types of farming impact on rural landscapes and how landscapes may be changed by these contrasting farming practices.

Level 1 0-5 marks

Candidates will demonstrate limited or vague understanding of how the characteristics of these two types of farming impact on rural landscapes.

**AO3 Application of knowledge and critical understanding in unfamiliar contexts
(0-22 marks)****Level 4 18-22 marks**

Candidates apply their detailed knowledge and critical understanding of the impacts on the rural landscapes of the two types of farming to evaluate whether the more modern agri-businesses have a bigger impact (whether positive or negative or both) and why this might be so (referring to technology, scale, demand, economics etc). An appreciation of the way this may vary with scale, location eg upland v lowland landscapes, and over time or how they may impact on different aspects or groups (eg farmers v retired) in the rural landscape can be expected.

Level 3 12-17 marks

Candidates apply their knowledge and critical understanding of the impacts on the rural landscapes of the two types of farming to evaluate whether the more modern agri-businesses have a bigger impact and why this might be so. Some appreciation of the way this may vary with location or how they may impact on different aspects or groups in the rural landscape can be expected.

Level 2 6-11 marks

Candidates apply some of their knowledge and critical understanding of the impacts on the rural landscapes of the two types of farming to offer a limited evaluation of whether the more modern agri-businesses have a bigger impact.

Level 1 0-5 marks

Candidates have limited or vague application of knowledge and critical understanding of the possible impacts on rural landscapes and so offer little, if any, evaluation.

Maximum 11 marks for application and 11 marks for evaluation

AO4 Communication (0-8 marks)

Use generic assessment criteria.

- 8 'The growth of second home ownership is a major threat to rural communities.' Consider the validity of this statement. [60]

AO1 Knowledge of content (0-8 marks)

Level 4 7-8 marks

Candidates will have detailed knowledge of well exemplified rural areas/communities suffering or benefiting from the growth in second home ownership. At this level a contrasting pair of detailed examples or case studies might be appropriate. They should show knowledge of other major physical (eg afforestation), economic (eg decline in agriculture) and social (eg loss of young population) threats supported with appropriate examples.

Level 3 5-6 marks

Candidates will have clear knowledge of soundly exemplified rural areas/communities suffering or benefiting from the growth in second home ownership. They should show knowledge of other major physical, economic and social threats supported with appropriate examples.

level 2 3-4 marks

Candidates will have sound knowledge of exemplified rural areas/communities suffering growth in second home ownership. They should show knowledge of at least one other major threat to rural communities.

Level 1 0-2 marks

Candidates will have limited or vague knowledge of a few examples (possibly a single case study) of rural areas undergoing growth of second home ownership.

AO2 Critical understanding of content (0-22 marks)

Level 4 18-22 marks

Candidates will demonstrate detailed understanding of the cause-effect of why the growth in second homes may cause problems to rural communities such as higher house prices, loss of services (as demand falls etc), changing population structure, weekend villages OR may bring benefits such as increased facilities, greater range of social activities. The role of a range of the underlying physical, economic, social and political factors will be understood as will the possible impact of other threats.

Level 3 12-17 marks

Candidates will demonstrate clear understanding of the cause-effect of why the growth in second homes may cause problems or bring benefits to rural communities. The role of a range of underlying economic and social factors will be understood as will the impact of other threats.

level 2 6-11 marks

Candidates will demonstrate sound understanding of the cause-effect of why the growth in second homes may cause problems to rural communities.

Level 1 0-5 marks

Candidates will demonstrate limited or vague understanding of why the growth in second homes may cause problems to rural communities.

**AO3 Application of knowledge and critical understanding in unfamiliar contexts
(0-22 marks)****Level 4 18-22 marks**

Candidates apply their detailed knowledge and critical understanding of the threats and benefits brought to rural communities by the growth in second home ownership to evaluate the accuracy of the statement. At this level some appreciation of how this may differ with scale eg individual village v region, location eg Yorkshire dales v highlands of Scotland can be expected together with the nature of the population or groups involved eg rural poor v wealthy retired. At this level some clear attempt to evaluate the relative threat (compared to other 'threats') is needed. Indeed some candidates may see second homes as saving some declining communities or being the lesser of a number of threats.

Level 3 12-17 marks

Candidates apply their knowledge and critical understanding of the threats and benefits brought to rural communities by the growth in second home ownership to evaluate the accuracy of the statement. At this level some appreciation of how this may differ with location and the nature of the population or groups involved can be expected. At this level an attempt to evaluate the relative threat is needed.

Level 2 6-11 marks

Candidates apply some of their knowledge and critical understanding of the threats caused to rural communities by the growth in second home ownership to offer a limited evaluation of the accuracy of the statement.

Level 1 0-5 marks

Candidates are limited and vague in the application of their knowledge and critical understanding of the threats caused to rural communities by the growth in second home ownership to offer very limited, if any, evaluation.

Maximum 11 marks for application and 11 marks for evaluation

AO4 Communication (0-8 marks)

Use generic assessment criteria.

- 9 'The designation of areas as National Parks causes more problems than it solves.' Discuss this viewpoint. [60]

AO1 Knowledge of content (0-8 marks)

Level 4 7-8 marks

Candidates will have detailed knowledge of the reasons for and the process of the creation of National Parks (such as Dartmoor in the UK or the different processes in setting up National Parks in other countries such as Yellowstone in the USA) and a variety of the resulting physical, eg trampling over moorland, economic eg conflicts of tourism and farming, and social eg housing shortage for locals, problems and benefits (such as habitat conservation, job creation, more careful planning, less pollution). At this level a contrasting pair of detailed examples might be appropriate.

Level 3 5-6 marks

Candidates will have clear knowledge of the reasons for and the process of the creation of National Parks and a variety of the resulting physical and human problems and benefits. At this level a contrasting pair of examples might be appropriate.

Level 2 3-4 marks

Candidates will have sound knowledge of the process of creation of National Parks and at least two of the resulting physical and human problems and benefits. Exemplification may be limited.

Level 1 0-2 marks

Candidates will have limited or vague knowledge of the process of creation of National Parks and the resulting physical and human problems and benefits.

AO2 Critical understanding of content (0-22 marks)

Level 4 18-22 marks

Candidates will demonstrate detailed understanding of the cause-effect relationship between the nature of National Parks and the resulting impacts on an area eg influx of visitors. Candidates should show an understanding of why/how some of these impacts may be (or lead to) problems or help solve existing problems. An understanding of the environmental, economic and/or political pressures that underlie this debate should be demonstrated.

Level 3 12-17 marks

Candidates will demonstrate clear understanding of the cause-effect relationship between the nature of National Parks and the resulting impacts on an area. Candidates should show an understanding of why/how these impacts may be problems or help solve existing problems.

Level 2 6-11 marks

Candidates will demonstrate sound understanding of the cause-effect relationship between the nature of National Parks and the resulting impacts on an area. Candidates should show some understanding of why/how at least two of these impacts may be problems or help to solve existing problems.

Level 1 0-5 marks

Candidates will demonstrate limited or vague understanding of the impacts of National Parks.

**AO3 Application of knowledge and critical understanding in unfamiliar contexts
(0-22 marks)****Level 4 18-22 marks**

Candidates apply their detailed knowledge and critical understanding of the impact of the creation of National Parks to evaluate the viewpoint that the resulting problems outweigh the solutions. At this level some appreciation of scale, location eg New Forest v Brecon Beacons in Wales and variations over time can be expected together with the evaluation varying with the nature of the area eg soil fertility, relief etc, its local population size/type eg area near to large population clusters, or the nature of the original problems that the park was set up to solve.

Level 3 12-17 marks

Candidates apply their knowledge and critical understanding of the impact of the creation of National Parks to evaluate the viewpoint that the resulting problems outweigh the solutions. At this level an appreciation of the role of location together with it varying with the local population size/type can be expected.

Level 2 6-11 marks

Candidates apply some of their knowledge and critical understanding of the impact of the creation of National Parks to offer a limited evaluation of the viewpoint that the resulting problems outweigh the solutions.

Level 1 0-5 marks

Candidates apply only limited or vague knowledge and critical understanding of the impact of the creation of National Parks to offer very limited, if any, evaluation of the viewpoint.

Maximum 11 marks for application and 11 marks for evaluation

AO4 Communication (0-8 marks)

Use generic assessment criteria.

Option 4: Hazardous Environments

- 10 To what extent does the response to the perceived level of danger vary in hazardous environments? [60]

AO1 Knowledge of content (0-8 marks)**Level 4 7-8 marks**

Candidates will have detailed and well exemplified knowledge of the types of response resulting from living in hazardous areas (such as warning systems, building modification, escape routes, stoicism) and the reasons why people have differing levels of perception of the danger: possible gains from the area (such as minerals, power, tourism), nature and frequency of the hazard/danger, problems living elsewhere, variations in knowledge and perception, level of mitigation etc Also knowledge of short term v long term hazards can be expected at this level.

Level 3 5-6 marks

Candidates will have clear and exemplified knowledge of the range of possible responses to the dangers resulting from living in a hazardous area and the reasons why people vary in their perceptions of the risks.

Level 2 3-4 marks

Candidates will have a sound knowledge of the range of possible responses to the dangers resulting from living in a hazardous area and at least two of the reasons why people vary in their perceptions of the risks. Exemplification may be limited in detail.

Level 1 0-2 marks

Candidates will have limited or vague knowledge of the responses, hazards and why people vary in their perceptions of the risks.

AO2 Critical understanding of content (0-22 marks)**Level 4 18-22 marks**

Candidates will demonstrate a detailed understanding of the cause-effect of the nature of the dangers, peoples' perception of them and the resulting response. There will be a detailed understanding of what is meant by 'hazardous environments', how this varies between types of hazards, whether the 'danger' is physical or economic or in terms of short and long term hazards.

Level 3 12-17 marks

Candidates will demonstrate a clear understanding of the cause-effect of peoples' perception of the level of danger and the resulting variety of responses in such areas. There will be an understanding of what is meant by 'hazardous environments'.

Level 2 6-11 marks

Candidates will demonstrate a sound understanding of the cause-effect of peoples' perception of the level of danger and the resulting variety of responses in such areas. There will be a limited understanding of what is meant by 'hazardous environments'.

Level 1 0-5 marks

Candidates will demonstrate a limited or vague understanding of the cause-effect of peoples' perception of the level of danger and the resulting responses in such areas. There will be little understanding of what is meant by 'hazardous environments'.

**AO3 Application of knowledge and critical understanding in unfamiliar contexts
(0-22 marks)****Level 4 18-22 marks**

Candidates apply their detailed knowledge and critical understanding to evaluate if and why peoples' responses vary both within the same hazardous environment and between different ones eg earthquake prone v hurricane areas. Some appreciation that this may vary with scale, location eg LEDC v MEDC, different groups eg wealthy v poor, and vary over time (more mitigation now so perceived as less risky) or the scale and frequency of the hazards can be expected. A clear evaluation of 'extent' is expected.

Level 3 12-17 marks

Candidates apply their clear knowledge and critical understanding to evaluate if and why peoples' responses vary both within the same hazardous environment and between different ones. Some appreciation that this may vary with location eg LEDC v MEDC, vary over time (more mitigation now so perceived as less risky) or the scale and frequency of the hazards can be expected. Some evaluation of 'extent' is expected.

Level 2 6-11 marks

Candidates apply their knowledge and critical understanding to why peoples' responses vary both within the same hazardous environment and between different ones. Some appreciation that this may vary with location eg LEDC v MEDC can be expected. Limited evaluation of 'extent' is expected.

Level 1 0-5 marks

Candidates apply only limited or vague knowledge and critical understanding and offer little or vague evaluation responses vary in such hazardous environments.

Maximum 11 marks for application and 11 marks for evaluation

AO4 Communication (0-8 marks)

Use generic assessment criteria.

11 Evaluate the success of strategies used to reduce the impact of tectonic hazards.

[60]

AO1 Knowledge of content (0-8 marks)

Level 4 7-8 marks

Candidates will have detailed and well exemplified knowledge of the main types of tectonic hazards together with a detailed range of ways that humans seek to reduce or minimise their impact. This could include: warning systems, planning, prevention, mitigation of the impacts. There will also be detailed knowledge of types of strategy, both direct eg using water to slow lava flows and indirect eg banning building in certain areas, and short v long term impact reduction.

Level 3 5-6 marks

Candidates will have clear and exemplified knowledge of the main types of tectonic hazards together with a range of ways that humans seek to reduce or minimise their impact. This could include: warning systems, planning, prevention, mitigation of the impacts. There will also be some knowledge of types of strategy.

Level 2 3-4 marks

Candidates will have sound knowledge of the main types of tectonic hazards together with some of the ways that humans seek to reduce or minimise their impact. There will be limited knowledge of types of strategy. Exemplification may be limited or vague.

Level 1 0-2 marks

Candidates will have limited or vague knowledge of the main types of tectonic hazards together with ways that humans seek to reduce or minimise their impact. There will be little attempt at exemplification.

AO2 Critical understanding of content (0-22 marks)

Level 4 18-22 marks

Candidates will demonstrate detailed understanding of the inter-relationship of management strategies and the causes of a variety of types of tectonic hazards with their resultant impacts. There will also be an understanding of how and why humans try to reduce the impact of such hazards or minimise their risk. Cause and effect will be well understood.

Level 3 12-17 marks

Candidates will demonstrate a clear understanding of the inter-relationship of management strategies and the causes of a variety of types of tectonic hazards with their resultant impacts. There will be also an understanding of how and why humans try to reduce the impact of such hazards or minimise their risk. Cause and effect will be understood.

Level 2 6-11 marks

Candidates will demonstrate a sound understanding of the inter-relationship of management strategies and types of tectonic hazards with their resultant impacts. There will be also some understanding of how and why humans try to reduce the impact of such hazards.

Level 1 0-5 marks

Candidates will demonstrate limited or vague understanding of management strategies and types of tectonic hazards. There will also be little understanding of how and why humans try to reduce the impact of such hazards.

**AO3 Application of knowledge and critical understanding in unfamiliar contexts
(0-22 marks)****Level 4 18-22 marks**

Candidates apply their detailed knowledge and critical understanding to evaluate the extent to which management strategies can, or can not, reduce the impact(s) of tectonic hazards (earthquakes and volcanoes). A clear evaluation of the reasons why it is difficult to control impact is expected. Ideas could include: little warning, sheer scale, so common, cost, knowledge, human attitude (cost/benefit idea). Some appreciation that this will vary with scale, location eg LEDC v MEDC and vary over time/development can be expected.

Level 3 12-17 marks

Candidates apply their knowledge and critical understanding to evaluate the extent to which management strategies can, or can not, reduce the impact(s) of tectonic hazards (earthquakes and volcanoes). An evaluation of the reasons why it is difficult to control impact is expected as is an appreciation that this will vary with location or level of development.

Level 2 6-11 marks

Candidates apply some of their knowledge and critical understanding to evaluate the extent to which management strategies can, or can not, reduce the impact(s) of tectonic hazards. A limited evaluation of the reasons why it is difficult to control impact is expected.

Level 1 0-5 marks

Candidates offer only limited or vague discussions of the extent to which management strategies can, or can not, reduce the impact(s) of tectonic hazards. There will be no attempt at evaluation.

Maximum 11 marks for application and 11 marks for evaluation

AO4 Communication (0-8 marks)

Use generic assessment criteria.

- 12 'The impact of hurricanes and tropical storms reflects an area's level of development more than the severity of the hazard's event.' Discuss this viewpoint. [60]

This could be well approached by the use of 2 contrasting examples drawn from an LEDC and MEDC.

AO1 Knowledge of content (0-8 marks)

Level 4 7-8 marks

Candidates will have detailed and well exemplified knowledge of the main types of primary and secondary hurricane or storm impacts such as wind speeds, heavy rainfall, storm surges, landslides, flooding, disease, dam failures etc They will also demonstrate a knowledge of areas of varying levels of development (economic, technological, social and/or political) with detailed exemplification of the way hurricanes and tropical storms impact on them.

Level 3 5-6 marks

Candidates will have clear and exemplified knowledge of the main types of primary and secondary hurricane or storm impacts. They will also demonstrate a knowledge of areas of varying levels of development with exemplification of the way hurricanes and tropical storms impact on them.

Level 2 3-4 marks

Candidates will have sound knowledge of the main types of primary and secondary hurricane or storm impacts. They will also demonstrate basic knowledge of areas of varying levels of development. This will be supported by brief exemplification.

Level 1 0-2 marks

Candidates will have limited or vague knowledge of impacts and areas of varying levels of development. Candidates will show very limited knowledge, if any, of appropriate examples.

AO2 Critical understanding of content (0-22 marks)

Level 4 18-22 marks

Candidates will demonstrate detailed understanding of the inter-relationship of the primary and secondary impacts of hurricanes on areas at differing levels of development and how these can vary with the nature and characteristics of the hurricane/storm. Cause and effect will be well understood.

Level 3 12-17 marks

Candidates will demonstrate clear understanding of the inter-relationship of the primary and secondary impacts of hurricanes on areas at differing levels of development and how these vary with the nature and characteristics of the hurricane/storm. Cause and effect will be understood.

Level 2 6-11 marks

Candidates will demonstrate sound understanding of some of the links between the impacts of hurricanes on areas at differing levels of development and some appreciation of how these may vary with the nature and characteristics of the hurricane/storm.

Level 1 0-5 marks

Candidates will demonstrate limited or vague understanding of the link between the impacts of hurricanes and the level of development.

**AO3 Application of knowledge and critical understanding in unfamiliar contexts
(0-22 marks)****Level 4 18-22 marks**

Candidates apply their detailed knowledge and critical understanding to evaluate and assess the extent to which primary and secondary impacts, or combinations of them, vary with the level of development or with the severity of the hurricane. Some appreciation that this is not a simple either/or but it may vary with scale, location eg upland area v lowland coast, time, preparation etc can be expected.

Level 3 12-17 marks

Candidates apply their knowledge and critical understanding to evaluate and assess the extent to which primary and secondary impacts, or combinations of them, vary with the level of development or with the severity of the hurricane. An appreciation that this is not a simple either/or but it may vary with location eg upland area v lowland coast, or level of preparation etc can be expected.

Level 2 6-11 marks

Candidates apply some of their knowledge and critical understanding to assess the extent to which the impacts of hurricanes/storms vary with the level of development or with the severity of the hurricane.

Level 1 0-5 marks

Candidates apply limited or vague knowledge and critical understanding to assess, in a limited way the extent to which the impacts of hurricanes/storms vary with the level of development.

Maximum 11 marks for application and 11 marks for evaluation

AO4 Communication (0-8 marks)

Use generic assessment criteria.

**Mark Scheme 2686
June 2007**

INSTRUCTIONS ON MARKING SCRIPTS

All page references relate to the Instructions to Examiner booklet (revised June 2006)

For many question papers, there will also be subject or paper specific instructions, which supplement these general instructions. The paper specific instructions follow these generic ones.

1 Before the Standardisation Meeting

Before the Standardisation Meeting you must mark a selection of at least 10 scripts. The selection should be drawn from several Centres. The preliminary marking should be carried out **in pencil** in strict accordance with the mark scheme. In order to help identify any marking issues which might subsequently be encountered in carrying out your duties, **the marked scripts must be brought to the meeting.** (*Section 5c, page 6*)

2 After the Standardisation Meeting

- a) Scripts must be marked in red, including those initially marked in pencil for the Standardisation Meeting.
- b) All scripts must be marked in accordance with the version of the mark scheme agreed at the Standardisation Meeting.
- e) **Annotation of scripts**

The purpose of annotation is to enable examiners to indicate clearly, where a mark is earned or why it has not been awarded. Annotation can, therefore, help examiners, checkers, and those remarking scripts to understand how the script has been marked.

Annotation consists of:

- the use of ticks and crosses against responses to show where marks have been earned or not earned;
- the use of specific words or phrases as agreed at standardisation and as contained in the final mark scheme either to confirm why a mark has been earned or indicate why a mark has not been earned (eg indicate an omission);
- the use of standard abbreviations eg for follow through, special case etc

Scripts may be returned to Centres. Therefore, any comments should be kept to a minimum and should always be specifically related to the award of a mark or marks and be taken (if appropriate) from statements in the mark scheme. General comments on a candidate's work must be avoided.

Where annotations are put onto the candidates' script evidence, it should normally be recorded in the body of the answer or in the margin immediately adjacent to the point where the decision is made to award or not award the mark.

d) Recording of marking: the scripts

- i) Marked scripts must give a clear indication of how marks have been awarded, as instructed in the mark scheme.
- ii) All numerical marks for responses to part questions should be recorded unringed in the right-hand margin. The total for each question (or, in specified cases, for each page) should be shown as a single ringed mark in the right-hand margin at the end of each question.
- iii) The ringed totals should be transferred to the front page of the script, where they should be totalled.
- iv) Every page of a script on which the candidate has made a response should show evidence that the work has been seen.
- v) Every blank page should be crossed through to indicate that it has been seen. (*Section 8a – d, page 8*)

e) Handling of unexpected answers

The Standardisation Meeting will include a discussion of marking issues, including:

- a full consideration of the mark scheme in the context of achieving a clear and common understanding of the range of acceptable responses and the marks appropriate to them, and comparable marking standards for optional questions;
- the handling of unexpected, yet acceptable answers. (*Section 6a, bullet point 5, page 6*)

There will be times when you may not be clear how the mark scheme should be applied to a particular response. In these circumstances, a telephone call to the Team Leader should produce a speedy resolution to the problem. (*Appendix 5, para 17, page 26*)

Specification Grid Unit 2686 : Investigative skills

AO1 show knowledge of the specified content

AO2 show critical understanding of the specified content

AO3 apply knowledge and critical understanding of unfamiliar contexts

AO4 select and use a variety of skills and techniques, including communication skills appropriate to geographical studies

Question 1	AO1	AO2	AO3	AO4	TOTAL
a	2	0	3	0	5
b	2	3	3	7	15
c	0	3	2	5	10
d	2	0	3	10	15
total	6	6	11	22	45
Question 2					
a	2	0	3	0	5
b	0	3	2	5	10
c	2	0	2	6	10
d	2	3	4	11	20
total	6	6	11	22	45
Question 3					
a	2	0	3	0	5
b	0	3	2	5	10
c	2	3	3	7	15
d	2	0	3	10	15
total	6	6	11	22	45

OVERALL ASSESSMENT CRITERIA

LEVEL	MAX 20 MARKS	MAX 15 MARKS	MAX 10 MARKS	MAX 5 MARKS
3	16-20	12-15	8-10	
2	9-15	7-11	5-7	4-5
1	0-8	0-6	0-4	0-3

LEVEL 3

Candidates show:

- Good knowledge of sources of information and have a clear sense of place and location, where relevant.
- Their knowledge is applied appropriately to familiar and unfamiliar geographical contexts. Candidates display skill in interpreting a range of sources of spatial and/or temporal geographical information where appropriate.
- They identify appropriate geographical questions in a range of contexts and formulate effective approaches to enquiry.
- Candidates demonstrate application of a range of skills and techniques to present and analyse the data.
- Where relevant, the candidate shows a wide knowledge of primary and secondary data sources.
- Conclusions are reasoned, with the outcomes and methods being evaluated.
- The limitations of the investigation are recognised.
- The work follows a logical and coherent structure with geographical terms used confidently.
- Spelling, grammar and punctuation are accurate.

LEVEL 2

Candidates demonstrate:

- A sound knowledge of appropriate techniques and understanding of the nature of geographical investigation.
- There is a sense of location and place.
- Geographical questions are formulated with reasonable effectiveness with some application of techniques to familiar and unfamiliar geographical contexts.
- Some skill is shown in the interpretation of spatial and/or temporal geographical information.
- Knowledge is applied to reach some valid conclusions and candidates are able to comment upon the effectiveness of their methodology and the validity of the outcome.
- Written answers are structured and spelling, punctuation and grammar are used with reasonable accuracy.
- A range of geographical terms are used.

LEVEL 1

Candidates show:

- A basic knowledge of the nature of geographical enquiry and of the techniques specified.
- Explanation and understanding of skills required in geographical investigation are limited.
- Candidates can identify basic relevant geographical questions when presented with familiar contexts and can suggest and adopt approaches to enquiry.
- Basic techniques are used with a limited range of methods to present and analyse evidence.
- Candidates are able to reach simple conclusions and identify strengths and weaknesses of their enquiries.
- Written work is poorly structured often with inaccurate spelling, punctuation and grammar.
- Basic and sometimes inaccurate use of geographical terms.

1 Study the O.S. Map extract 1:50000 which shows an area in which an 'A' level Geography Investigation is to be undertaken

- a) Outline and justify an appropriate Geographical Investigation within the area shown (5)**

Indicative content:

- There are a range of potential enquiries based upon
- River studies
- Settlement issues
- Woodland ecology
- Transport studies etc

Q = question
 J = justification
 Ref = map data and references
 I = irrelevant
 DAQ = does not answer the question

Level marking

L2 [4-5]

A clear and appropriate question or hypothesis based upon the map that could be carried out in an appropriate time scale. It must be justified

G.R.'s on map/named places

Some mention of underlying theory but this will be a top level 2 indicator.

L1 [0-3]

A less clear or less appropriate question based upon the map extract lacking justification or a realistic time frame.

- b) With reference to the map extract, describe and explain the sampling methodology that you would use to gather the necessary data (15)**

Indicative content:

- Clear statement of an appropriate range of techniques including specific sampling techniques.
- Candidates should establish a clear link between the technique and the question/hypothesis. More able candidates will give specific details related to sites and distances on the map.
- When stratified sampling is identified then the sub-sets should be clearly demarcated.
- Sampling intervals should be determined and explained
- I expect that the number of methods employed would mirror the range of data collected.

D = describe
 E = explain
 Ref = reference to the map

Level Mark:**L3 [12-15]**

A **detailed** understanding and grasp of the necessary techniques. Types of sampling. Both description and explanation with specific reference to the map

L2 [7-11]

Answer dominated by either **clear** description or explanation. Less reference to the map and an unconvincing grasp of sampling methodology

L1[0-6]

an unbalanced **basic** answer with little understanding nor reference to the map. All description and little /no explanation.

- c) **Describe and justify other preparations necessary before starting your data collection.** (10)

Indicative content**Possible answers may include**

- Background reading
- Risk assessment/weather impacts
- Access issues
- Time scale
- Pilot investigation might be appropriate
- Techniques employed
- Specificity would be expected
- Transport provisions

P1 = preparations

D = describe

J = justify

Preparations on site prior to data collection Max L2

This is really about what the candidates should do prior to undertaking the investigation. I would allow two variations on a similar theme to reach level three

Level marking**L3 [8-10]**

A **detailed** wide ranging answer having two or more of the listed ideas well explained

L2 [5-7]

Will have two or more **clear** ideas but it will lack detail and reference to the task about to be undertaken.

L1[0-4]

A poorly constructed **basic** answer lacking focus .

d) How would you ensure that the data collected is accurate and reliable? (15)

Indicative content:

- Assessment of data quality
- Sampling strategy and target population
- Training in use of equipment
- Job sharing within the group
- Accurate recording of material
- Use of secondary data as a checking technique
- Correct timing to allow equipment to re-set

A = accuracy

R = reliable

SR or MWU L1 max

Level marking

L3 [12-15]

A wide ranging **detailed** answer having three or more of the listed ideas well explained and with reference to the map OR two ideas fully explored.

L2[7-11]

will have two or three **clear** ideas but it will lack detail and reference to the task about to be undertaken.

L1[0-6]

a poorly constructed **basic** answer lacking focus and detail.

2 Study Fig 1 which shows results of fieldwork on gravestone weathering.

a) Outline the limitations of the data as shown in Fig 1 (5)

Indicative content

L1 ...limitations

- Size of sample
- Rock type and correct identification in the field.
- Age of gravestone/clarity/has it been replaced?
- Subjectivity of weathering index
- Missing or dubious data
- Biased sample with only three granite

Level marking

L2[4-5]

A **clear** understanding of the two elements involved and how they are linked to the data.

L1[0-3]

A **basic** understanding of at least one of the elements but the links are less well established to the data presented.

b) Study Figs 2 and 3, which show two graphical representations of the weathering data. Assess the relative merits of the two graphical methods in representing the data (10)

Indicative content:

- Clarity
- Effectiveness in showing trends and patterns
- Recovery of information
- Ease of construction
- Range of data

G1 /G2 = methods M = merits

This has to be a comparison and so description of each in turn is LEVEL 2 max

Level marking:**L3[8-10]**

A **detailed** indication and explanation of at least two of the above statements

L2[5-7]

A **clear** understanding of at least one of the above with some detail shown

L1[0-4]

Thin on content, detail and understanding. A **basic** answer

- c) **Describe and justify the measures of central tendency that could be used to analyse this data in Fig 1** (15)

D = describe D1 / D2 / D3
J = justify

Indicative content

Mean, modal group, median (IQR 9-10), range could be established.
But, as the groups by rock are uneven in size, the results must be treated with caution.

Level Marking**L3 [12-15]**

shows a **detailed** understanding of the available methods with a discursive content about those that are more applicable. **Must have at least two.**

Comparison between the rock types mean values + standard deviation 9-10**L2 [7-11]**

a **clear** understanding of at least one of the elements but the links are less well established.
Central tendency in general **L2 max**

L1 [0-6]

a **basic** understanding of the terminology and few links established.

- d) The graph in Fig 4 plots the relationship between age of gravestones and the severity of weathering.

Describe and justify the use of regression analysis to help in the conclusion of this geographical investigation. (15)

Indicative content:

- Allows the development of a predictive model
- Provides a summary of the relationship between the two factors
- Allows geographer to make comparisons between areas
- Links to any field work exercises that the candidates have undertaken.
- A discursive content showing why this tool can be useful.

D = describe J = justify

Level mark:

L2 max for a purely mathematical proof

L3 [12-15]

A mathematical analysis using approved equations leading to an accurate drawing of the regression line. A clear indication and explanation of at least two of the above statements. Links to field work exemplars such as the gravestones may be applicable. Good discursive content.

L2 [7-11]

an understanding of at least one of the above with some detail and understanding shown. Some discursive content will move candidate towards top of level. Line drawn by calculating the mean value of both the horizontal and vertical values and marking the point of intersection. The best fit line then passes through the mean point. Similar numbers above and below the line. Care over axes with the dependent and independent variables!

L1 [0-6]

thin on content, detail and understanding. A line of best fit drawn solely by eye. A basic understanding shown.

3 Study Fig. 5 which shows pedestrian flows into a Central Business District in two British towns.

a) Suggest and justify a suitable hypothesis for this data

(5)

Indicative content:

J = justify V = valid question

- A valid hypothesis or question which seems a logical development of the data provided
- Hypothesis may mention links to slope position, rates of change and physical location, types of woodland, rainfall levels

Level mark:

L2 [4-5]

a clear and appropriate question or hypothesis which must be justified. An extension of the data provided such as services and shops

L1 [0-3]

a less clear or less appropriate question, perhaps without justification.
Straight lift of data distance decay function from the data table given.

(b) Secondary data is usually needed in addition to primary data collected in the field. Describe and justify the secondary data you would need to help explain the pedestrian flows?

(10)

Indicative content:

D = describe J = justify

- A clear statement of some of the likely secondary sources to be of use
- These may include
- Population totals
- Land use maps /Goad maps and Kelly Directories
- Traffic flows
- Previous studies

Level marking:

L3 [8-10]

a **detailed** series of statements mentioning most of the data sources above. Two/three well described, clearly presented, **justified** and effective.

L2 [5-7]

a **clear** answer showing some understanding but lacking in detail. One or two well described points with some justification.

L1 [0-4]

a very **basic** answer lacking specificity and justification.

- (c) Describe and justify an appropriate statistical test to examine the difference between the two data sets in Fig 5 (15)

Indicative content:

- The better candidates may show that a range of tests will be part of the analysis.
- The use of the correct statistical test. This should be a test of difference and not correlation. Mann Whitney 'U' or a similar test such as Chi-Squared should be both explained and justified
- A brief outline of the methodology involved.

D1 = draw up table for test
 D2 = calculation undertaken but no negative marking if formula wrong. Credit for correct formula.
 D3 = critical values and use of significance tables
 J = justification

Level marking:

L3 [12-15]

all three aspects of the testing programme may be included with detail. Good MWU will be L3. Dealing with tied values is a good indicator

L2 [7-11]

two of the above with some detail and understanding shown

L1 [0-6]

a lack of understanding and detail. SRCC is inappropriate DAQ =0

- (d) The two towns chosen for the investigation are about 150 kilometres apart. Assess the validity and reliability of any comparison between the two data sets (15)

Indicative Content:

- Some suggestions but there may be many other relevant ideas
- Too many variables between the areas
- Climate on day
- Time of study
- Season of study
- Specific urban characteristics
- Market day/school run
- Urban morphological differences
- Time scale involved
- Who collected the data?
- Compatibility of data

V = validity
 Rel = reliability
 C1 / C2 etc
 comparisons

Level Mark**L3[12-15]**

A **detailed** indication and explanation of at least three of the above statements. Links to field work exemplars would be expected at the top of level. Good discursive content leading to valid conclusions about the numbers of variables and the issues of compatibility. Good discussion of role of distance

L2[7-11]

a **clear** understanding of at least two of the above with some detail and understanding shown **OR** one point done very well. Some discursive content will move candidate towards top of level.

L1[0-6]

thin on content, detail and understanding. There will be sweeping statements and candidates may not appreciate that problems will exist.

**Advanced GCE (Subject) (3832, 7832)
June 2007 Assessment Series**

Unit Threshold Marks

<i>Unit</i>		Maximum Mark	a	b	c	d	e	u
2680	Raw	100	68	61	54	47	40	0
	UMS	120	96	84	72	60	48	0
2681	Raw	75	51	46	41	36	32	0
	UMS	90	72	63	54	45	36	0
2682 01	Raw	60	39	36	33	30	28	0
2682 02	Raw	15	12	10	8	7	6	0
2682 Opt A	Raw	60	60	39	41	37	34	0
	UMS	90	72	63	54	45	36	0
2683	Raw	90	68	60	52	45	38	0
	UMS	90	72	63	54	45	36	0
2684	Raw	120	84	76	68	61	54	0
	UMS	120	96	84	72	60	48	0
2685	Raw	90	76	68	60	52	44	0
	UMS	90	72	63	54	45	36	0

Specification Aggregation Results

Overall threshold marks in UMS (i.e. after conversion of raw marks to uniform marks)

	Maximum Mark	A	B	C	D	E	U
3832	300	240	210	180	150	120	0
7832	600	480	420	360	300	240	0

The cumulative percentage of candidates awarded each grade was as follows:

	A	B	C	D	E	U	Total Number of Candidates
3832	25.6	46.6	65.6	80.5	90.8	100.0	4,681
7832	29.9	60.6	82.5	95.1	99.3	100.0	4,140

8,821 candidates aggregated this series

For a description of how UMS marks are calculated see;
http://www.ocr.org.uk/exam_system/understand_ums.html
 Statistics are correct at the time of publication

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