OCR
RECOGNISING ACHIEVEMENT

GCE

Geography A

Advanced GCE **A2 7832**

Advanced Subsidiary GCE **AS 3832**

Mark Schemes for the Units

January 2008

3832/7832/MS/R/08J

Oxford Cambridge and RSA Examinations

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Additional Guidance

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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.

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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.**

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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

Hydrological Systems

1 (a) Study Fig. 1, which shows the flows and stores in a drainage basin hydrological cycle.

(i) Name the stores labelled A and B and the flows labelled C and D.

Store A	Interception/Vegetation/Canopy
Store B	Groundwater/Aquifer/Permeable rock
Flow C	Throughflow/Interflow
Flow D	Percolation

[4]

(ii) State and explain <u>two</u> ways in which physical factors could affect flows below the surface in the hydrological cycle shown. [6]

Indicative content: physical factors could include geology (structure and lithology), weather and climate, soils, relief and vegetation cover. Any two of these factors should be related to subsurface flows, such as infiltration, percolation, throughflow and baseflow.

Level 2 (5-6 marks): candidates state and explain in detail how two physical factors alter subsurface flows. Effective use of geographical terminology will characterise the top of this level.

Level 1 (0-4 marks): candidates state and explain how two physical factors alter subsurface flows, with limited development or clearly state and explain how one physical factor affects subsurface flows. One physical factor explained in detail is worth top of Level 1. Where physical factors are stated but lack development, one mark can be given for each correct statement.

(b) Study Fig. 2, which shows the storm hydrograph for a river in a rural area.

(i) How long is the lag time of the hydrograph?

5 hours = 2 marks; 4, 4.5, 5.5 or 6 hours = 1 mark **[2]**

(ii) Describe the shape of this storm hydrograph. [4]

Indicative content: identification of relative steepness of rising and falling limbs; reference to flashiness of peak.

Level 2 (3-4 marks): a summative comment will discriminate from Level 1. For the top of this level, evidence from the graph should be present.

Level 1 (0-2 marks): one feature identified with supporting evidence or correct terminology, or two basic features identified without supporting evidence or terminology.

(iii) Describe and explain the possible effects of afforestation on the storm hydrograph of the river shown. [10]

Indicative content: short-term and long-term effects might be considered, but both are not required. Short-term effects might include increased discharge and shorter lag times related to increased surface run-off due to trees planted in rows with drainage provided: long term effects might include reduced discharge and longer lag-times, because of increased interception, which slows the flow of water and increased outputs from evapotranspiration.

Level 3 (8-10 marks): candidates describe at least two possible effects of afforestation on the storm hydrograph shown, and explain in detail the reasons for these effects. Reference to the hydrograph is to be required at this level. Effective use of geographical terminology will characterise the top of this level.

Level 2 (5-7 marks): candidates either identify at least two possible effects of afforestation on the storm hydrograph and provide clear explanations of these effects, or identify only one effect and explain it in detail. Some use of geographical terminology will characterise the top of this level.

Level 1 (0-4 marks): candidates describe effects without explanation. Geographical terminology will generally be used inaccurately.

Max level 1 for answers based on deforestation

[Total 26 marks]

Ecosystems

2 (a) Study Fig. 3, which shows the components of a nutrient cycle in an ecosystem.

(i) Name <u>two</u> flows of nutrients within the system and <u>two</u> outputs of nutrients from the system.

Flows: Leaf fall or fallout, uptake, decay, any equivalent name for one of the flows
Outputs: Leaching, surface run-off, any equivalent name for one of the outputs **[4]**

(ii) What is meant by the term ' biomass'?

The total dry weight (1 mark) of all living matter (1 mark) **[2]**

(iii) Explain why biomass is the largest store in a deciduous woodland ecosystem. [4]

Indicative content: favourable rainfall and temperatures promote high levels of photosynthesis (especially in summer), fixing energy in plant matter; trees are large species, with much biomass stored in trunks and branches. Comparisons between biomass and soil/litter are valid.

Level 2 (3-4 marks): candidates either identify one relevant factor and explain it in detail, or identify two different factors, with less detailed explanation. The top of this level is likely to show accurate use of geographical terminology. May explain energy fixation or relative sizes of stores.

Level 1 (0-2 marks): candidates identify one factor with basic explanation. May refer either to energy fixation or relative sizes of stores.

(b) Describe and explain <u>one</u> way in which human activity can modify the flow of nutrients in an ecosystem. [4]

Indicative content: relevant human activities could include tree felling, coppicing, conservation areas, trampling, burning, reference to animals. Candidates might focus on one specific flow or might follow a trail through the nutrient cycle.

Level 2 (3-4 marks): candidates describe and explain in detail one way in which human activity affects nutrients flows. The top of this level is likely to show accurate use of geographical terminology.

Level 1 (0-2 marks): candidates identify a relevant human activity and indicate an effect on nutrient flows, but provide no explanation.

(c) For a named example of a sand dune ecosystem, describe and explain the changes in vegetation that occur with distance from the sea. [10]

Indicative content: a named sand dune ecosystem should be expected. Descriptions might include a number of species, % vegetation cover and identification of particular species in different locations. Explanations might include changing environmental conditions (wind, soil pH, water availability), competition and human intervention.

Level 3 (8-10 marks): candidates will describe clearly changes in vegetation across a named sand dune ecosystem. Explanations will cover at least two reasons explained in detail. Effective use of geographical terminology will characterise the top of this level.

Level 2 (5-7 marks): candidates will describe clearly changes in vegetation across a named sand dune ecosystem. Explanations will cover either two reasons, partially developed, or one reason explained in detail. One reason developed in detail can reach the top of this level. Some use of geographical terminology will characterise the top of this level. Max 6 if no named example.

Level 1 (0-4 marks): candidates will describe changes in vegetation across a sand dune ecosystem, but will provide no explanation for those changes. A named sand dune ecosystem may not be included. Geographical terminology will generally be used inaccurately.

Max 6 if focus is on temporal rather than spatial changes.

[Total 24 marks]

Atmospheric Systems

3 (a) Study Fig. 4, which shows the variation in typical midnight temperatures across a city near the Equator.

(i) Describe the variation in temperature shown. [4]

Indicative content: identification of increase towards the centre/decrease towards the suburbs with supporting quantitative evidence. Credit relevance reference to land uses/location.

Level 2 (3-4 marks): a summative comment may discriminate from Level 1. Description will be clear with supporting evidence from Fig. 4. Reference to land use is likely to characterise top of this level.

Level 1 (0-2 marks): basic description without supporting evidence.

(ii) State and explain <u>two</u> possible reasons for the variation in temperature shown. [6]

Indicative content: possible reasons include differences in land use, relating to amount of heat absorbed and released, anthropogenic heat sources, the cooling effect of the water body, sensible heat transfer in more open areas.

Level 2 (5-6 marks): candidates identify and explain two reasons in detail. Effective use of geographical terminology will characterise the top of the level.

Level 1 (0-4 marks): candidates identify and explain two reasons with an element of development, or identify one reason and develop it in detail. One reason explained in detail is worth top of Level 1. At the lower end of this level the identification of correct reasons is worth one mark per reason.

(b) Study Fig. 5, which shows the air masses affecting the British Isles.

(i) What is meant by the term 'air mass'? [2]

A large body of air (1 mark) of uniform characteristics or with characteristic(s) of its source/path (1 mark). Candidates cannot be credited for using the term mass in their definition, and need to convey the idea of scale clearly.

(ii) Identify the two air masses labelled 2 and 5.

Air Mass 2 Polar maritime (Pm/mP) or Arctic (A)
Air Mass 5 Tropical continental (Tc/cT) **[2]**

(iii) State and explain <u>two</u> differences in the characteristics of these two air masses in summer. [6]

Indicative content: differences are most likely to focus on humidity and temperature, although stability is also acceptable. Reasons for the differences are likely to relate to the characteristics of the source areas and the paths taken.

Level 2 (5-6 marks): candidates state and explain two differences in detail. Effective use of geographical terminology will characterise the top of the level.

Level 1 (0-4 marks): candidates state and explain two reasons with limited development, or identify one reason and develop it in detail. One difference explained in detail is worth top of Level 1. At the lower end of this level the identification of correct differences is worth one mark per difference.
Max level 1 if not focussed on summer.

(iv) Explain why frost is frequently experienced when Air Mass 3 affects the British Isles in winter. [4]

Indicative content: temperatures below freezing, leading to air or surface dropping below dew point, leading to the change of state of water vapour in saturated air/at the surface. Reference to both ground and air frost is acceptable, but not required.

Level 2 (3-4 marks): candidates explain in detail the occurrence of frost: this level is likely to be characterised by recognition of the role of water vapour/dew point in the process and/or explicit linkages to Air Mass 3 conditions.

Level 1 (0-2 marks): candidates provide a basic explanation of frost: at this level recognition of the change of state of water vapour is lacking and/or description of Air Mass 3 conditions.

[Total 24 marks]

Lithosphere

4 (a) Study Fig. 6, which shows the distribution of earthquakes at different depths around the Pacific Rim.

(i) Name <u>two</u> areas where shallow focus earthquakes dominate.

1 mark for each correctly identified area, such as mid-Pacific, western coast of N. America, East Pacific (rise), San Andreas (fault), Hawaii. **[2]**

(ii) Explain how tectonic processes are responsible for earthquake activity found at location X. [6]

Indicative content: explanations could include reference to subduction occurring at a destructive margin, direction of plate movement, the processes responsible for this (convection currents/slab pull/ridge push), pressure build up/plates sticking through friction, energy release as plates slip past each other.

Level 2 (5-6 marks): candidates effectively explain the processes along the subduction zone. Reference may be made to varying depth of foci. Effective use of geographical terminology will characterise the top of the level.

Level 1 (0-4 marks): candidates concentrate on plate movement and/or provide a basic explanation of processes along the subduction zone.

(b) Study Fig. 7, which shows a granite tor in southwest England.

(i) Name and explain one possible weathering process acting on the rock outcrop. [4]

Indicative content: acceptable processes include hydrolysis, freeze-thaw (frost shattering), insolation, unloading (dilatation/pressure release).

Level 2 (3-4 marks): 1 mark for a correctly named process. The explanation of the named process is detailed. For top of this level, either the cyclic nature of freeze-thaw and insolation or the knowledge of the chemical change in feldspar is needed. If no correct name to the process, maximum 3, if explanation is clear.

Level 1 (0-2 marks): 1 mark for a correctly named process, with basic explanation.

(ii) Explain the uneven nature of the weathering shown. [4]

Indicative content: jointing is the key factor, allows water to penetrate into the rock; water key element in all weathering; more joints/cracks increase surface area exposed to water.

Level 2 (3-4 marks): candidates develop the explanation of the significance of joints. The recognition of the increased surface area exposed and/or the entry point for water is likely to characterise this level.

Level 1 (0-2 marks): 1 mark for identifying joints or cracks. Basic development of the significance of joints will qualify for the top of this level.

(c) Describe and explain ways in which human activity can affect weathering processes. [10]

Indicative content: human activities might include quarrying, leading to exposure of bare rock/unloading; atmospheric pollution leading to increased chemical weathering through more acidic precipitation; deforestation, leading to increased water reaching rocks/decreased chelation.

Level 3 (8-10 marks): candidates clearly describe and explain in detail at least two examples of the effects of human activity on specific weathering processes. Effective use of geographical terminology will characterise the top of this level.

Level 2 (5-7 marks): candidates either describe and explain two examples of the effects of human activity on weathering with limited development, or describe and explain in detail one example of the effects on weathering. Some use of geographical terminology will characterise the top of this level.

Level 1 (0-4 marks): candidates can identify human activities that affect weathering, but provide no explanation. Geographical terminology will generally be used inaccurately.

[Total 26 marks]

2681 The Human Environment

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Level 1

- **A more** limited **answer with** basic **understanding and knowledge**
- Limited **or** no **development of ideas**
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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**
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- **A** more limited **answer with perhaps** reasonable **knowledge but** basic **understanding**
- Limited or no **development of ideas**
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- **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

Population

1 (a) Study Fig. 1, which shows the population structure of Zambia in 1980 and 2006.

With reference to Fig. 1, compare the population structure of Zambia in 1980 with that of 2006. [6]

Level 2 5 – 6 marks:
A clear description which compares the population structures of 1980 and 2006. The discriminator from Level 1 is description of at least one similarity and one difference in which summative comments are used to refer to the main elements of the population structure e.g. youthful or elderly groups. There is use of appropriate terminology.
Max 5 marks if no reference to population figures or age groups.

Level 1 0 – 4 marks:
A basic description in which only one aspect of comparison is made e.g. only similarities or only differences may be awarded up to 4 marks.
Max 3 if no reference to population figures or age groups.
At the lower end of the mark range a maximum of 2 marks may be awarded for description of one of the pyramids only (without comparison) or for simplistic listing of figures for individual bars.

Indicative content:

Similarities could include:

- Overall progressive / expansive shape / demographic transition stage 1/2
- High proportions under 20 / youthful population / wide base
- Low proportions over 40 / elderly population / rapidly tapering top

Differences could include:

- Greater numbers under 40 in 2006 (e.g. the 20-24 age category has almost tripled from approx 0.45 million to 1.2 million and the 0-4 age group has nearly doubled from 1.16m to just over 2m).
- Rates of tapering: in 1980 rapid tapering is most evident up to age 10; in addition in 2006 it is also very rapid between ages 20 and 40.
- Gender imbalance; higher proportion of females aged 45 to 70 in 2006.
- Gender imbalance; higher proportion males aged 30 to 44 in 2006.

(b) The average life expectancy at birth in Zambia in 2006 was 37 years. State and explain <u>one</u> possible reason for Zambia's low life expectancy. [3]

1 mark for clear statement of a reason.
2 further marks for explanation / development of the reason .

Indicative content :

Candidates need not have specific knowledge of Zambia but it is reasonable to expect understanding of relevant conditions pertaining in LEDCs.

Possible reasons / further development could include:

- high rates of infant mortality
- limited access to health care / poor communications / limited number of doctors/head
- poor diet / nutrition / low calorific intake
- insufficient wealth / limited ability to buy food
- limited access to education including low levels of female literacy
- inadequate sanitation
- limited access to clean water supply
- spread of infectious and contagious diseases (especially AIDS)
- drop in foreign aid / inappropriate use of aid

(c) Study Fig. 2, which shows the crude birth rates of selected countries in 2006. Suggest <u>two</u> reasons why the crude birth rates of LEDCs are higher than those of MEDCs. [6]

Level 2 5 – 6 marks:
Clear understanding of the factors that account for higher crude birth rates in LEDCs / lower CBRs in MEDCs. The discriminator from Level 1 is that two reasons are identified at least one of which is well explained. For full marks two reasons are identified and well explained with a clear link to CBRs.

Level 1 0 – 4 marks:
A basic response. At the upper end of the mark range, one well explained reason or basic statement of two reasons may be awarded up to 4 marks. At the lower end of the mark range (max 2 marks) understanding is weak with very brief undeveloped phrases.

Indicative content :
Possible reasons for differences in CBRs may be economic, social, religious or political including:

- relative success of family planning / population policies
- availability of contraception
- expectations of differing religions
- economic value / burden of additional family members
- relative youthfulness / ageing of the population structure
- infant mortality rate
- status of women / maternal age at birth of first child
- education

(d) With reference to <u>one or more</u> examples, explain the causes of international migration. [10]

Level 3 8 – 10 marks:
Detailed knowledge and convincing understanding of the factors which cause international migration. The discriminator from Level 2 will be identification of at least two factors each of which is clearly explained as an underlying cause of international migration. At this level there should be exemplification in each instance. For full marks reference to specific dates, localities or figures is expected.

Level 2 5 – 7 marks:
Clear knowledge and understanding of the causes of international migration. Factual knowledge is less detailed and understanding of the factor is less securely understood than in Level 3. The discriminator from Level 1 is that at least one factor (socio-economic, physical or political) is explained.

Level 1 0 – 4 marks:
Basic knowledge and understanding of international migration. Answers may offer little more than description of international migration with no, or very limited, reference to the underlying causes (perhaps with vague, comments about 'push' and 'pull' factors).
At the lower end of this mark range (max 2) there may be very brief, undeveloped statements. Factual knowledge is weak.

Indicative content :
Socio-economic factors could include:

- employment opportunities / regular, higher wages / possible remittances
- tax avoidance
- colonisation / pioneers
- services / amenities
- kinship
- overpopulation

Physical factors could include:

- climatic attractions / retirement
- natural disasters (drought / famine, hurricanes, flooding, tectonic activity)

Political factors could include:

- war / refugees
- persecution
- relaxation of emigration controls in Eastern Europe

These factors could be applicable to:

- a wide range of examples, modern or historic,
- a group of people or an individual
- either the place of origin and / or the destination

[Total : 25]

Rural Settlement

2 (a) Study Fig. 3, which shows the relationship between total population and total number of shops and services for rural settlements in East Suffolk, 2006.

(i) What is meant by the range of a good or service? [2]

The maximum distance people are prepared to travel to purchase a particular good or service.
One mark only for a less clear definition e.g. without the word 'maximum'

(ii) Describe the relationship shown in Fig. 3. [2]

The greater the population, the larger the number of shops and services. 2 marks.
A positive relationship. 2 marks.
When there is accurate description of the graph only, with no explicit description of the relationship. 1 mark.

(iii) Suggest reasons for this relationship. [4]

Level 2 3 – 4 marks:
A response in which there is clear understanding of the factors that link population size and service provision. The discriminator from Level 1 is appropriate understanding of the concept of threshold population. For full marks, reference to lower / higher order goods within the hierarchy and / or anomalies is required.

Level 1 0 – 2 marks:
Candidates may show basic understanding by relating population size to overall number of shops and services in terms of customers using them, with no clear use of the term threshold. A basic response may include little more than description of the graph.

Indicative content :

- the threshold population of higher order services is more easily met where the population is larger
- where population is larger more functions of the same order can survive
- anomalous figures could be explained as settlements with dormitory functions, holiday resorts or key settlements

(b) State and explain <u>two</u> reasons for counterurbanisation in MEDCs. [6]

Level 2 5 – 6 marks:
An answer in which there is clear understanding of the reasons for counterurbanisation.
The discriminator from Level 1 is that two reasons are identified, at least one of which is well explained.
For full marks two reasons are well explained.

Level 1 0 – 4 marks:
A response in which there is basic statement of reasons for counterurbanisation.
One well developed reason may be awarded up to 4 marks.
At the lower end of the mark range (max 2) responses will be brief, with undeveloped phrases possibly with little more than a description or definition of counterurbanisation.

Indicative content
Possible reasons include :

- increasing personal mobility i.e. car ownership
- the desire (and means) to live in a rural area and commute to work in a town or city
- the decentralisation of jobs to rural areas
- retirement migration from urban to rural areas
- tele-working from home having moved out of a town or city to a rural area
- dissatisfaction with quality of life in urban areas as a result of traffic congestion, crime, service provision, pollution
- the attractions of safer rural communities, good schools

(c) Explain the disadvantages that population change can bring to rural areas in MEDCs. Refer to <u>one or more</u> examples in your answer. [10]

Level 3 8 – 10 marks
Detailed knowledge and understanding of a rural area or areas, in an MEDC, which has experienced the effects of population change. Reference to place names, population figures / dates, services is expected. At this level the link between effects of population change and specific disadvantages should be explicit. The discriminator from Level 2 is that two disadvantages are identified and explained.

Level 2 5 – 7 marks
Clear knowledge and understanding of a rural area which has experienced the effects of population change. The link between population change and the disadvantages arising may be less explicit and knowledge of place / population / service change may be less secure than in Level 3.
At the lower end of this mark range the response may be more descriptive, but the discriminator from Level 1 is that there is appropriate explanation of at least one disadvantage brought about by population change.

Level 1 0 – 4 marks
Basic knowledge of a rural area in an MEDC and very limited if any understanding of the effects of population change on rural settlements / communities. If the response is purely descriptive it is firmly placed in Level 1.
At the lower end of this mark range there may be vague, simplistic and brief statements of problems in rural settlements with no link to population change.

Indicative content:
Possible disadvantages for rural areas could include:

- Loss of services e.g. school closure, public transport
- Increased traffic / air pollution / noise
- House building / loss of farmland / flooding
- Increase in house prices
- Conflicting attitudes of original inhabitants and newcomers; old and young
- Changing age-structure / difficulties in providing different services

Maximum 6 marks for a wholly generalised response.

[Total:24]

Urban Settlement

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

Urbanisation is the increase in the proportion (%) of people living in towns and cities in a country or region. 2 marks
A less specific response, which perhaps omits the increase in %, may be awarded 1 mark.

(b) Study Fig. 4, which shows the population growth of Mexico City between 1905 and 2005.

(i) With specific reference to Fig. 4, describe the population growth shown. [4]

Level 2 3 – 4 marks:
A clear response in which there is description of the growth in population. The discriminator is a summative comment recognising a change in the rate of growth. References to changing rates of population doubling should be placed in Level 2. Max 3 marks if no reference to dates or figures.

Level 1 0 – 2 marks:
A basic response pointing out the overall growth in absolute terms but with no reference to change in rate of growth. Responses which merely list figures / dates shown on the graph should be placed in Level 1.

Indicative content :
Absolute growth in numbers:
- Population grew from just over ½ m in 1905 to 15m in 1985, reaching 19.2m by 2005.

Change in rates of growth:
- Relatively slow growth up to 1945; increase in rate between 1945 and 1980, deceleration between 1980 and 1995; further period of deceleration after 2000.

(ii) State and explain two possible reasons for this population growth. [6]

Level 2 5 – 6 marks:
A clear explanation of the growth in population. The discriminator from Level 1 is an understanding of the two main causes of growth (net migration gain and natural increase in the urban area itself) and / or deceleration. Specific knowledge and understanding of Mexico City's population growth are not needed. For full marks, explanation of the two processes is required.

Level 1 0 – 4 marks:
A basic account in which only one reason is offered. Responses which include only brief phrases with undeveloped statements are likely to be placed in Level 1.

Indicative content:
- Net-migration gain : many large urban areas in LEDCs, such as Mexico City, experience high rates of net migration gain (from rural and other urban areas); this is the result of strong rural push factors (e.g. overpopulation) and urban pull (e.g. perceived and real employment opportunities).
- Natural increase : most rural migrants are young / in the reproductive age groups; birth rates in the city are still high (e.g. children are viewed as important contributors to the family income in LEDC urban areas) with death rates in some city areas beginning to decline.
- Periods of deceleration caused by slowing down of net migration gain and / or drop in rate of natural increase.

(c) Population growth presents many problems for urban authorities in LEDCs.

Explain why it is difficult to provide <u>housing</u> and <u>jobs</u> in urban areas in LEDCs.

i) Housing [4]

Level 2 3 – 4 marks:
A clear response in which there is understanding of the problem of meeting the demand for adequate housing. The discriminator from Level 1 is that there is explanation. Full marks could be achieved by one well explained difficulty in providing housing, or two in less detail. Exemplification is not essential but it should be credited where it helps to confirm understanding.

Level 1 0 – 2 marks:
A basic response in which there is description of a housing problem(s) only, with no understanding of, for example, the scale or rate of escalation of the problem which makes it difficult to resolve.

Indicative content:
Housing problems include:
- Short supply of cheap housing / high demand

Difficult to satisfy because:
- Rapidity of population growth
- Size / scale of population growth
- Poverty of rural migrants
- Poverty of LEDC urban authorities
- Reluctance of many residents to move into low cost housing developments
- Lack of physical space available as a result of physical environmental constraints, fossilised land uses, planning controls

(ii) Jobs [4]

Level 2 3 – 4 marks:
A clear response in which there is understanding of the problem of meeting the demand for jobs. The discriminator from Level 1 is that there is explanation. Full marks could be achieved by one well explained difficulty in providing employment, or two in less detail.
Exemplification is not essential but it should be credited where it helps to confirm understanding.

Level 1 0 – 2 marks:
A basic response in which there is description of the employment problem, with no understanding of its underlying cause(s).

Indicative content :
Problems associated with jobs include:
- Unemployment
- Underemployment

Difficulties in providing jobs can be explained by:
- Scale of rural–urban migration, numbers outstrip supply of jobs
- Limited skills and qualifications of rural migrants
- Perceptions of rural migrants regarding availability of employment in urban areas
- Employment in the informal sector (often underemployment) is actively encouraged

(d) State and explain <u>two</u> environmental problems arising from urban growth in LEDCs. [6]

Level 2 5 – 6 marks:

A clear response in which there is understanding of the link between urban growth (population or sprawl) and its impact on the physical environment. The discriminator from Level 1 is that two problems of the physical environment are explained in terms of urban growth. Exemplification is not essential but it may be credited at this level where it supports explanation / confirms understanding.

Level 1 0 – 4 marks:
A basic response in which two environmental problems are explained in less detail and where the link to urban growth is only implicit.
One well explained and appropriate environmental problem which is linked to urban growth may be awarded up to 4 marks.
At the lower end of this mark range, max 2 marks for responses in which environmental problems are described but there is no link to urban growth.
There may be only brief, simplistic phrases or comments with limited development.

Indicative content:
Possible effects of urban growth in LEDCs on the environment include:

- Water pollution / contamination / shortages
- Air pollution
- Impact on natural ecosystems e.g. deforestation
- Landslides
- Ground contamination

[Total : 26]

2682 Geographical Investigation

1 (a) Stage 4 in a geographical investigation is analysis, evaluation and interpretation. Explain the purpose of this stage in your investigation.

[10 marks]

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

- Analysis
  - The use of descriptive statistics (e.g. central tendency, measures of variation) and analytical statistics (difference between samples (Mann-Whitney), association between samples (Spearman's, Chi-squared).
  - The use of satellite images, air photographs, GIS, simple statistical software and ICT.
  - It is important to consider only appropriate/relevant data from that collected (ideally only relevant data was collected in the first instance).
- Interpretation
  - Provide the outcomes of the investigation by considering what the results of the analysis mean, e.g. patterns, relationships, differences, links, anomalies.
  - Identify possible explanations for these outcomes, i.e. impact of factors upon data.
- Evaluation
  - Consider whether the findings meet the investigation objectives and offers reasons, e.g. inappropriate sampling, adverse weather, factors previously unaware of.
  - Relate outcomes to geographical theory.
  - Explanation of outcomes may be considered part of evaluation rather than interpretation.
  - Alternatively evaluation may be regarded as part of the summary, i.e. consideration of the performance of the investigation at all stages, i.e. choice of question for investigation, strategy used, the data collected and the analysis and subsequent interpretation.
- Relationship between analysis, evaluation & interpretation & other stages of an investigation
  - Question for investigation: evaluation shows whether this has been met and if not why not.
  - Strategy: determines the data to be collected for subsequent analysis and interpretation; evaluation considers whether and why this was a good approach.
  - Data collection: analysis makes direct use of data collected; evaluation considers whether and why this was a good approach.
  - Summary: analysis, interpretation and evaluation feed into final summary and suggestions for improvement.

The following skills are applied to each level:

- Level of detail.
- Use of geographical terminology.
- Clarity of the explanation.
- Discussion relates to the candidate's own investigation.
- Relevance of the material presented.
- Understanding what analysis, evaluation and interpretation are.
- Understanding how analysis, evaluation & interpretation relate to other investigation stages.

Level 3 (8-10 marks)
Explanation of the purpose of stage 4 is discussed **in detail**.
Considers three or more of analysis, evaluation, interpretation and linkage between stage 4 and the other stages of an investigation.
Refers to own geographical investigation.
The answer is logically ordered.

Level 2 (5-7 marks)
Explanation of the purpose of stage 4 is discussed **clearly (less detail).**
Considers two or more of analysis, evaluation interpretation and linkage between stage 4 and the other stages of an investigation.
May refer to own geographical investigation.
There are lapses in the logic of the answer.

Level 1 (0-4 marks)
Explanation of the purpose of stage 4 is discussed **basically**.
Considers one or more of analysis, evaluation interpretation and linkage between stage 4 and the other stages of an investigation.
Unlikely to refer to own geographical investigation.
There are considerable gaps and/or errors in the answer.

1 (b) With the aid of a labelled diagram, describe and justify the choice of one graph or chart used in your geographical investigation. [10 marks]

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

- Graph or chart type.
  - Bar chart / histogram / compound
  - Pie chart / proportional circle
  - Cross section / profile
  - Line graph
  - Scattergraph
  - Dispersion graph
  - Located graphs
  - Tally chart
- Characteristics:
  - Title
  - Labelled axes with units of measurement
  - Key
  - Essential shape/features of graph/chart, e.g. points, bars, lines, joined up points, best fit, anomalies
- Justification
  - Ease of use
  - Ease of construction
  - Showing relationship / spread of data / change in environment on transect

The following skills are applied to each level:

- Level of detail.
- Use of geographical terminology.
- Clarity of the description and justification.
- Discussion relates to the candidate's own investigation.
- Relevance of the material presented.
- Understanding the relevance of the method.
- Balance of the response between description and justification.

Level 3 (8-10 marks)
Description and justification of chosen representational technique is discussed **in detail**.
Diagram and text present.
Refers to own geographical investigation.
The answer is logically ordered.

Level 2 (5-7 marks)
Either **Description and justification** of chosen representational technique is discussed **clearly (less detail).**
Or **One** of **description *or* justification** of chosen representational technique is discussed **in detail** and the **other basically or Max 6** if **not at all.**
Diagram and/or text present.
May refer to own geographical investigation.
There are lapses in the logic of the answer.

Level 1 (0-4 marks)
Description of chosen representational technique is discussed **basically**.
Diagram and/or text absent.
Unlikely to refer to own geographical investigation.
There are considerable gaps and/or errors in the answer.

2 (a) Explain how you could make use of two different types of map in a geographical investigation. [10 marks]

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

- Type of map may refer to scale and/or subject matter, e.g.
  - Ordnance Survey: 1:5000, 1:10 000, 1:25 000, 1:50 000.
  - Geological; soil; land use; Goad.
  - Atlas by scale: region within country, country, regions within continent, continent, global.
  - Atlas by topic: climate, geology, land use, physical, ocean currents, vegetation, population.
  - Map surveyed by candidate (sketch).
  - Map with technique overlaid: choropleth, isolines, flow lines, located graphs.
- Appreciation of what is appropriate for a particular scale, e.g.
  - 1:25 000: the general location of a site for investigation is identified; route to sampling sites (road network); selection of specific sampling sites (including feasibility); risk assessment; access to sites; used in strategy, data collection and analysis, evaluation and interpretation stages.
  - Region of country: shows location; compare locations; useful as base map for adding own data, e.g. flow lines; used in strategy, data collection and analysis, evaluation and interpretation stages.
- Appreciation of what is appropriate for a particular subject matter, e.g.
  - Goad shows detail about land use in urban areas; usable as basis for adding own data or updating Goad; used in data collection and analysis, evaluation and interpretation stages.

The following skills are applied to each level:
- Level of detail.
- Use of geographical terminology.
- Clarity of the explanation.
- Discussion relates to named types of map.
- Relevance of the map types chosen.
- Understanding how to use maps in an investigation.

Level 3 (8-10 marks)
Explanation of how to make use of **two** types of map is discussed in **detail**.
Map type is named.
The answer is logically ordered.

Level 2 (5-7 marks)
Either **Explanation** of how to make use of **two** types of map is discussed clearly **(less detail).**
Or **Explanation** of how to make use of **one** type of map is discussed **in detail and** the **other basically or Max 6 if not at all.**
Map type is named.
There are lapses in the logic of the answer.

Level 1 (0-4 marks)
Explanation of how to make use of **one or two** types of map is discussed **basically**.
Max. top Level 2 if one map type in detail.
Map type is not named.
There are considerable gaps and/or errors in the answer.

Max. Top Level 1 if map type is not named

2 (b) Describe and justify the use of photographs in a geographical investigation. [10 marks]

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

- Type of photographs
  - Published, e.g. book/journal, internet
  - Unpublished, e.g. school, field studies centre
  - Own
  - Peers
  - Aerial
- Photographs must have
  - Title indicating content and location.
  - Appropriate annotations (brief text not complete sentences).
  - Scale should be apparent (use of people, clearly sizable objects such as cars) or added next to the photograph.
  - A cross reference from the point at which they are mentioned in the text.
- Strategy stage
  - Secondary data may be a source of information to assist with planning the investigation.
  - May not actually be part of final report.
- Data collection stage
  - Photographs taken when collecting data: these could be own or from another source.
  - Inserted in investigation alongside (or following) other data so that their relevance to the investigation is clear.
- Analysis, interpretation and evaluation stage
  - Supporting evidence to help explain the outcomes of the investigation, e.g. to show anomalies, to show why the results did fit with expectations.

The following skills are applied to each level:
- Level of detail.
- Use of geographical terminology.
- Clarity of the description and justification.
- Discussion relates to photographs.
- Understanding how photographs are used in an investigation.
- Balance of the response between description and justification.

Level 3 (8-10 marks)
Description and justification of use of photographs are discussed **in detail.**
Likely to consider application in different stages as well as presentational issues.
The answer is logically ordered.

Level 2 (5-7 marks)
Either **Description and justification** of use of photographs are discussed **clearly (less detail).**
Or **One of description *or* justification** of use of photographs is discussed **in detail and** the **other basically or Max 6** if **not at all.**
There are lapses in the logic of the answer.

Level 1 (0-4 marks)
Description of use of photographs is discussed **basically**.
There is unlikely to be justification.
There are considerable gaps and/or errors in the answer.

3 (a) The topic of a geographical investigation is the distances that shoppers travel to a city centre. Describe how you would collect the data to ensure that the sample is representative. [10 marks]

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

- Sampling methodology
  - Sampling approach: at city centre [hard to justify at residential areas as this would require a large dataset and it would not be possible to know how far to sample from the city]
  - Sampling type: transect/grid/random
  - Selection of sampling points: systematic/random/systematic stratified/random stratified/opportunistic [stratification: land use]
  - Sampling shoppers at points: systematic/random/systematic stratified/random stratified/opportunistic [stratification: age/gender]
  - Number of sampling locations / distance apart
  - Duration, times of day and days of week for sampling at each point
  - Simultaneous sampling
  - Risk assessment
  - Consideration of transport mode in sampling locations
  - Questionnaire is most appropriate form of making contact
- Rejection of alternatives credited

The following skills are applied to each level:
- Level of detail.
- Use of geographical terminology.
- Clarity of the description.
- Relevance of the data collection technique.
- Understanding of representativeness.

Level 3 (8-10 marks)
Description of data collection method is discussed **in detail.**
The data collection method is appropriate.
Refers to representativeness of methodology.
The answer is logically ordered.

Level 2 (5-7 marks)
Description of data collection method is discussed **clearly (less detail).**
The data collection method is mostly appropriate.
May refer to representativeness of methodology.
There are lapses in the logic of the answer.

Level 1 (0-4 marks)
Description of data collection method is discussed **basically.**
The data collection method is mostly inappropriate.
Unlikely to refer to representativeness of methodology.
There are considerable gaps and/or errors in the answer.

3 (b) Study Fig. 1, which shows the results of an investigation of the distances travelled by shoppers to a city centre. Explain how measures of central tendency can help to analyse the data shown. [10 marks]

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

- Mode
  - Most frequently occurring value
  - Identify bimodal distribution of the resource
  - Not affected by extreme values of the resource
  - Since resource is grouped data, mode is not very precise as depends on size of groupings
  - Cannot be used for further data analysis
- Median
  - Midpoint of a dataset arranged from highest to lowest
  - Not affected by extreme values
  - Equal weight given to each item regardless of value (high, medium, low)
  - Can be used for some further data analysis
- Mean
  - Sum of all values in dataset divided by number of values
  - Distorted by extreme values – best if normal distribution and not widely spread – which is not the case for the resource
  - Unreliable when dataset is small – and it is not given for the resource
  - Can be used for much further statistical analysis
- Relationship between measures
  - Resource has a positive skew: mean > median > mode
  - To be a normal distribution: mean = median = mode
- This question is not about the detail of deviation, variability and dispersion

The following skills are applied to each level:
- Level of detail.
- Use of geographical terminology.
- Clarity of the discussion.
- Discussion relates to the resource.
- Knowledge of measures of central tendency.
- Understanding of how measures of central tendency assist with analysis.

Level 3 (8-10 marks)
Explanation of how **two or more** measures of central tendency assist with analysis discussed **in detail**.
Refers to Figure 1.
The answer is logically ordered.

Level 2 (5-7 marks)
Either Explanation of how **two or more** measures of central tendency assist with analysis discussed **clearly (less detail).**
Or Explanation of how **one** measure of central tendency assists with analysis discussed **in detail and one or more basically or Max 6** for **one well explained** measure.
May refer to Figure 1.
There are lapses in the logic of the answer.

Level 1 (0-4 marks)
Explanation of how **one or more** measures of central tendency assist with analysis discussed **basically**.
Unlikely to refer to Figure 1.
There are considerable gaps and/or errors in the answer.

2683 Options in Physical and Human Geography

Group A Options

Option 1: Coastal Environments

1 (a) Describe the causes of relative sea level rise and relative sea level fall. [20]

(b) Explain the role of sea level change in the development of coastal landforms. [25]

(a)

The causes of changing sea level is a major heading in the Spec. The question leads candidates to consider 'relative' and both rising and falling sea levels.	
AO1+ AO2	• Level 2 max if only eustatic / isostatic • eustatic – mainly result of glacio-eustacy both +ive and –ive • isostatic - mainly result of glacio-eustacy both +ive and –ive • glaciated regions have complicated relative changes – e.g. when ice sheets melt, both sea and land rises. This might be a Level 3 indicator. • eustacy associated with thermal expansion / contraction of water. This might be a Level 3 indicator. • tectonic movements, relatively + / - and local / large scale • isostatic change linked with denudation / deposition balance e.g. S.America. A likely Level 3 indicator. • credit references to tidal changes
AO3	• Level 2 max. without 'relative' • Level 1 max if only eustatic / isostatic
AO4	• see generic mark scheme

(b)

The results of sea level change, i.e. landforms, is a major heading in the Spec. The question is clear that landforms resulting from both rising and falling levels are to be considered.	
AO1+ AO2	• rising – shingle accumulations e.g. bars, tombolos driven onshore by post-glacial sea rise; drowned valleys – rias / fjords / fiards – latter a possible level 3 indicator; slope-over-wall cliff profiles; coral atolls eroded; dalmation style plan; destruction of landforms e.g. sand dunes • falling – fossil shore platforms, raised beaches and abandoned cliff lines
AO3	• Level 1 max. if only rising / falling • Quality of link between sea level change and landform will help advise Level; Level 1 max if no link
AO4	• see generic mark scheme

2 (a) Describe the origins and characteristics of sediment found in the coastal zone. [20]

(b) Explain why beach profiles vary. [25]

(a)

Sediment sources and characteristics are explicitly mentioned in the Spec.	
AO1+ AO2	• coastal landforms e.g. cliffs; Level 3 likely if unconsolidated geology recognised as significant c.f. granite for e.g.; shore platforms as a source likely to be a Level 3 indicator; mass movement on cliffs e.g. periglacial action in high latitudes • land-based sediments carried into coastal zone by rivers – max Level 2 if no mention; latitude variations a Level 3 indicator – tropical rivers significant c.f. mid-latitude • offshore zone; includes post-glacial rise in sea level bringing sediment onshore • longshore drift • wind blown glacial sands • human activity • characteristics – clastic i.e. broken down rocks / biogenic e.g. shells likely to be a Level 3 indicator; size and shape – some acknowledgement of great range in both needed for Level 3 • indication of variety in sediment a Level 3 indicator
AO3	• Level 1 max if only origins / characteristics • river sediments required for Level 3
AO4	• see generic mark scheme

(b)

This is a familiar topic to candidates and many are likely to have investigated this in the field. Inclusion of relevant field references is to be credited. Material on beach plan is irrelevant and should be dealt with in AO3 but can be given limited credit in AOs 1+2. Allow comments about sand dunes but not as entire answer.	
AO1+ AO2	• wave type – the perennial issue of terminology; high energy (surfing) tend to result in wide + flat beaches, some with a breakpoint bar in the immediate offshore zone; low energy (surging) waves tend to result in steep profile with distinctive berms due to tide heights • calibre of sediment; the coarser the sediment the steeper the profile due to angle of rest • calibre of sediment related to permeability and effect on swash / backwash ratios • water table; high tends to result in flatter profile as swash / backwash equal, likely to be a level 3 indicator • role of wind • human activity
AO3	• top of Level 1 max if either wave type or sediment are the only factor • seasonal changes a likely indicator of top Level 2 / Level 3 indicator • max top of Level 1 if beach plan
AO4	• see generic mark scheme

Option 2: Fluvial Environments

3 (a) Describe the patterns of flow found in river channels. [20]

(b) Explain how human activities affect discharge and sediment load. [25]

(a)

Water movements within a channel should be a familiar topic for the candidates. References to field course material could be appropriate here.	
AO1+ AO2	• laminar flow – layers of water slipping past each other. Water speed increases with height above the bed until a slight reduction is felt due to friction with the air. Often associated with approximately semi-circular cross-sectional channels, gentle gradients and fine sediment loads. • turbulent flow – increasing mixing of water with water flow in the form of eddies and vortices. Maximum water flow is just below the surface with lower speeds along the bed and banks. Often associated with upland streams, steep gradients, shallow channels and many obstructions along the channel e.g. boulders. • helical flow – a spiralling core of maximum velocity associated with water flow around a meander; the main flow continues to move downstream but the water spirals around this. A surface flow moves across the channel lifting water towards the outside of the meander. A return flow is induced across the bed towards the inside of the meander
AO3	• Level 1 max if turbulent absent • Level 3 when flow linked with high and low flow conditions
AO4	• see generic mark scheme

(b)

A variety of human activities can affect discharge and sediment load. Rivers adjust to changes caused by human activities and eventually a new equilibrium is established. Local scale examples just as effective as the macro-scale ones.	
AO1+ AO2	• land-use – rural to urban increases run-off + discharge • land-use – urbanisation increases sediment loads through construction of roads, bridges, buildings • land-use – pastoral to arable increases discharge + sediment load • dams – downstream discharge regulated. Runoff as % of total precipitation falls. Implications for sediment load • water abstraction – similar points • channel straightening – implications for energy levels + sediment load
AO3	• Level 1 max if only discharge / sediment • Quality of link between human activity and fluvial factors will help advise the Level; Level 1 max if no link • Bottom of level 2 max if no exemplification
AO4	• see generic mark scheme

4 (a) Describe methods by which cross-sectional channel shape and channel efficiency might be investigated. [20]

(b) Explain the inter-relationships between channel efficiency, velocity and discharge. [25]

(a)

Investigations of cross-sectional channel shape and channel efficiency are explicitly stated in the Spec. Comments about issues such as sampling and risk assessments are appropriate. Theoretical discussion of the relationship between channel shape and channel efficiency, max Level 2.	
AO1+ AO2	• credit anything that is appropriate for a sixth-former to be realistically • capable of achieving • credit a variety of equipment • either hydraulic radius or width-to-depth ratio acceptable for efficiency
AO3	• Level 2 max if no reference to bankfull channel
AO4	• see generic mark scheme

(b)

These inter-relationships are explicitly mentioned in the Spec. as they are fundamental to an understanding of the fluvial energy system.	
AO1+ AO2	• efficiency is for a channel as a conveyor of water and sediment • for Level 2+ needs idea that only a small proportion of a river's energy • available for erosion and transport • efficiency higher when ratio between wetted perimeter and cross- • sectional area, hydraulic radius, is high • as discharge increases, cross-sectional area increases faster than • width + depth. So ratio of cross-sectional area to wetted perimeter • increases and, therefore, so does efficiency. Velocity likely to increase.
AO3	• quality of links between velocity, discharge and channel efficiency will • help advise Level • Level 1 max if no mention of bankfull discharge • Reference to Manning's equation likely to indicate a top Level 2 / • bottom Level 3 response
AO4	• see generic mark scheme

Option 3: Glacial and Periglacial Environments

5 (a) Describe the ways in which sediment is transported in glacial environments. [20]

(b) Explain how a period of glaciation produces a variety of depositional landforms. [25]

(a)

Processes of transport are fundamental knowledge and understanding in this Option. The question invites descriptions about any type of transport in glacial environments. Answer solely on periglacial processes, bottom of Level 2.	
AO1+ AO2	• glacial – supra- ; en- ; sub- ; • glacio-fluvial – supra- ; en- ; sub- ; streams • comments about competence levels in streams and seasonal contrasts • likely to indicate Level 3 response • comments about glacio-fluvial beyond the ice appropriate • comments about wind-blown sediment appropriate
AO3	• Level 1 max if no reference to glacial / glacio-fluvial • Level 3 requires both glacial + glacio-fluvial
AO4	• see generic mark scheme

(b)

The focus here is on the range of depositional landforms resulting from glaciation. The main focus here is the contrast between the production and deposition of sediments directly by ice and those which are the result of glacio-fluvial actions.	
AO1+ AO2	• landforms – glacial, moraines including till plains, erratics, drumlins; • glacio-fluvial – sandur / outwash plain; kame + kame terrace; esker; • varves • credit references to sediment characteristics sediments – glacial, • angular / sub-angular; unsorted; orientation possible; fluvio-glacial, • rounded, sorted, no orientation
AO3	• Level 1 max. if only glacial or only glacio-fluvial • Bottom of Level 2 if just a descriptive listing of landforms. Once the • responses begins to attempt to explain, then top of Level 2+ is likely. • Points about the different conditions under which the sediments were • formed and laid down are appropriate • Level 3 requires both glacial + glacio-fluvial
AO4	• see generic mark scheme

6 (a) Describe the weathering and slope processes associated with periglacial conditions. [20]

(b) Explain the factors leading to the growth and decay of ice masses. [25]

(a)

Periglacial weathering and slope processes are explicitly stated in this Option as a separate heading and so should be well known and understood by the candidates.	
AO1+ AO2	• Level 1 max if no mention of frost action • permafrost and the active zone; ground ice • mass movement – solifluction, some idea of scale of movement, 1-10 • cm/yr, might indicate a Level 3 response
AO3	• there need not be equal treatment of weathering + slope processes, but omission • of one restricts to Level 1 • Level 2 max if glacial erosion included
AO4	• see generic mark scheme

(b)

This topic is perhaps often studied as an introduction to the Option. The Spec explicitly mentions three types of ice mass but the main focus here is on growth and decay as a generic topic.	
AO1+ AO2	• variations in sun spot activity • role of volcanic dust • changes in atmospheric CO_2 • plate tectonics • Earth's orbital eccentricity • changes in Earth's tilt • precession of equinoxes • changes in jet streams • changes in ocean currents • mass balance
AO3	• there need not be mention of all three types of ice mass but the acknowledgement of the scales of ice mass and therefore differences in factors is a Level 3 indicator – ice sheets, ice caps, glaciers • comments about ice formation and accumulation are relevant but a response consisting only of this will not be above bottom of Level 2 • glacial mass balance only, max Level 2
AO4	• see generic mark scheme

Option 4: Hot Arid and Semi-arid Environments

7 (a) With the help of labelled diagrams, describe three different types of sand dunes. [20]

(b) Explain how sand dunes are formed. [25]

(a)

Sand dune landscapes are a major aspect of the study of arid and semi-arid environments. Within this, the variety of dune morphology is well known.	
AO1+ AO2	• inclusion of scale a possible Level 3 indicator • barchan – crescent shaped; horns pointing downwind; height 1-30 m • seif – also known as linear dunes; long, straight ridge parallel to wind direction; up to 100 m high + 100 km long • star – isolated mound resembling a star in plan; ridges converge from basal points to central peak up to 100 m high • transverse – asymmetric ridge; often a sequence of parallel ridges c. 1-2 km apart; up to 70 m high + 50 km long • parabolic – U-shaped with open end of U facing upwind. Variable in scale
AO3	• Level 1 for just one type; Level 2 for two and Level 3 for three + four
AO4	• see generic mark scheme

(b)

Responses might take different dunes in turn and offer explanation or generic points might be made; either is equally valid for AOs3 + 4.	
AO1+ AO2	• low rainfall so that vegetation cover limited leads to unconsolidated surface materials, mostly sand, more easily moved by wind. A point likely to be found only amongst the Level 3 responses • wind velocity exceeds threshold velocity for entrainment – generally c. 20km/hr • saltation and suspension • supply of sand e.g. barchan and seif limited, transverse abundant • nature of wind regime e.g. barchan constant wind; seif strong wind varying within one general direction; transverse reducing wind velocities; star wind from all directions • shape of ground surface e.g. regular surface allows longitudinal systems to evolve. Topographic barriers can help generate transverse dune systems • air flow – e.g. helical flows in the formation of seif dunes ; turbulence in lee of basic asymmetric mobile dune • perhaps the very best responses will make the point that there is such a complexity of dune forms and one type can readily merge into another that clear separate explanations are too simplistic
AO3	• Level 1 max for omission of role of wind • Level 1 max if factors are not explicitly linked with dune formation
AO4	• see generic mark scheme

8 (a) Describe the ways in which human activities can use and misuse water resources in hot arid and semi-arid environments. [20]

(b) Explain how erosion and transport of sediment by flowing water produce distinctive desert landforms. [25]

(a)

The impact of human activity on arid and semi-arid environments is a major heading in the Option. We can expect some authoritative exemplification in responses.	
AO1+ AO2	• distinction between surface and ground water resources might be a Level 3 indicator, especially in AO2 • comments about regional / local deforestation / afforestation relevant – might be a Level 3 indicator • stores – surface e.g. dams + reservoirs; small scale stone walls; ground water • irrigation – various methods could be described here, e.g. spray; trickle; furrow
AO3	• Level 1 for no human activities • Level 2 for mis- / use only • Level 3 for a response that offers both use and misuse
AO4	• see generic mark scheme

(b)

The role of water c.f. wind has been reappraised in our understanding of arid and semi arid environments. This question focuses explicitly on water's role in the erosion and transportation of sediment. It is now recognised that although short-lived, intense and localised flowing water can carry out significant geomorphic work in these environments.	
AO1+ AO2	• role of water when it arrives on land surface depends on nature of that surface. Unconsolidated materials e.g. active dunes + sand sheets are easily erodible, susceptible to sheet-wash + gullying. Also highly permeable + infiltration rapidly reduces surface flow. These points likely to indicate a Level 3 response • canyons + arroyos + wadis • washes – channels and valleys in low-relief landscape; playas; pediments; alluvial fans • dormant/relict dunes + sheets with surface crusts initially more resistant. Once crust is broken erosion of underlying material is rapid. This point a likely Level 3 indicator.
AO3	• although there need not be an equal treatment of both erosion and transport, the omission of one will leave the response at bottom of Level 2 max.
AO4	• see generic mark scheme

Option 5: Applied Climatology

9 (a) Describe the circumstances that can lead to wind-throw. [20]

(b) Explain why forest climates differ from their surroundings. [25]

(a)

Within the Forest climates section, wind-throw and the circumstances under which it is most likely to occur are explicitly stated. The term refers to the complete up-rooting of trees and not just the loss of a limb or the crown.	
AO1+ AO2	• extreme / catastrophic weather events e.g. storm of 1987 in southern and eastern England; 1999 Vosges • role of soil in anchoring trees e.g. sandy / clay contrast but also depth of soil e.g. chalk rendzina c.f. brown earth – a likely Level 3 indicator • antecedent rainfall patterns in influencing moisture levels of soil before strong winds • location of trees e.g. exposed positions on headlands • height of trees • deciduous trees particularly vulnerable in autumn due to dense foliage • also allow effects of volcanic eruptions if it is made clear that it is the very strong air movements (blast) that cause the throwing e.g. Mt. St. Helens eruption – a likely Level 3 indicator
AO3	• Level 1 max if just referring to physical damage to trees
AO4	• see generic mark scheme

(b)

It is the contrasts between forest climates and the climate experienced by the areas surrounding the forest that is the focus here.	
AO1+ AO2	• temperature – forests have relatively low albedo c.10% of solar radiation reflected c.f. c.25% grassland. During the day shaded areas in forests receive less insolation than open areas; at night reduced loss of long-wave radiation due to forest canopy c.f. open areas and increased content of water vapour also helps trap more long-wave energy. In summary, daytime temperatures lower, night-time higher than surrounding areas • wind speeds reduced within forest – relate to friction • latent heat (evaporation) contrasts – possible seasonal contrasts here depending on forest type – a likely indication of a Level 3 response. Forest humidity is generally higher by about 10% than surrounding areas; size of forest related to increased rainfall • seasonality in terms of leaf cover e.g. conifers in winter, deciduous in summer – a likely Level 2+ indicator
AO3	• Level 1 max if simply a listing of differences associated with forest climates • Level 2 + once the response begins to explain the differences
AO4	• see generic mark scheme

10 (a) Describe ways in which major air pollution episodes cause problems for humans. [20]

(b) Explain the contributions of climatological and meteorological factors to major air pollution episodes. [25]

(a)

Air pollution is a major sub-heading within this Option. The human problems associated with air pollution are explicitly stated in the Spec. and there is a wide variety of material that could be included here.	
AO1+ AO2	• air quality – health issues e.g. asthma • air quality – loss of economic productivity with people off work • air quality – children not at school • air quality – disruption of communications e.g. airport closure; visibility problems for drivers • credit reference to acid rain
AO3	• Level 1 max if no reference to specifically human problems • Level 1 max if focus is on remedies to air pollution
AO4	• see generic mark scheme

(b)

Both climatological and meteorological factors that contribute to air pollution are explicitly stated.	
AO1+ AO2	• temperature including lapse rates and inversions • wind – as regards directional spread of pollution and in relation to concentration of pollutants. • precipitation – acid rain • effect of sub-tropical high pressure on dispersal of pollutants; persistent anti-cyclones in mid-latitudes and their link with air quality
AO3	• bottom of Level 2 if no reference to either climatological or meteorological factors • there need not be an equal treatment of both meteorological and climatological but the minimal reference to one will limit to bottom of Level 2
AO4	• see generic mark scheme

Group B Options

Option 6: Agriculture and Food

11 (a) Describe ways in which agro-ecosystems modify productivity, species diversity and sustainability. [20]

(b) Explain how relief influences agricultural systems. [25]

(a)

Agricultural systems are highlighted in this Option and the structure of a systems approach offers much potential knowledge and understanding for candidates. Agro-ecosystems are explicitly mentioned as are the elements identified in the question.	
AO1+ AO2	• productivity – an interesting factor as a Level 3 indicator could be mention of the contrasts amongst both agro- and natural eco-systems. Many will simply assume that natural are more productive than agro-. Comments about yield are appropriate. • species diversity – also offers possibilities for the thoughtful response. Some agro-ecosystems can offer considerable diversity e.g. traditional mixed farming. • sustainability – generally natural offer greater sustainability than agro-. A helpful way of looking at this issue is at the energy balance in agro-ecosystems i.e. energy in c.f. energy out
AO3	• Level 1 for just one factor; Level 2 for two and Level 3 for all three
AO4	• see generic mark scheme

(b)

The physical environment is a key input to agricultural systems with relief being explicitly stated in the Spec.	
AO1+ AO2	• altitude – mostly its relationship with climate. In lower latitudes then increased altitude allows a wider range of agricultural systems c.f. higher latitudes where increased altitude tends to make agriculture marginal. Frost hollows relevant here e.g. orchards • slope – impact on ability to use machinery; types of livestock e.g Welsh black cattle • aspect – restricts or encourages certain agricultural systems depending on north/south facing and which hemisphere
AO3	• Key aspect of assessment is the quality of the link between relief and agricultural system. Level 1 max with no link, simply statements of agriculture in different types of relief. • Bottom of Level 2 if relief simply taken as altitude • Level 3 indicator when relief, slope and aspect are discussed
AO4	• see generic mark scheme

12 (a) Describe the pattern of nutrition at the global scale. [20]

(b) Explain how technology influences agricultural systems. [25]

(a)

Within the heading of food supplies, the geography of nutrition is explicitly mentioned. Three aspects of nutrition are highlighted, mal-, under- and over-nutrition and the question clearly places the pattern at the global scale.	
AO1+ AO2	• pattern of nutrition is uneven • malnutrition – lack of adequate nutrition caused by an unbalanced diet. Widespread amongst LEDCs but also among the poorer socio-economic groups in MEDCs – a point likely to indicate a Level 3 response. Where there is an effective description that draws attention to the diversity in the pattern of nutrition among the LEDCs i.e. Latin America and Asia c.f. sub-Saharan Africa, this is a likely indication of Level 3 • undernutrition – caused by too little food that can ultimately lead to death by starvation. FAO identify this as when people who do not consume enough food to maintain their body weight. In this respect the conditions in sub-Saharan Africa stand out • overnutrition – caused by too much food. A feature of parts of the MEDCs in particular. Level 3 responses might point out contrasts such as Eastern Europe c.f. Western Europe
AO3	• Level 1 for just one type of nutrition; Level 2 for two and Level 3 for all three
AO4	• see generic mark scheme

(b)

As well as physical factors, human factors play an important role on agricultural systems. Within this section in the Spec., technology is explicitly stated. Technology should be given a wide interpretation.	
AO1+ AO2	• irrigation – large or small scale • drainage – large or small scale • mechanisation in all its forms. Level 3 indicator might be the mention that mechanisation can limit type of agriculture e.g. tractors operate on more gentle slopes than horse-drawn equipment • glasshouses + poly-tunnels • green revolution • intermediate technology in all its forms • fertilisers – inorganic • pesticides / fungicides • transport e.g. access to markets • refrigeration • be open to factors such as barbed wire for fencing large areas
AO3	• Key aspect of assessment is the quality of the link between technology and agricultural system. Level 1 max with no link. • Either a broad-brush approach or develop fewer ideas in more detail appropriate
AO4	• see generic mark scheme

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

13 (a) Describe the spatial and economic characteristics of peripheral regions. [20]

(b) Explain how governments, planners and other agencies try to regenerate industry in peripheral regions. [25]

(a)

Peripheral regions are explicitly mentioned under the sub-heading of regions of industrial change.	
AO1+ AO2	• spatial – remote geographically e.g. Highlands + Islands Scotland / Mezzogiorno, especially in context of market access, a likely Level 3 indicator; marginal physical environment e.g. climate / relief ; • economic – employment structure e.g. overdependence on limited range of sectors e.g. Nord-Pas-de-Calais; outdated manufacturing technology; below average GDP; out-migration of young adults diminishes labour force; depopulation reduces thresholds + local markets; grant aid can be highly significant • comment that some regions can be peripheral in an economic sense but not spatially e.g. Nord-pas-de-Calais – Level 3 indicator
AO3	• Level 1 max if spatial / economic only; Level 2+ for both • If peripheral = suburbs / edge of city, Level 2 max.
AO4	• see generic mark scheme

(b)

The locational influence of governments and governmental agencies should be well-known and understood by candidates. This particular question sets it in the context of peripheral regions.	
AO1+ AO2	• establishment of development boards + agencies; grants + low-interest loans; advanced built factory units promotion through advertising; re-training schemes; advisory services; • improvement in regional infrastructure e.g. road + rail access • credit reference to shift into service sector
AO3	• bottom of level 2 max if no clear reference to peripheral regions • distinction amongst scales of government e.g. supra-national / national / local, likely to indicate top of Level 2+ response • a detailed case study that exemplifies the measures adopted can reach Level 3
AO4	• see generic mark scheme

14 (a) Describe ways in which markets can influence the location of manufacturing industries. [20]

(b) Explain the global shift in manufacturing. [25]

(a)

Industrial location factors is a major heading within this Option and the influence of markets is explicitly stated.	
AO1+ AO2	• Weberian analysis identifies weight gaining industries as being pulled strongly to the market e.g. brewing • Löschian analysis identifies the role of maximum demand and profit at the market as a locational pull – a likely Level 3 indicator • industries where the finished product is more fragile / perishable than the raw materials e.g. pastries / bread • just-in-time delivery systems encourage spatial concentrations of component suppliers around their market • any industry where transport costs of the finished product vary most in spatial terms is likely to attracted to the market • different scales of market – global / national / local – likely to indicate a Level 3 response, in particular in AO2
AO3	• Level 1 max if the conditions are not clearly linked to the market
AO4	• see generic mark scheme

(b)

Globalisation is a well-established theme in the study of manufacturing industry. The Spec. makes specific reference to patterns and processes such as export-led industrialisation; movement offshore to NICs, deindustrialisation in MEDCs, the operations of TNCs.	
AO1+ AO2	• fundamentally, the globalisation of manufacturing is about firms supplying markets worldwide • usually achieved by location of production in several different countries + continents – key reason is to be near markets. Proximity to markets allows manufacturers to respond quickly to demand changes • also New International Division of Labour has a role – multi-national restructuring of production taking into account differential labour costs. Some types of manufacturing migrated away from MEDCs to LEDCs + NICs. Drawing attention to the movement of certain types of manufacturing from NICs to LEDCs likely to indicate a Level 3 response, especially in AO2. • relatively low cost of transport allows longer distances to be covered
AO3	• bottom of Level 2 if response simply states manufacturers move to 'cheap labour' • NICs now outsourcing a possible Level 3 indicator
AO4	• see generic mark scheme

Option 8: Service Activities: Location, Change and Environmental Impact

15 (a) Describe the principles of bid-rent theory and trade area analysis. [20]

(b) Explain how economies of scale influence patterns of retail location. [25]

(a)

Theories and models are a major sub-heading within this Option. Bid-rent theory and trade area analysis are explicitly mentioned under this sub-heading.	
AO1+ AO2	• Bid-rent theory – the rent people are prepared to pay against distance from some point, usually the city centre. Rent bids generally decrease with increasing distance from a city centre. This K and U needed for Level 1. Comments about the contrasting gradients for different land-uses would suggest a Level 2 response; Level 3 will be indicated in responses suggesting that subsidiary peaks of bidding exist at various locations throughout an urban area e.g. neighbourhood service centres. Level 3 might also be indicated in responses suggesting that the recent trend of out-of–town locations for some services reverses the traditional gradient. • Trade area analysis – classical central place theory often gives the impression of a deterministic rigid structure of spheres of influence. A response that suggests the change from a zone of dominance immediately around a centre through a zone of competition to a zone of marginal influence is likely to be at Level 3. Various schemes suggested for assessing trade areas; analysis of public transport services; local delivery areas; catchment areas of schools/police; newspaper circulation
AO3	• Level 1 max if response focussed solely on central place theory • Level 2 max if either bid-rent or trade area analysis solely are the focus • Level 1 max if no reference to patterns
AO4	• see generic mark scheme

(b)

Changing patterns of retail organisation is a major sub-heading in this Option.	
AO1+ AO2	• economies of scale – average store size risen in some retailing sectors so that locations offering space at affordable costs are sought after e.g. greenfield locations for food / diy / furniture; • increasing scale of transport for deliveries to stores, reinforcing the pull of edge of town locations. Traditional locations either CBD or neighbourhood tend not to offer such locational advantages. • credit reference to vast scale of distribution hubs for major retailers e.g. food • credit reference to growth of large scale on-line retailers serving nationwide / large regional markets • such trend tends to fuel growth of national and trans-national retailers and reduce viability of independent smaller scale retailers
AO3	• Level 1 max if focus is on offices • bottom of Level 2 max if no reference to patterns
AO4	• see generic mark scheme

16 (a) Describe the characteristics of office parks, regional shopping centres and edge cities. [20]

(b) Explain how decentralisation of service activities creates opportunities and problems. [25]

(a)

Both of these types of out-of-centre service locations are explicitly mentioned in the Spec.	
AO1+ AO2	• office park – planned edge of town cluster of offices occupying purpose built buildings. Depending on the local planning legislation they can be several stories high but not of skyscraper proportions. Set in landscaped grounds with extensive car parking. Supporting services such as food retailers and health club facilities often present. • regional shopping centres – planned edge of urban area shopping centres. Comparable in scale and range of retailing to the central shopping area of a high order centre. The complete range of retailing is on offer but dominated by chain stores / multiples. Most fully enclosed. Services e.g. leisure (Cinema) and restaurants / coffee bars present. Surrounded by extensive car parking space. • edge city – city-like settlements on the fringes of existing urban settlements. Most common in USA. Made up of socially and economically high status residential areas that in USA are increasingly divided into gated communities. Often located in spatial association with office parks and shopping malls. Private car transport dominates.
AO3	• Level 1 if only one is mentioned.
AO4	• see generic mark scheme

(b)

Decentralisation is a major theme within this Option. This sub-part invites candidates to consider both sides of the decentralisation trend.	
AO1+ AO2	• disadvantages – use of rural fringe land contributes to urban sprawl. Speculative land prices, degrading of former agricultural land adjacent urban areas. Increases road congestion. Increases in environmental pollution such as noise and air quality. Statements such as 'increases pollution' to be rewarded at level 1 if no development. Decline of urban based services, especially retailing. Adverse effects on groups with low levels of mobility. • advantages – cheaper and larger sites. Flexibility of layout and modern buildings more conducive to current methods of organisation and operation e.g. allows economies of scale in food retailing. Ready access to ring road and inter-urban routes – allows trade areas to expand. Easier commute for employees especially from suburban residential locations.
AO3	• there does not need to be equal treatment of both advantages and disadvantages, but the omission of one restricts mark to bottom of Level 2 • response considering advantages / disadvantages both to consumers and providers likely to be Level 3
AO4	• see generic mark scheme

Option 9: Tourism and recreation and their Environmental Impacts

17 (a) Describe the following types of tourist development: resort; enclave; zone. [20]

(b) Explain the changing pattern of holiday destinations. [25]

(a)

The types of tourist development identified here are explicitly stated in the Spec.	
AO1+ AO2	• enclave – concentrated areas of tourist development. Largely confined to LEDCs. Foreign owned with capital for investment in facilities from MEDCs. Little if any interaction between tourists and local area and people – often beach based closed to local people. Often represent the early phase of tourist developments. e.g. Gambia in 1970s • resort – oldest types of tourist development. First were inland spas and seaside resorts. Most are concentrated around a natural resource e.g. beach. Have developed in a diversity of ways including decline. More popular resorts today have mixture of domestic and foreign investment and a variety of scales of facilities. Some resorts develop specialist functions e.g. Las Vegas; Disneyland. Numerous examples. • zone – found in regions with a mature tourism industry – in coastal areas zones have a linear extent following the coastline e.g. Costa del Sol. Domestic and foreign investment. Also zoning of tourist activities e.g. Green Island, Great Barrier Reef
AO3	• Level 1 for just one type of tourist development; Level 2 for two and Level 3 for all three
AO4	• see generic mark scheme

(b)

The focus of this sub-part is clear. The better responses are likely to offer a factor-led discussion.	
AO1+ AO2	• changes in disposable income. Comments about 'disposable' likely to indicate level 2+ especially when linked to urban tourism as a second holiday • growth of paid holiday in 20th century • increase in formal holiday time. • increases in personal mobility – first train and then private car and then air travel allowing overseas holidays to be feasible. Economies of scale achieved by larger aircraft likely to indicate a Level 3 response. • changes in social / cultural attitudes to travel • growth in package holidays – links with economies of scale • role of media and advertising
AO3	• bottom of Level 2+ once there is a clear link made between the change and an explanatory point • top of Level 2 likely to be indicated by reference to factors encouraging domestic holidays to be taken in addition to major overseas holiday
AO4	• see generic mark scheme

18 (a) Describe the changing spatial pattern of domestic tourism within MEDCs from the 19th century onwards. [20]

(b) Explain why governments encourage tourism and recreation. [25]

(a)

Domestic tourism patterns are a key aspect contained within a number of sub-headings in the Option. The timescale is broad to allow the description to include the origins and growth of seaside resorts and spas right the way through to urban tourism today.	
AO1+ AO2	• rise of spas and seaside resorts in early 19th century • spread of seaside resorts throughout 19th and early 20th century • comments about different 'class' of resorts likely to indicate a level 3 response e.g. Scarborough / Blackpool • zenith of seaside tourism reached in latter 1950s and early 1960s • decline from later 1960s onwards e.g. Margate • growth of urban tourism in late 20th / early 21st centuries • revival of some seaside resorts in late 20th / early 21st centuries e.g. Llandudno
AO3	• Level 1 max if the response is focussed on inter-national tourism • Level 1 max if 'spatial pattern' not clear
AO4	• see generic mark scheme

(b)

The influence of government on tourism and recreation is a major sub-heading within this Option. In particular, government sponsorship is highlighted as is the role tourism and recreation can play as part of national and regional development strategies. There is no prescription as to LEDC / MEDC so there is a wealth of exemplar material for candidates to draw upon.	
AO1+ AO2	• social / cultural – support indigenous culture resulting from tourist interest; widen outlook of communities e.g. raise the role and status of women; encourage education as employment in tourism / recreation available; political aims e.g. right to roam • economic – wealth creation for communities with few alternatives; helps justify + fund infrastructure projects; helps diversify local + regional economies • environmental – raises awareness of and economic support for conservation • political – raise profile of country and thereby possible inward investment
AO3	• simple listing of government projects will not rise above bottom of Level 2 • Level 2+ for those responses clearly trying to link government with tourism + recreation projects
AO4	• see generic mark scheme

2684 Synoptic Geography: People and Environment Options

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 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 (EU).

1 Discuss the view that the single European market has intensified the problems of peripheral regions in the EU. [60]

Peripheral may be both geographical and/or socio-economic in nature.

AO1 Knowledge of content (0-8 marks)

Level 4 (7-8 marks)
Candidates will have detailed knowledge of a range of problems faced by peripheral regions including physical, political, economic and social. Clear knowledge of the causes and role of single European market is expected. These should be well exemplified.

Level 3 (5-6 marks)
Candidates will have clear knowledge of a range of problems faced by peripheral regions including physical and economic. Knowledge of the causes and role of single European market is expected. These should be exemplified.

Level 2 (3-4 marks)
Candidates will have sound knowledge of some of the problems faced by peripheral regions. A limited range of the causes is expected. These will be limited in exemplification.

Level 1 (0-2 marks)
Candidates will have limited or vague knowledge of some of the problems faced by peripheral regions and a limited or vague knowledge of the causes. Little, if any, exemplification.

AO2 Critical understanding of content (0-22 marks)

Level 4 (18-22 marks)
Candidates will demonstrate detailed understanding of the inter-relationship of the single European market and the challenges faced by the peripheral regions. A clear cause-effect between the creation of a single market and its impact on peripheral regions can be expected. This may be underpinned by an effective use of concepts eg core-periphery or theories 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 the single European market and the challenges faced by the peripheral regions. A cause-effect between the creation of a single market and its impact on peripheral regions can be expected.

Level 2 (6-11 marks)
Candidates will demonstrate a sound understanding of the inter-relationship of the single European market and the challenges faced by the peripheral regions. A limited, if any, appreciation of the cause-effect between the creation of a single market and its impact on peripheral regions can be expected.

Level 1 (0-5 marks)
Candidates will demonstrate a limited or vague understanding of the links between the creation of a single market and its impact on peripheral regions.

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 single European market and its effect on peripheral regions to evaluate the relative impact on such areas' problems. Candidates at this level will argue that this varies with location (north v south etc) scale (local, regional, national), with time/development. At this level candidates should appreciate that the impact may differ with the nature of the problems (eg economic problems increased but physical turned into advantages) or even variation within a problem(eg Economic = increased market but increased competition).

Level 3 (12-17 marks)
Candidates apply their knowledge and critical understanding of the inter-relationship of the single European market and its effect on peripheral regions to evaluate the relative impact on such areas' problems. Candidates at this level will argue that this varies with location (north v south etc) with time/development or the nature of the problems. At this level candidates may appreciate that the impact may differ with the nature of the problems.

Level 2 (6-11 marks)
Candidates apply some of their knowledge and critical understanding of the inter-relationship of the single European market and its effect on peripheral regions to evaluate the relative impact on such areas' problems. At this level most will agree with the view.

Level 1 (0-5 marks)
Candidates apply limited or vague knowledge and critical understanding of the inter-relationship of the single European market and its effect on peripheral regions to offer a limited discussion. Candidates at this level will offer little, if any, evaluation of the relative impact on the problems.

Maximum 11 marks for application and 11 marks for evaluation

AO4 Communication (0-8 marks)

Use generic assessment criteria.

2 Evaluate the effectiveness of strategies to regenerate a named rural region experiencing decline in the EU. [60]

Region is open to wide interpretation of scale eg very local to large scale such as Eastern England. If no named rural region max top of level 2.

AO1 Knowledge of content (0-8 marks)

Level 4 (7-8 marks)
Candidates will have detailed knowledge of a named rural area experiencing decline and the strategies being used to regenerate the area - (immediate and longer term, direct and indirect, environmental v political v economic, central v local etc) by the EU and other agencies/sources is expected. A knowledge of appropriate models and/or concepts can be expected eg spread, trickling down etc.

Level 3 (5-6 marks)
Candidates will have clear knowledge of a named rural area experiencing decline. Also a knowledge of the range of strategies used to regenerate the area by the EU and/or other agencies is expected.

Level 2 (3-4 marks)
Candidates will have sound knowledge of a named rural area experiencing decline. Limited exemplification is expected as is some limited knowledge of the range of strategies used by the EU.

Level 1 (0-2 marks)
Candidates will have limited or vague knowledge of a named rural area experiencing decline and limited, if any, knowledge of the range of strategies used 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 rural regional decline resulting from a range of factors (economic, demographic, social, political and possibly physical). A detailed understanding of the effectiveness of the types of strategies used to regenerate such areas can be expected.

Level 3 (12-17 marks)
Candidates will demonstrate a clear understanding of the cause-effect of rural regional decline resulting from a range of factors (economic and social). An understanding of the effectiveness of the types of strategies used to regenerate such areas can be expected.

Level 2 (6-11 marks)
Candidates will demonstrate a sound understanding of the cause-effect of rural regional decline resulting from a range of factors. A limited understanding of the effectiveness of the types of strategies used to regenerate such areas can be expected.

Level 1 (0-5 marks)
Candidates will demonstrate a limited or vague understanding of the cause-effect of rural regional decline and little, if any, understanding of the effectiveness of the types of strategies used to regenerate such areas can be expected.

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 rural regional decline and the range of remedial strategies to evaluate their effectiveness in regenerating the area. They may also effectively show how EU responses may be helping or hindering the solution of these problems. Candidates may recognise that the effectiveness will vary with scale, time, location eg remote v less remote, and with the scale/type of cause of decline. At this level candidates can be expected to recognise that the view of their effectiveness may vary between groups in the rural community.

Level 3 (12-17 marks)
Candidates apply their knowledge and critical understanding of the causes of rural regional decline and the range of remedial strategies to evaluate their effectiveness in regenerating the area. They may also show how EU responses may be helping or hindering the solution of these problems. Candidates may recognise that the effectiveness will vary with time, location eg remote v less remote, and that the effectiveness may vary between groups in the rural community.

Level 2 (6-11 marks)
Candidates apply some of their knowledge and critical understanding of the causes of rural regional decline and the range of remedial strategies to evaluate their effectiveness in regenerating the area. Candidates may recognise that the effectiveness will vary over time and between locations.

Level 1 (0-5 marks)
Candidates apply limited or vague knowledge and critical understanding of the causes of rural regional decline and the range of remedial strategies to offer a limited or vague evaluation of their effectiveness.

Maximum 11 marks for application and 11 marks for evaluation

AO4 Communication (0-8 marks)

Use generic assessment criteria.

3 'The problem of transnational pollution in the EU has largely been solved.' Assess the accuracy of this statement. [60]

Pollution can cover air, water, solid, noise etc and should be clearly transnational. A case study of a single type eg acid rain is a valid approach.

AO1 Knowledge of content (0-8 marks)

Level 4 (7-8 marks)
Candidates will have detailed knowledge of the problem of transnational pollution, its causes and a range of solutions/strategies used to reduce its impact and their relative success.

Level 3 (5-6 marks)
Candidates will have a clear knowledge of the problem of transnational pollution its causes and a variety of solutions/strategies used to reduce its impact and their relative success.

Level 2 (3-4 marks)
Candidates will have a sound knowledge of the problem of transnational pollution and at least two of the solutions/strategies used to reduce its impact and their relative success.

Level 1 (0-2 marks)
Candidates will have limited or vague knowledge of the problem of transnational pollution together with vague knowledge of the solutions/strategies used to reduce its impact .

AO2 Critical understanding of content (0-22 marks)

Level 4 (18-22 marks)
Candidates will demonstrate detailed understanding of how and why strategies act to reduce transnational pollution. A clear cause-effect will be demonstrated between strategy and impact. A clear understanding of what 'solved' means is expected.

Level 3 (12-17 marks)
Candidates will demonstrate a clear understanding of how and why strategies act to reduce transnational pollution. Cause-effect will be demonstrated between strategy and impact. An understanding of what 'solved' means is expected.

Level 2 (6-11 marks)
Candidates will demonstrate a sound understanding of how and why strategies act to reduce transnational pollution. 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 strategies act to reduce transnational pollution. 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 overall impact (negative or positive) on solving the problem of transnational pollution is effective. Some appreciation that this will vary with scale, location (within an area/region), over time and may vary depending on the particular causes or nature of the pollution can be expected at this level. There will be a clear evaluation of the statement.

Level 3 (12-17 marks)
Candidates apply their knowledge and understanding of the strategies' impacts to evaluate whether the overall impact (negative or positive) on solving the problem of transnational pollution is effective. An appreciation that this will vary with location (within an area/region) and may vary depending on the particular cause or type of pollution can be expected at this level. There will be an evaluation of the statement.

Level 2 (6-11 marks)
Candidates apply some of their knowledge and understanding of the strategies' impacts to evaluate whether the overall impact (negative or positive) on solving the problem of transnational pollution is effective. There will be a limited evaluation.

Level 1 (0-5 marks)
Candidates apply limited or vague knowledge and understanding of the strategies' impacts to produce a limited evaluation of whether the problem of transnational pollution has been solved.

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 To what extent has the redevelopment of brownfield sites in MEDCs been successful? [60]

AO1 Knowledge of content (0-8 marks)

Level 4 (7-8 marks)
Candidates will have detailed knowledge of examples of redevelopments of brownfield sites (from one or more urban areas) and their resulting success – or lack of it. Knowledge of appropriate models and concepts such as core-periphery model, multiplier etc can be expected but is not required.

Level 3 (5-6 marks)
Candidates will have clear knowledge of examples of redevelopments of brownfield sites (from one or more urban areas) and their resulting success – or lack of it. Knowledge of appropriate models and concepts such as core-periphery model, multiplier etc may be expected.

Level 2 (3-4 marks)
Candidates will have sound knowledge of examples of a range of redevelopments of brownfield sites (from one or more urban areas) and their resulting success.

Level 1 (0-2 marks)
Candidates will have only limited or vague knowledge of the redevelopment of brownfield sites and the resulting success. 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 nature of brownfield sites and their redevelopment. A clear understanding of what makes for a successful redevelopment is expected – may include physical, economic, social and political aspects.

Level 3 (12-17 marks)
Candidates will demonstrate a clear understanding of the causal links between the nature of brownfield sites and their redevelopment. An understanding of what makes for a successful redevelopment is expected.

Level 2 (6-11 marks)
Candidates will demonstrate a sound understanding of the causal links between the nature of brownfield sites and their redevelopment. Some limited understanding of what makes for a successful redevelopment is expected.

Level 1 (0-5 marks)
Candidates will demonstrate limited or little understanding of the causal links between the nature of brownfield sites and their redevelopment.

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 how and why brownfield sites are redeveloped to evaluate their relative success. At this level a cost-benefit analysis could be appropriate but also an appreciation that the success will vary with scale, location eg inner v outer city areas, over time (there is a cycle effect) and will vary depending upon the viewpoint of different groups eg rich v poor.

Level 3 (12-17 marks)
Candidates apply their knowledge and critical understanding of how and why brownfield sites are redeveloped to evaluate their relative success. Some appreciation that the success will vary with location eg inner v outer city areas and will vary depending upon the viewpoint of different groups eg rich v poor can be expected.

Level 2 (6-11 marks)
Candidates apply some of their knowledge and critical understanding of how and why brownfield sites are redeveloped to offer a limited evaluation of their relative success. Some appreciation that the success may vary can be expected.

Level 1 (0-5 marks)
Candidates apply limited or vague knowledge and understanding of how and why brownfield sites are redeveloped 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 Evaluate the success of strategies used to revitalise inner city areas. [60]

Candidates may focus on MEDCs but LEDCs or a combination are equally valid provided it is clearly an inner city area ie this is not the improving shanty town question.

AO1 Knowledge of content (0-8 marks)

Level 4 (7-8 marks
Candidates will have detailed knowledge of a range of various types of strategies used to revitalise inner city areas (renewal, redevelopment, regeneration, refurbishment, gentrification etc). Detailed examples are expected from a range of inner urban areas demonstrating knowledge of the relative success of some of these strategies.

Level 3 (5-6 marks)
Candidates will have clear knowledge of a range of various types of strategies used to revitalise inner city areas. Exemplification is expected from one or more inner urban areas demonstrating knowledge of the relative success of some of these strategies.

Level 2 (3-4 marks)
Candidates will have a sound knowledge of various types of strategies used to revitalise inner city areas. Some exemplification is expected from one or more inner urban areas demonstrating knowledge of the relative success of some of these strategies.

Level 1 (0-2 marks)
Candidates will have limited or vague knowledge of various types of strategies used to revitalise inner city areas. 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 strategy and the types of revitalisation (physically, economically, environmentally and socially) of inner city areas. An understanding of some of the appropriate models or concepts such as the multiplier, spread etc can be expected but are not required.

Level 3 (12-17 marks)
Candidates will demonstrate a clear understanding of the cause-effect relationship between the strategy and the types of revitalisation of inner city areas. Some understanding of some of the appropriate models or concepts such as the multiplier, spread etc may be expected.

Level 2 (6-11 marks)
Candidates will demonstrate a sound understanding of the cause-effect relationship between the strategy and the types of revitalisation of inner city areas.

Level 1 (0-5 marks)
Candidates will demonstrate a limited or vague understanding of the cause-effect relationship between the strategy and the types of revitalisation of inner city areas.

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 range of strategies used by a number of agencies to evaluate whether they have been effective in revitalising inner city areas. An appreciation that the level of effectiveness may vary with: location within the inner area, type of strategy, scale, time or even between the different aspects eg economic v social, or may vary with the viewpoint of the different groups within the local community is expected.

Level 3 (12-17 marks)
Candidates apply their knowledge and critical understanding of the range of strategies used by a number of agencies to evaluate whether they have been effective in revitalising inner city areas. Some appreciation that the level of effectiveness may vary with: type of strategy, time, between the different aspects eg economic v social is expected.

Level 2 (6-11 marks)
Candidates apply some of their knowledge and critical understanding of the strategies used by a number of agencies to offer a limited evaluation of whether they have been effective in revitalising inner city areas. An appreciation that the level of effectiveness may vary is expected.

Level 1 (0-5 marks)
Candidates apply only limited or vague knowledge and critical understanding of the causes of the strategies used by a number of agencies to offer a limited or vague evaluation of their effectiveness.

Maximum 11 marks for application and 11 marks for evaluation

AO4 Communication (0-8 marks)

Use generic assessment criteria.

6 'Cities can never be sustainable.' How far do you agree with this statement? [60]

This is about cities in general so can draw on examples from both LEDCs and MEDCs. A lot will hinge on the understanding of the term 'sustainable'.

AO1 Knowledge of content (0-8 marks)

Level 4 (7-8 marks)
Candidates will demonstrate a detailed and well exemplified knowledge of the problems created by cities (physical, economic and social) as well as knowledge of what sustainability means in an urban context.

Level 3 (5-6 marks)
Candidates will demonstrate a clear and exemplified knowledge of the problems created by cities (physical, economic and social) as well as knowledge of what sustainability means in an urban context.

Level 2 (3-4 marks)
Candidates will demonstrate a sound and exemplified knowledge of the problems created by cities as well as some knowledge of what sustainability means in an urban context.

Level 1 (0-2 marks)
Candidates will have limited or vague knowledge of the process of problems created by cities and sustainability.

AO2 Critical understanding of content (0-22 marks)

Level 4 (18-22 marks)
Candidates will demonstrate detailed understanding of how and why cities pose a challenge to the concept of sustainability. A clear grasp of cause-effect relationships is expected as is an understanding of the way that sustainability varies relative to the viewpoint eg economic v environmental.

Level 3 (12-17 marks)
Candidates will demonstrate a clear understanding of how and why cities pose a challenge to the concept of sustainability. A grasp of cause-effect relationships is expected as is an understanding of the way that sustainability varies relative to the viewpoint.

Level 2 (6-11 marks)
Candidates will demonstrate a sound understanding of how and why cities pose problems/challenges to the concept of sustainability and some of the ways this may vary.

Level 1 (0-5 marks)
Candidates will demonstrate limited or vague understanding of how and why cities pose problems/challenges to the concept of sustainability.

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 problems posed by cities to evaluate whether they are or ever can be sustainable. At this level some appreciation of scale eg large cities v neighbourhoods, location eg LEDC v MEDC and variations over time (have they ever been sustainable?) 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 problems posed by cities to evaluate whether they are or ever can be sustainable. At this level some appreciation of location eg LEDC v MEDC 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 problems posed by cities to offer a limited evaluation of whether they are or ever can be sustainable.

Level 1 (0-5 marks)
Candidates apply limited or vague knowledge and critical understanding of the problems posed by cities 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 To what extent do you agree with the view that the main role of farmers is to manage the countryside? [60]

AO1 Knowledge of content (0-8 marks)

Level 4 (7-8 marks)
Candidates will have detailed knowledge of the farmers roles and their role in managing the countryside and why/how roles vary or have changed in recent years – from producer of food to manager or steward of the countryside. Detailed exemplification is expected.

Level 3 (5-6 marks)
Candidates will have clear knowledge of the farmers' roles and their role in managing the countryside and why/how roles vary or have changed. Sound exemplification is expected.

Level 2 (3-4 marks)
Candidates will have sound knowledge of the farmers' roles and their role in managing the countryside. Limited exemplification is expected.

Level 1 (0-2 marks)
Candidates will have limited or vague knowledge of the farmers' role in managing the countryside. 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 the current range of management roles of farmers (ranging from agri-businesses to organic farmers to diversification) and how these may impact on the countryside – both the physical environment and the human community- and why such management is needed.

Level 3 (12-17 marks)
Candidates will demonstrate clear understanding of the current management roles of farmers and how these may impact on the countryside – both the physical environment and the human community- and some appreciation of why such management is needed.

Level 2 (6-11 marks)
Candidates will demonstrate sound understanding of some of the current management roles of farmers and how some of these may impact on the countryside and a limited appreciation of why such management is needed.

Level 1 (0-5 marks)
Candidates will demonstrate limited or vague understanding of the current management roles of farmers and how these may impact on the countryside.

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 current range of management roles of farmers to evaluate whether it is the key role. An appreciation of the way this may vary with: scale, location eg upland v lowland areas, time, the type of farming, the exact management role adopted, or how they may impact on different aspects or groups of/in the countryside can be expected.

Level 3 (12-17 marks)
Candidates apply their knowledge and critical understanding of the current range of management roles of farmers to evaluate whether it is the key role. Some appreciation of the way this may vary with: location eg upland v lowland areas, the type of farming, the exact role adopted, can be expected.

Level 2 (6-11 marks)
Candidates apply some of their knowledge and critical understanding of the some of the management roles of farmers to offer a limited evaluation of their effectiveness in making the countryside sustainable. Some limited appreciation of the way this may vary is expected.

Level 1 0-5 marks)
Candidates have limited or vague application of knowledge and critical understanding of the management roles of farmers and the possible impacts on the countryside 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 'Modern intensive farming is the main cause of habitat loss.' How far do you agree with this statement? [60]

'Modern intensive' may refer to types of farming eg agri-businesses or intensive techniques such as the use of fertilisers etc.

AO1 Knowledge of content (0-8 marks)

Level 4 (7-8 marks)
Candidates will have detailed knowledge of the impact (both positive and negative) of a range of modern intensive farming aspects and other factors on a variety of habitats. Detailed exemplification is expected. At this level a contrasting pair of detailed examples or case studies might be appropriate.

Level 3 (5-6 marks)
Candidates will have clear knowledge of the impact (both positive and negative) of modern intensive farming aspects and other factors on a variety of habitats. Sound exemplification is expected of both intensive farming and habitats.

Level 2 (3-4 marks)
Candidates will have sound knowledge of the impact (both positive and negative) of modern intensive farming aspects on a variety of habitats. Exemplification is expected of either intensive farming or habitats being damaged.

Level 1 (0-2 marks)
Candidates will have limited or vague knowledge of a few examples (possibly a single case study) of habitats being damaged by modern intensive farming.

AO2 Critical understanding of content (0-22 marks)

Level 4 (18-22 marks)
Candidates will demonstrate detailed understanding of the cause-effect of why modern intensive farming, and its techniques, poses a threat to habitats (including impacts on stores and flows in the system or impacts on aspects of habitats eg reduction in herbivores etc). An understanding of the level of threat (is it likely to cause total destruction?) from farming and other factors is also expected.

Level 3 (12-17 marks)
Candidates will demonstrate clear understanding of the cause-effect of why modern intensive farming and its techniques poses a threat to habitats or aspects of the habitat. Some understanding of the level of threat from farming and other factors is also expected.

Level 2 (6-11 marks)
Candidates will demonstrate sound understanding of the cause-effect of why modern intensive farming and its techniques poses a threat to habitats or aspects of the habitat.

Level 1 (0-5 marks)
Candidates will demonstrate limited or vague understanding of why modern intensive farming and its techniques poses a threat to habitats.

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 caused to habitats (or aspects of habitats) by modern intensive farming to evaluate the extent to which modern intensive farming is the main cause – it could be pollution, housing, increased population etc. At this level an appreciation of how this may differ with scale eg small pond v forest, over time, with location eg East Anglia v highlands of Scotland can be expected together with the nature and characteristics of the habitats involved.

Level 3 (12-17 marks)
Candidates apply their knowledge and critical understanding of the threats caused to habitats (or aspects of habitats) by modern intensive farming to evaluate the extent to which intensive farming is the main cause. At this level some appreciation of how this may differ with location eg East Anglia v highlands of Scotland can be expected.

Level 2 (6-11 marks)
Candidates apply some of their knowledge and critical understanding of the threats caused to habitats (or aspects of habitats) by modern intensive farming to offer a limited evaluation of the extent to which intensive farming is the main threat.

Level 1 (0-5 marks)
Candidates are limited and vague in the application of their knowledge and critical understanding of the threats caused to habitats (or aspects of habitats) by modern intensive farming 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 'Rural communities and cultures are undergoing rapid change.' Evaluate this statement. [60]

Many will see this as farmers but it goes beyond this to include all those that traditionally make up rural communities and more recent additions.

AO1 Knowledge of content (0-8 marks)

Level 4 (7-8 marks)
Candidates will have detailed knowledge of the changing make-up of rural communities and cultures with detailed exemplification. A detailed knowledge of the factors influencing the changes and structure of the rural community (economic, social, demographic etc) is also expected.

Level 3 (5-6 marks)
Candidates will have clear knowledge of the changing make-up of rural communities with sound exemplification. A knowledge of the factors influencing the changes and the structure of the rural community is also expected.

Level 2 (3-4 marks)
Candidates will have sound knowledge of the changing make-up of rural communities with some limited exemplification. Some knowledge of the factors influencing the changes in the rural community is also expected.

Level 1 (0-2 marks)
Candidates will have limited or vague knowledge of the changing make-up of rural communities.

AO2 Critical understanding of content (0-22 marks)

Level 4 (18-22 marks)
Candidates will demonstrate detailed understanding of the cause-effect relationship between a range of change factors and their impact on rural communities and cultures, especially those involved in farming . An understanding of the wider economic and/or social changes that underlie this structural change should be demonstrated.

Level 3 (12-17 marks)
Candidates will demonstrate clear understanding of the cause-effect relationship between a range of change factors and their impact on rural communities, especially farm workers. Some understanding of the wider economic and/or social changes (including urban growth, spread etc) that underlie this structural change should be demonstrated.

Level 2 (6-11 marks)
Candidates will demonstrate sound understanding of the cause-effect relationship between a range of change factors and their impact on rural communities, especially farm workers.

Level 1 (0-5 marks)
Candidates will demonstrate limited or vague understanding of the impacts of a range of factors on 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 impact of various factors on rural communities to evaluate the viewpoint that rural communities and cultures are undergoing rapid change. At this level some appreciation that the speed and nature of change may vary with: scale, location eg SE England v highlands of Scotland and variations over time can be expected together with it varying with the nature of the area eg type of farming, its local population size/type eg area near to large population clusters, the nature of the community/culture, etc.

Level 3 (12-17 marks)
Candidates apply their knowledge and critical understanding of the impact of various factors on rural communities to evaluate the viewpoint that rural communities and cultures are undergoing rapid change. At this level some appreciation can be expected that change and its rate will vary with: location eg SE England v highlands of Scotland and variations with the nature of the area eg type of farming, its local population size/type eg area near to large population clusters, etc.

Level 2 (6-11 marks)
Candidates apply some of their knowledge and critical understanding of the impact of various factors on rural communities to offer a limited evaluation of the viewpoint that rural communities and cultures are undergoing rapid change.

Level 1 (0-5 marks)
Candidates apply only limited or vague knowledge and critical understanding of the impact of various factors on rural communities 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 are the impacts of a natural hazards determined by human rather than physical factors ? [60]

AO1 Knowledge of content (0-8 marks)

Level 4 (7-8 marks)
Candidates will have detailed and well exemplified knowledge of the impact of natural hazards and the physical (relief, geology, drainage, type/scale of hazard etc) and human (population size, economic, social, political etc) factors that influence the level of impact. 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 impact of natural hazards and the physical and human factors that influence the level of impact. Some knowledge of short term v long term hazards can be expected at this level.

Level 2 (3-4 marks)
Candidates will have a sound knowledge of the impact of natural hazards and the physical and human factors that influence the level of impact. Exemplification may a limited in detail.

Level 1 (0-2 marks)
Candidates will have limited or vague knowledge of the impact of natural hazards and the physical and human factors that influence the level of impact.

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 role (and inter-relationship) of a range of physical and human factors on the impact of a variety of natural hazards. An understanding of the scale and type of impact is also expected.

Level 3 (12-17 marks)
Candidates will demonstrate a clear understanding of the cause-effect of the role (and inter-relationship) of a range of physical and human factors on the impact of a variety of natural hazards. Some understanding of the scale and type of impact is also expected.

Level 2 (6-11 marks)
Candidates will demonstrate a sound understanding of the cause-effect of the role (and inter-relationship) of a range of physical and human factors on the impact of a variety of natural hazards. There will be limited understanding of the scale and type of impact.

Level 1 (0-5 marks)
Candidates will demonstrate limited or vague understanding of the cause-effect of physical and human factors on the impact of a variety of natural 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 whether human factors (eg level of development, technology, wealth, population density etc) are more significant in determining the level of impact than purely physical factors. Some appreciation that this may vary with scale, location eg LEDC v MEDC and vary over time

(more mitigation now so human more significant) or the scale and frequency of the hazards can be expected. A clear conclusion to the evaluation is expected.

Level 3 (12-17 marks)
Candidates apply their clear knowledge and critical understanding to evaluate whether human factors (eg level of development, technology, wealth, population density etc) are more significant in determining the level of impact than purely physical factors. An appreciation that this may vary with location eg LEDC v MEDC or the scale and frequency of the hazards can be expected. A conclusion to the evaluation is expected.

Level 2 (6-11 marks)
Candidates apply their knowledge and critical understanding to evaluate whether human factors are more significant in determining the level of impact than purely physical factors. An appreciation that this may vary with location eg LEDC v MEDC can be expected.

Level 1 (0-5 marks)
Candidates apply only limited or vague knowledge and critical understanding and offer little or vague evaluation of whether human factors are more significant in determining the level of impact than purely physical factors.

Maximum 11 marks for application and 11 marks for evaluation

AO4 Communication (0-8 marks)

Use generic assessment criteria.

11 'The nature of volcanic hazards is difficult to predict.' Evaluate this statement. [60]

AO1 Knowledge of content (0-8 marks)

Level 4 (7-8 marks)
Candidates will have detailed and well exemplified knowledge of volcanic hazards (including lava flows, ash, explosions, lahars, gases, nuee ardent etc) and methods of predicting their occurrence (eg historical mapping, pressure monitoring, chemical analysis etc). Also knowledge of short term v long term or primary v secondary hazards can be expected at this level.

Level 3 (5-6 marks)
Candidates will have clear and exemplified knowledge of the main volcanic hazards and a variety of methods of predicting their occurrence. Also some knowledge of short term v long term or primary v secondary hazards can be expected at this level.

Level 2 (3-4 marks)
Candidates will have sound knowledge of the main volcanic hazards and at least two methods of predicting their occurrence. Exemplification may be limited or vague.

Level 1 (0-2 marks)
Candidates will have limited or vague knowledge of the main volcanic hazards and methods of predicting their occurrence. 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 why the exact nature of volcanic hazards may be difficult to predict – in terms of type of plate boundary, place, timing, scale and type. Cause and effect will be well understood.

Level 3 (12-17 marks)
Candidates will demonstrate a clear understanding of why the exact nature of volcanic hazards may be difficult to predict – in terms of a number of aspects such as: place, timing, scale and type. Cause and effect will be understood.

Level 2 (6-11 marks)
Candidates will demonstrate a sound understanding of why the exact nature of volcanic hazards may be difficult to predict – in terms of a number of aspects. Cause and effect will be understood to a limited extent.

Level 1 (0-5 marks)
Candidates will demonstrate limited or vague understanding of why the exact nature of volcanic hazards may be difficult to predict. Cause and effect will not be understood.

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 volcanic hazards are difficult to predict. A clear evaluation of the reasons why it is so difficult to predict is expected. An appreciation that this will vary with: scale, location eg LEDC v MEDC, vary over time (as technology changes etc), the nature of the area (eg population density, wealth etc), the nature of the hazard or type of volcano or plate margin can be expected.

Level 3 (12-17 marks)
Candidates apply their knowledge and critical understanding to evaluate the extent to which volcanic hazards are difficult to predict. An evaluation of the reasons why it is so difficult to predict is expected. Some appreciation that this will vary with: location eg LEDC v MEDC, the nature of the area (eg population density, wealth etc), the nature of the hazard or type of volcano can be expected.

Level 2 (6-11 marks)
Candidates apply some of their knowledge and critical understanding to evaluate the extent to which volcanic hazards are difficult to predict. A limited evaluation of the reasons why it is so difficult to predict is expected.

Level 1 (0-5 marks)
Candidates offer only limited or vague discussions of the extent to which volcanic hazards are difficult to predict. 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 Evaluate the effectiveness of hazard mitigation strategies for hurricanes and tropical storms. [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 mitigation strategies used to reduce the primary and secondary hurricane or tropical storm impacts such as monitoring, planning, evacuation strategies, building designs etc. They will also demonstrate a knowledge of the effectiveness of these strategies for a number of hurricane events.

Level 3 (5-6 marks)
Candidates will have clear and exemplified knowledge of the main types of mitigation strategies used to reduce the primary and secondary hurricane or tropical storm impacts. They will also demonstrate some knowledge of the effectiveness of these strategies for a number of hurricane events.

Level 2 (3-4 marks)
Candidates will have sound knowledge of the main types of mitigation strategies used to reduce the primary and secondary hurricane or tropical storm impacts. They will also demonstrate basic knowledge of the effectiveness of these strategies. This will be supported by brief exemplification.

Level 1 (0-2 marks)
Candidates will have limited or vague knowledge of the main types of mitigation strategies used to reduce hurricane or tropical storm impacts.
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 ways that different mitigation strategies seek to reduce the various impacts of hurricanes/storms and how these can vary with the nature and characteristics of the hurricane/storm and the nature of the area. Cause and effect will be well understood.

Level 3 (12-17 marks)
Candidates will demonstrate clear understanding of the ways that different mitigation strategies seek to reduce the various impacts of hurricanes/storms and how these can vary with the nature and characteristics of the hurricane/storm and the nature of the area. Cause and effect will be understood.

Level 2 (6-11 marks)
Candidates will demonstrate sound understanding of the ways that some of the mitigation strategies seek to reduce the various impacts of hurricanes/storms and some appreciation of how these can vary with the nature and characteristics of the hurricane/storm and the nature of the area.

Level 1 (0-5 marks)
Candidates will demonstrate limited or vague understanding of the link between mitigation strategies and the impacts of hurricanes

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 effectiveness of hazard mitigation strategies for hurricanes/storms. Some appreciation that this is not a simple evaluation but the effectiveness may vary with scale, location eg upland area v lowland coast, time, level of development, population preparation/education etc as well as the nature of the hurricane's/storm's primary and secondary impacts can be expected.

Level 3 (12-17 marks)
Candidates apply their knowledge and critical understanding to evaluate the effectiveness of hazard mitigation strategies for hurricanes/storms. An appreciation that this is not a simple evaluation but the effectiveness may vary with location eg upland area v lowland coast, level of development, population preparation/education etc as well as the nature of the hurricane's/storm's impacts can be expected.

Level 2 (6-11 marks)
Candidates apply some of their knowledge and critical understanding to offer a limited evaluation of the effectiveness of hazard mitigation strategies for hurricanes/storms. An appreciation that this is not a simple evaluation but the effectiveness may vary with the level of development or with the severity of the hurricane/storm can be expected.

Level 1 (0-5 marks)
Candidates apply limited or vague knowledge and critical understanding to assess, in a limited way the effectiveness of hazard mitigation strategies for hurricanes/storms. Evaluation will be very limited or non-existent.

Maximum 11 marks for application and 11 marks for evaluation

AO4 Communication (0-8 marks)

Use generic assessment criteria.

Grade Thresholds

Advanced GCE (Geography A) (Aggregation Codes 3832, 7832)
January 2008 Examination Series

Unit Threshold Marks

Unit		Maximum Mark	A	B	C	D	E	U
2680	Raw	100	67	60	53	46	40	0
	UMS	120	96	84	72	60	48	0
2681	Raw	75	57	51	46	41	36	0
	UMS	90	72	63	54	45	36	0
2682 01	Raw	60	41	38	35	33	31	0
2682 02	Raw	15	12	10	8	7	6	0
	UMS	90	72	63	54	45	36	0
2683	Raw	90	66	59	52	45	39	0
	UMS	90	72	63	54	45	36	0
2684	Raw	120	88	80	72	64	56	0
	UMS	120	96	84	72	60	48	0

Specification Aggregation Results

Overall threshold marks in UMS (ie 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	18.39	43.50	65.47	86.55	98.21	100	223
7832	8.00	56.00	80.00	96.00	96.00	100	25

248 candidates aggregated this series

For a description of how UMS marks are calculated see:
http://www.ocr.org.uk/learners/ums_results.html

Statistics are correct at the time of publication.

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