Published Mark Schemes for GCE AS Geography

Summer 2009

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

MARK SCHEMES (2009)

Foreword

Introduction

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

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

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

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

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MARK SCHEME

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Introductory Remarks

The assessment objectives (AOs) for this specification are listed below. Students must:

AO1 demonstrate knowledge and understanding of the content, concepts and processes;

AO2 analyse, interpret and evaluate geographical information, issues and viewpoints and apply understanding in unfamiliar contexts;

AO3 select and use a variety of methods, skills and techniques (including the use of new technologies) to investigate questions and issues, reach conclusions and communicate findings.

General Instructions for Markers

The main purpose of the mark scheme is to provide a uniform basis for the marking process so that all markers are following exactly the same instructions and making the same judgements so far as this is possible. Markers must apply the mark scheme in a consistent manner and to the standard agreed at the standardising meeting.

It is important to recognise that in some cases there may be other correct responses that are equally acceptable to those included in this mark scheme. There may be instances where certain judgements have to be left to the experience of the examiner, for example, where there is no absolute, correct answer.

Markers are advised that there is no correlation between length and quality of response. Candidates may provide a very concise answer that fully addresses the requirements of the question and is therefore worthy of full or almost full marks. Alternatively, a candidate may provide a very long answer which also addresses the requirements of the question and is equally worthy of full or almost full marks. It is important, therefore, not to be influenced by the length of the candidate's response, but rather by the extent to which the requirements of the mark scheme have been met.

Some candidates may present answers in writing that is difficult to read. Makers should take time to establish what points are being expressed before deciding on a mark allocation. However, candidates should present answers which are legible and markers should not spend a disproportionate amount of time trying to decipher writing that is illegible.

Levels of Response

For questions with an allocation of six or more marks, three levels of response will be provided to help guide the marking process. General descriptions of the criteria governing levels of response mark schemes are set out on the next page. When deciding about the level of a response, a "best fit" approach should be taken. It will not be necessary for a response to meet the requirements of all the criteria within any given level for that level to be awarded. For example, a Level 3 response does not require all of the possible knowledge and understanding which might be realistically expected from an AS or AL candidate to be present in the answer.

Having decided what the level is, it is then important that a mark from within the range for that level, which accurately reflects the value of the candidate's answer, is awarded.

General Descriptions for Marking Criteria

Knowledge and Understanding	Skills	Quality of Written Communication	Level
The candidate will show a wide-ranging and accurate knowledge and a clear understanding of the concepts/ideas relevant to the question. All or most of the knowledge and understanding that can be expected is given.	The candidate will display a high level of ability through insightful analysis and interpretation of the resource material with little or no gaps, errors or misapprehensions. All that is significant is extracted from the resource material.	The candidate will express complex subject matter using an appropriate form and style of writing. Material included in the answers will be relevant and clearly organised. It will involve the use of specialist vocabulary and be written legibly and with few, if any, errors in spelling, punctuation and grammar.	3
The candidate will display an accurate to good knowledge and understanding of many of the relevant concepts/ ideas. Much of the body of knowledge that can be expected is given.	The candidate will display evidence of the ability to analyse and interpret the resource material but gaps, errors or misapprehensions may be in evidence.	The candidate will express ideas using an appropriate form and style of writing. Material included will be relevant and organised but arguments may stray from the main point. Some specialist terms will be used and there may be occasional errors in spelling, punctuation and grammar. Legibility is satisfactory.	2
The candidate will display some accurate knowledge and understanding but alongside errors and significant gaps. The relevance of the information to the question may be tenuous.	The candidate will be able to show only limited ability to analyse and interpret the resource material and gaps, errors or misapprehensions may be clearly evidenced.	The candidate will have a form and style of writing which is not fluent. Only relatively simple ideas can be dealt with competently. Material included may have dubious relevance. There will be noticeable errors in spelling, punctuation and grammar. Writing may be illegible in places.	1

Section A

1 **(a)** The hazard identified will obviously depend on the field study undertaken – potential hazards can be identified in all environments and risk management is a vital element of fieldwork planning.

Mark Breakdown
Valid Hazard – if stated clearly and relevant to the field study **[1]**

Identification – **Award [1]** if a risk identification method is clarified. This may involve a discussion of risk assessment (e.g. pre-site visit, risk assessment survey, etc.) adopted as part of fieldwork planning.

Risk management/minimisation – **Award [3]** for detailed discussion of risk management/minimisation strategies relevant to hazard specified.
Award [2] or [1] if only one strategy is outlined, or alternatively, if strategies are general in nature and do not link explicitly with hazard. [5]

(b) **(i)** The primary data collection methods selected for description must be relevant to the fieldwork and this must be cross-referenced with the report submitted.

For each method:
Award [3] for a detailed description of a primary data collection method with explicit and convincing reference to the fieldwork undertaken.
Award [2] or [1] when the methodology described lacks depth and reference to the fieldwork is more general and less explicit.
2 × [3] [6]

(ii)
- **Strengths** – these will vary, but may relate to factors such as the nature of the equipment, representative sampling, a rigorous approach in the field, etc.
- **Limitations** – limitations relate to weaknesses in the method which may obviously influence the reliability of the data collected. A range of factors are possible depending on the fieldwork activity.

Award [1] for an answer which outlines a valid limitation.
Award [1] for an awareness of a valid strength.
Award [1] for development of either the strength or weakness.
Alternatively this third mark can be awarded for a second strength or a second limitation. [3]

(c) (i) The statistical analysis performed will depend on the chosen technique, but it must be relevant to the aim of the investigation.

Measures of Central Tendency/Range
Calculation of Mean [2]
Calculation of Median [2]
Identification of the Mode [1]
Calculation of the Range [2]

Spearman's Rank or Nearest Neighbour Analysis
[5] for the accuracy of the calculations, method marks awarded appropriately.
Maximum [3] if error in ranks results in incorrect rs calculation.
Maximum [3] if Spearman's Rank is performed with less than 7 ranked pairs of values.
[2] for accurate statistical interpretation.
Credit interpretation – if accurate for an incorrect rs value.

N.B. Maximum [4] marks if selected statistical technique is inappropriate to investigate the aim stated. [7]

(ii) The statistical analysis stage should allow the candidate to progress to the geographical interpretation stage of the investigation. The candidate is now in a position to produce reliable conclusions which should integrate geographical theory, concepts and models.
Maximum Level 2 for an incorrect or incomplete statistical outcome from **(c)(i)**.
No credit for answers which relate entirely to statistical analysis.

Level 3 ([5]–[6]) – Geographical reasoning is expressed with clarity. There is thorough and detailed geographical understanding of the statistical outcome in relation to the aim/hypothesis. The use of key terminology is accurate and appropriate.

Level 2 ([3]–[4]) – There is a generally accurate explanation with a reasonable attempt to integrate geographical concepts in relation to the aim/hypothesis. A detailed but partial answer maybe at this level.

Level 1 ([1]–[2]) – Explanations are more limited and simplistic and at the lower band level may, in some part, lack clarity. Language used may be basic. [6]

(d) Answers will vary according to the field of study. Do not credit answers which relate to a different study.

Award [3] for an answer which outlines a realistic modification/improvement and logically explains how the suggested amendment could increase the reliability of the conclusion.

Award [2] for an answer which proposes a realistic amendment with a more general justification of how enhanced reliability could be achieved.

Award [1] for an answer which proposes a modification which may be more general in nature. The proposed amendment may be less realistic or the explanation provided more limited. [3] 30

Section A **30**

Section B

2 (a) Candidates are required to explain how each of their two chosen factors affect both river discharge and the storm hydrograph.

Soil This controls the speed of infiltration and the rate of throughflow. Sandy soils, with large pore spaces, allow rapid infiltration. This means that surface runoff will be less and this slows transfer to the river and would reduce river discharge. Since throughflow is slower than surface runoff the storm hydrograph would have a more gently sloping rising limb and lower peak discharge. The opposite applies to clay soils which have much smaller pore spaces. This leads to less throughflow and more rapid overland flow, which increases river discharge. The storm hydrograph will have a steep rising limb and higher peak discharge.

Geology Rocks which allow water to pass through them, whether through pores such as in sandstone or chalk, or along joints (previous) as in some types of limestone, reduce surface runoff and delay water reaching the river channel. This leads to a reduction in discharge and a storm hydrograph with a gently sloping rising limb and lower peak discharge. In contrast impermeable rocks such as granite or basalt result in water reaching the river channel more rapidly. This increases river discharge and produces a storm hydrograph with a steeply rising limb and higher peak discharge.

Land use Since vegetation intercepts and stores rainfall, discharge will be much greater in bare or deforested areas than where the ground is covered in vegetation, whether natural or planted by man. Type or density of vegetation would also be a factor. Urbanisation also greatly increases the speed at which water reaches the river channel and so affects discharge and the storm hydrograph.

Precipitation Prolonged rainfall will cause an increase in river discharge as the ground becomes saturated and infiltration is replaced by surface runoff. This leads to a storm hydrograph with a steeper rising limb and higher peak discharge. Intense rainfall, such as in a thunderstorm, will also increase discharge as infiltration rates are exceeded and surface runoff becomes more rapid. Snowmelt, which releases water held in storage, will also increase discharge, especially if the ground remains frozen and no infiltration is possible.

Drainage density Drainage density is higher on impermeable rocks and clays, and lower on permeable rocks and sands. This would have the same effects on river discharge and the storm hydrograph as for **geology** [above].

Award up to [3] marks for each factor. For full marks the candidate must clearly explain how the factor affects both river discharge and the storm hydrograph. [3]+[3] [6]

(b) (i) Sand [1]

(ii) At a speed of 100 cm sec^{-1} the river is carrying particles up to the size of gravel. As the speed of flow decreases the river's carrying capacity will also gradually decrease and the load will be deposited in order of decreasing grain size. Gravel will be dropped first. When velocity falls to 10 cm sec^{-1} sand will start to be deposited, followed by silt. At a velocity of 1 cm sec^{-1} finer silt and clay will continue to be transported.

Award [5] for a detailed and thorough answer which uses information from the Resource to describe and explain how the river would deposit its load as velocity gradually decreases.

Award [3]–[4] for a general but accurate answer which describes and explains how the load is deposited. Use of the Resource may be limited.

Award [1]–[2] for a limited answer which fails to clearly describe and explain how the load is deposited. [5] 12

3 (a) Solar radiation enters the ecosystem through the process of photosynthesis by green plants. These are the producers. The plants are consumed as food by the first consumers [herbivores]. The herbivores provide food for the second consumers [carnivores], which in turn provide food for the next trophic level [carnivores and omnivores].

The process of energy movement is not 100% efficient as energy is lost through processes such as respiration. This means that fewer organisms can be supported at successive levels.

At each stage the decomposers break down dead organic material and this can be recycled.

If no ecosystem is named, or scale is inappropriate maximum Level 2.

Level 3 ([5]–[6])
The candidate uses information from the Resource and appropriate terminology to describe and explain how energy moves through the small scale ecosystem they have named. There should be good reference to plant/ animal species and/or food chains.

Level 2 ([3]–[4])
The candidate provides a general but accurate answer which explains how energy moves through an ecosystem. The ecosystem may not be named and reference to species may be limited.

Level 1 ([1]–[2])
The candidate provides a limited response which fails to describe and explain clearly how energy moves through an ecosystem. There may be no reference to species in the ecosystem. [6]

(b) A wide range of answers is possible. An ecosystem reflects the inter-relationships between five main factors, plants, animals, soil conditions, geology and climate. Most candidates are likely to choose climatic or soil characteristics. Candidates could describe and explain any two of these characteristics for mid-latitude grassland ecosystems. Answers might include.

The annual range of temperature is high [35 °C] as there is no moderating influence from the sea.

Annual rainfall is low [500 mm] because of distance from the sea.

The thick grass cover provides a plentiful supply of mull humus which forms a black, crumbly topsoil.

For each of their chosen characteristics award up to [3] for a clear description and explanation. [3]+[3] [6] 12

4 **(a)** Hurricane structure is characterised by strong convergence at the lower surface, rapid upward movement in the vortex and divergence aloft. There is an outer convective ring of cumulus clouds and an inner ring of towering cumulonimbus clouds. At the heart of the hurricane is the eye zone which has descending air currents, no cloud and calm conditions. Candidates should produce a diagram which shows these main structural elements. There should also be a scale to the diagram.

Level 3 ([7]–[8])
The candidate produces a well annotated diagram and uses it to provide a clear and well developed description of the structure of a hurricane.

Level 2 ([4]–[6])
The candidate produces an adequate but less detailed diagram and provides a general but incomplete description of the structure of a hurricane or the candidate provides a well annotated diagram of the structure of a hurricane or the candidate fails to produce a diagram but provides a well developed description of the structure of a hurricane.

Level 1 ([1]–[3])
The candidate produces a poor or unclear diagram and the description of the structure of a hurricane is limited or incomplete or the candidate fails to produce a diagram and provides a limited description of the structure of a hurricane.

[8]

(b) (i) The Resource shows a section through a **cold front**. [1]

(ii) The temperature decreases from east to west at ground level. In front of the Frontal zone the temperature is above 5 °C, as the front passes it decreases to –5 °C and after the front has passed it continues to decrease to below –15 °C. Some candidates may note the more rapid decrease at the Frontal zone.

Vertically the temperature decreases with height from over 5 °C to below –20 °C.

(ii) Award up to [3] for a clear description of how the temperature changes both horizontally [2] and vertically [1] across the front.
No figures quoted, maximum [1]. [3] 12

Section B **36**

Section C

Answer **any two** questions

5 The details of the answer will depend on the case study chosen. Candidates must name a large-scale drainage basin or its delta to achieve Level 3. They should provide details of a range of both the physical and human causes of the flood event or events named.

Physical causes could include seasonal climatic changes, e.g. monsoon, rainfall or spring snowmelt, the impact of slope processes (topography), hurricane storm surges, etc.

Human factors might include deforestation, urbanisation, farming practices and channel alteration, dam building, etc.

Level 3 ([9]–[12])
The candidate provides a balanced answer, describing and exploring a number of both physical and human causes of flooding. The case study is clearly located and there is good reference to specific case study examples throughout the answer. Alternatively a sound answer which describes and explains theoretical causes without detailed reference to place can obtain full marks.

Level 2 ([5]–[8])
The candidate describes and explains one or two physical and human factors, but with little or no reference to case study material, or produces an unbalanced answer which concentrates on either the physical or the human causes of flooding. The answer may lack depth or be superficial.

Level 1 ([1]–[4])
The candidate provides a brief or very general answer. There may be no spatial context. The quality of communication may also be poor. [12] 12

6 The details of the answer will depend on the case study chosen. Candidates should describe and explain the characteristics of one vegetation succession. This would include how the succession began and developed through a series of changes to its present stage. Any type of succession, lithosere, psammosere, halosere, etc. is valid. Good candidates will establish the background conditions of climate and topography. The answer should include references to plant species at different stages in the succession and processes such as soil formation, stabilisation, etc. as the succession develops.

Level 3 ([9]–[12])
The candidate identifies a specific vegetation succession and describes and explains how it has developed over time. There is good reference to species present and processes involved.

Level 2 ([5]–[8])
A succession is identified, but the description and explanation of its formation are lacking in depth or clarity.

Level 1 ([1]–[4])
The candidate provides an answer which is very generalised with little reference to spatial context or process. The quality of communication may also be poor. [12] 12

7 An anticyclone is a large mass of subsiding air. The source for this air is the upper atmosphere where there is little water vapour so the air is dry. As the air is descending it is warming adiabatically and therefore condensation does not occur. Cloud formation is suppressed and anticyclones are associated with clear skies and sunny weather. At ground level an area of high pressure is produced. Pressure gradients are gentle resulting in calm conditions with little or no wind.

In winter, since the daylight hours are short and the sun is low in the sky there is little incoming radiation during the day and temperatures are low. At night the absence of clouds causes the temperatures to become very low and fog and frost can develop. These may take a long time to disperse the next day as the sun is so weak.

These atmospheric conditions are likely to impact on people in a variety of ways. There may be traffic problems resulting from black ice on roads, asthma attacks due to the formation of photochemical smog in urban areas, more hospital admissions from accidents due to people falling on ice, cancellation of sporting fixtures, disruption to travel etc.

Candidates may include case study references in their answer, but this is not a requirement of the question.

Level 3 ([9]–[12])
The candidate produces a balanced answer which clearly explains the formation of an anticyclone, explains the weather associated with an anticyclone in winter and discusses its impacts on people.

Level 2 ([5]–[8])
The candidate provides a less detailed or unbalanced answer which may not describe clearly the formation of an anticyclone or its weather conditions in winter and impacts on people.

Level 1 ([1]–[4])
The candidate provides an answer which shows limited knowledge of anticyclonic formation. Explanation of the weather conditions in winter may be unclear and there may be few examples of its impacts on people. The quality of communication may also be poor. [12] 12

Section C **24**

Total **90**

Rewarding Learning

ADVANCED SUBSIDIARY (AS)
General Certificate of Education
2009

Geography

Assessment Unit AS 2

assessing

Human Geography

[AG121]

THURSDAY 11 JUNE, AFTERNOON

MARK SCHEME

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The candidate will display some accurate knowledge and understanding but alongside errors and significant gaps. The relevance of the information to the question may be tenuous.	The candidate will be able to show only limited ability to analyse and interpret the resource material and gaps, errors or misapprehensions may be clearly evidenced.	The candidate will have a form and style of writing which is not fluent. Only relatively simple ideas can be dealt with competently. Material included may have dubious relevance. There will be noticeable errors in spelling, punctuation and grammar. Writing may be illegible in places.	1

Section A

1 (a) (i) Award [1] for the accurate plotting of each velocity value on **Resource 1A**.
- 0.14 m s^{-1} at a depth of 0.2 m
- 0.02 m s^{-1} at a depth of 0.4 m

2 × [1] [2]

(ii) Award [1] for the accurate completion (interpolation) of each of the following isovels.
- 0.4 m s^{-1}
- 0.3 m s^{-1}
- 0.2 m s^{-1}
- 0.1 m s^{-1}

[4]

(iii) In an asymmetrical channel velocity is recognisably higher on the outside of the river bend (Bank X) where the helicoidal current flow spirals to the outer meander bank. In this zone of deeper water, a smaller proportion of the water is in contact with the river banks and bed, reducing energy loss through friction. The inside of the meander bend is characterised by lower velocity as energy loss through frictional resistance is considerably higher in this shallow water zone. The build-up, or aggradation, of point bar deposits on the inside bend contributes to energy loss through friction.

Level 2 ([3]–[4])
Candidate provides a detailed and sound understanding of velocity in relation to fluvial energy and frictional resistance. The answer clearly contrasts the inside and outside of the meander bend and employs specific geographical terminology.

Level 1 ([1]–[2])
Candidate provides a more general description or superficial, explanation of river velocity in the asymmetrical channel. At the lower mark there may be no attempt to contrast inside and outside river bank zones and some inaccuracy may be evident.

[4]

(iv) Spearman's Rank Correlation [1]
Justification [2]
Award [2] for an answer which recognises that Spearman's Rank is suitable to test the degree of association/relationship between the two variables. The **strength/significance** and **type** of relationship can be ascertained.
Award [1] for a valid, but less detailed, answer. [3]

(b) (i) Isle of Mull (population decrease) at a rate of 0.01–10% [1]
Isle of Skye (population gain) at a rate of 0.01–10% [1] [2]

(ii) Breakdown is as follows.

Technique [1]

- Candidates should recognise the mapping technique as choropleth.

Strengths/Advantages [2]

- Choropleth maps provide a striking visual representation of the data which aids, or simplifies, interpretation. The intensity of tone highlights regions with highest/lowest rates of population change.
- The technique allows positive and negative rates of population change to be visually represented, reducing complexity and thus aiding geographical interpretation.

Limitations [2]

- Oversimplification occurs as a regional zone is depicted as having a uniform value which eliminates intra-regional variations.
- Striking contrasts appear evident at boundary zones which can be unrealistic and non-existent in reality.
- A range of values for each regional zone disguises the actual single value appropriate for the location – thus reducing accuracy and precision.

Award [2] for each well expressed strength/limitation.
Award [1] for a valid strength/limitation which is less well developed.
2 × [2] [5]

(iii) 1. 20–24 years [1]

2. 55–59 years [1]

3. Population loss appears to be dominated by the young economically active sector resulting in a higher than average proportion of aged dependants. Potential development problems may result from underpopulation and rising dependency. Decreasing thresholds may result in service closures and consequently job losses. The shrinkage in the working population reduces tax payments and thus less money is generated to fund welfare provision. The negative multiplier hinders development.

   Award [3] for an answer which displays a clear understanding of how the resulting age structure may hinder potential development. Explicit resource use is evident.
   Award [2] or [1] for a more general explanation of one potential development problem with only limited, or no, reference to age structure or resource material. [3]

(c) **(i)**
- Large supplies of moisture available in the Atlantic Ocean to provide latent heat through condensation to drive the storm.
- Sea temperatures which exceed 27 °C to provide a continuous source of heat to maintain rising air currents.
- Low latitudes around 20 °N of the equator to allow the tropical storm to rotate as the Coriolis force is sufficient.
- Anticlockwise rotation of air. Warm air is drawn into the system in a spiralling manner developing the intensity of the hurricane.
- Image indicates the date (27 August 2005). In the Autumn season sea temperatures reach their maximum which aids the formation of the feature.

Award [1] for identifying a condition visible on the resource and [1] for explanation.
2 × [2] with maximum [3] if no **overt** Resource use. [4]

(ii) Satellite images have a wide range of geographical uses. These include:
- Mapping of urban growth.
- Monitoring deforestation, desertification, etc.
- Mapping of hazards such as floods, fires, oil spills, volcanic activity, etc.
- Location of minerals, oil reserves, etc.
- Climate change

Award [1] for an acceptable **geographical** use of remotely sensed images. Do not credit answers which relate to any aspects of weather/ climate monitoring. [1] 30

Section A **30**

Section B

2 (a) (i) Accept \$8–9 trillions. [1]

(ii) \$1000 (accept \$800 to \$1500). [1]

(iii) Asia and the Pacific have shown the largest increases in total GDP, increasing by 9 trillion dollars by 2030. However, they have had the second lowest increase in GDP per capita only increasing 1 thousand dollars. These areas are likely to have very high crude birth rates and considerable rates of natural increase. The increased wealth has to be shared among a greater number of people and thus the per capita figures are lowered [2].
In comparison, the Middle East and North Africa have increased their GDP total by 3 trillion dollars in the same period, but increased their GDP per capita by 3 thousand dollars. They are likely to have lower crude birth rates and lower rates of natural increase and thus the increased wealth is shared among a smaller number of people thus giving the greater increases in the per capita figures [2].
Description without discussion of natural change, maximum [2] [4]

(b) Dependency ratios would vary from LEDCs to MEDCs. A MEDC would show a very high old age dependency ratio whereas a LEDC would show a high youth dependency ratio [2].
There are many economic effects on a LEDC. For example the large numbers of young create problems in the cost of providing education, the difficulties in providing employment, the cost of training more teachers or midwives, etc. [2] × 2.
Accept answers which focus on aged dependency in a LEDC.

Level 3 ([5]–[6])
A good answer that fully understands the differences of age dependency in LEDCs and MEDCs. They have given two full economic impacts for a LEDC.

Level 2 ([3]–[4)
Candidates who have given inaccurate economic impacts or definitions will fall into this level. Their economic impacts may need more development.

Level 1 ([1]–[2])
Candidates who inaccurately describe the difference in dependency ratios in LEDCs and MEDCs will be placed in this level. Also candidates who do not give economic impacts will be placed here. [6] 12

3 **(a)** Spontaneous settlements in Mexico City are found on the outskirts of the city close to the city boundary; there are none in the city centre. [2]
The level of service provision is very poor. Housing is inadequate and built from packaging, scrap materials and other waste products that have been scavenged. Electricity might be tapped from overhead power lines, and water carried from a well or taps many miles away. Large numbers of people may share a communal tap and there is no sewage system. [2]

A large number of people working here will be employed in the informal sector. Work in the informal sector is irregular and casual, generally unregulated by the government or local authority. Mostly it is labour intensive, small scale, cash-based, and often unskilled. People might sell fruit or vegetables at stalls, or just by the road side. Some might shine shoes or sell matches. They have to work long hours for very little return. [2]
[2] + [2] + [2] [6]

(b) Gentrification is the process whereby an area of housing is renovated and, as a result, their value increases. It is a process which improves the quality of the housing stock and takes the area upmarket. Relatively affluent newcomers displace lower income groups. They need to identify an appropriate area which has experienced this process and evaluate its impact. The evaluation should include both the positive and negative impacts, but a balance is not required.
Answers which concentrate on evaluating redevelopment, maximum [3]

Level 3 ([5]–[6])
Candidates, who clearly understand the process, have identified an appropriate case study and have offered both the positive and negative impacts on their case study will be placed in this level. The case study goes further than simply naming a city.

Level 2 ([3]–[4])
Candidates still understand the term but their evaluation may be weaker or the case study may be very poor. Candidates who simply offer the name of a city as a case study will fall into this level. Similarly candidates who offer no case study and discuss the impact of gentrification in general terms will be limited to this level.

Level 1 ([1]–[2])
A poor answer that shows very little understanding of the meaning of the term and discusses either positive or negative effects only with no case study. [6] 12

4 **(a)** A wide range of measures are acceptable – percentage who can read and write, percentage in primary education, calorie intake, etc. The question asks for a social measure so those who offer an economic measure should be limited to [1].
Accept HDI as its components are social.
[1] for naming a social measure.
[1] for describing their chosen measure.
[2] for evaluating their chosen measure. [4]

(b) Each region has shown a large increase in the number of McDonalds restaurants from 1991 to 1996. Accept description of differences between regions [1].
Socially this means more people will be eating the same foods or have access to the same foods. Individual cultures may be corroded [2]. This is only one possible social effect, candidates may discuss others, e.g. obesity. [3]

(c) Candidates need to discuss the effect of globalisation on a specific case study. Most will discuss TNCs. Candidates who do not use a case study and only generally discuss the effect of globalisation should be limited to [3].
Since aid is an aspect of gobalisation accept case study material on aid. [5] 12

Section B **36**

Section C

Answer **any two** questions

5 The pattern of population distribution needs to be described and then explained in terms of the available physical and human resources. Look for a detailed description that shows variations in population density throughout the country and a sound explanation that reveals a clear understanding of the relationship that exists between population distribution and resources. This is a case study question so we need to see reference to specific places and figures. Both physical and human resources must be addressed but there does not need to be a balance.

Level 3 ([9]–[12])
There is detailed and thorough description of population distribution with specific reference to figures and places. A clear picture is given of the resources in their chosen case study. There is a sound understanding of the relationship between population distribution and the resources. Both physical and human resources are discussed.

Level 2 ([5]–[8])
Candidate provides a general, though accurate description and explanation, but there is less factual detail and depth throughout or **one** aspect is only dealt with in a superficial manner.

Level 1 ([1]–[4])
Candidate provides a limited answer which may focus on description only. The answer is lacking in detail and depth on all aspects or there may be incorrect information. Answers with no case study or inappropriate case study would also fall into this level. [12] 12

6 The specification lists: green field developments, suburbanisation, counterurbanisation and transport infrastructure as the issues in the rural–urban fringe that need to be studied. Candidates should be able to discuss at least three issues. There does not need to be balance in the issues discussed, but three need to be included. They should be able to demonstrate their issues by referencing place for illustration.

Level 3 ([9]–[12])
Candidate shows a detailed and thorough explanation of the issues faced in the rural–urban fringe. They discuss at least three issues and have related these issues well to place for illustration purposes.

Level 2 ([5]–[8])
Candidate still provides a good answer, but the depth of knowledge may be less. They may only discuss one or two issues faced in the rural–urban fringe. Their reference to place for illustration may be poor.

Level 1 ([1]–[4])
A limited answer that lacks understanding of the issues expected. There may be inaccuracies and incorrect information. [12] 12

7 Colonialism is taking political and economic control of a foreign country and establishing some form of administration in that country. Candidates will most likely focus on the removal of manufacturing industries in the colonies and the establishment of monoculture. They need to not only outline these processes, but make a clear attempt to address how such activities affected development in a LEDC they have studied.

Neo-colonialism is economic control of a foreign and politically independent country through monetary loans or bilateral aid. Many will discuss transnational companies, but be wary of answers that simply outline the effects of transnational companies. They need to clearly describe how such activities have affected the level of development in a LEDC they have studied.

Level 3 ([9]–[12])
Candidate has a clear understanding of the meaning of the process they have selected. They show a solid outline of the effects of such process and are able to relate these effects to a specific LEDC.

Level 2 ([5]–[8])
Still a good answer, but the depth of knowledge may be less. They may be able to outline the effects, but do not connect these to the level of development in a specific place.

Level 1 ([1]–[4])
Candidate has inaccuracies in their answer. They may not have a full understanding of the process they are discussing and the impacts of such process are vague and limited. [12] 12

Section C	**24**
Total	**90**