



*Rewarding Learning*

**ADVANCED SUBSIDIARY (AS)  
General Certificate of Education  
2017**

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**Geography**  
**Assessment Unit AS 2**

*assessing*

Human Geography

**[AG121]**

**FRIDAY 19 MAY, AFTERNOON**

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**MARK  
SCHEME**

## MARK SCHEMES

### Foreword

#### Introduction

Mark Schemes are published to assist teachers and students in their preparation for examinations. Through the mark schemes teachers and students will be able to see what examiners are looking for in response to questions and exactly where the marks have been awarded. The publishing of the mark schemes may help to show that examiners are not concerned about finding out what a student does not know but rather with rewarding students for what they do know.

#### The Purpose of Mark Schemes

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

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

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

The Council hopes that the mark schemes will be viewed and used in a constructive way as a further support to the teaching and learning processes.

## 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. Markers 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

AVAILABLE  
MARKS

1 (a) (i) Nearest Neighbour for 11 is 10 and for 23 it is 27 [2]

(i)  $R_n = 2 \times 0.203 \sqrt{\frac{30}{6.33}}$  [1]

$R_n = 0.406 \sqrt{\frac{30}{6.33}}$  [1]

$R_n = 0.406 \times 2.176$  [1]

$R_n = 0.883$  (accept 0.89) [1]

Type of distribution = Random [1]

This means our hypothesis would be rejected [1] [6]

- (iii) • The delineation of the boundary area will require very careful consideration. A larger area will lower the  $R_n$  value and exaggerate the extent of clustering. Conversely the inclusion of a smaller area will increase the  $R_n$  value and exaggerate the extent of regularity. This can affect any hypothesis being tested.
- The measurement of the straight-line distances between the points and their nearest neighbour can create some problems. For example, if the points relate to settlements it may be difficult to locate the centre point for measurement, especially if the settlement has a linear morphology.
  - Although Nearest Neighbour statistic provides a reliable classification pattern, it provides no explanation for the distribution. Geographers need to complete further research to explore potential geographical reasons for the patterns classified.
  - Number of points should exceed 30 for accurate analysis. [2]

(b) (i)

Description	Type of sampling	Diagram number
Bedrock has been taken into account and sites are located according to the percentage occurrence of different rock types	Stratified	3
Sites are selected entirely due to chance and all parts of the river have an equal probability for selection	Random	2
Sites are selected at equal distance intervals	Systematic	1

[6]

- (ii) Pragmatic sampling is when a more flexible approach to site selection is needed. When there are significant constraints within the physical or human environment, the site/sample will be chosen by the researcher. For example, the occurrence of hazardous sites, the lack of landowner permission or restricted access. [1]

## Disadvantages:

- Selection is an obvious problem as the sample is controlled by the researcher on the basis of certain characteristics. The approach thus lacks absolute objectivity as sites are generated in a non-random way.
- As this method is less rigorous, data accuracy, validity and thus statistical reliability are compromised.
- There can be no assurance that data will be representative as it is highly probable that results may be influenced by distortion. [2]

## Advantages:

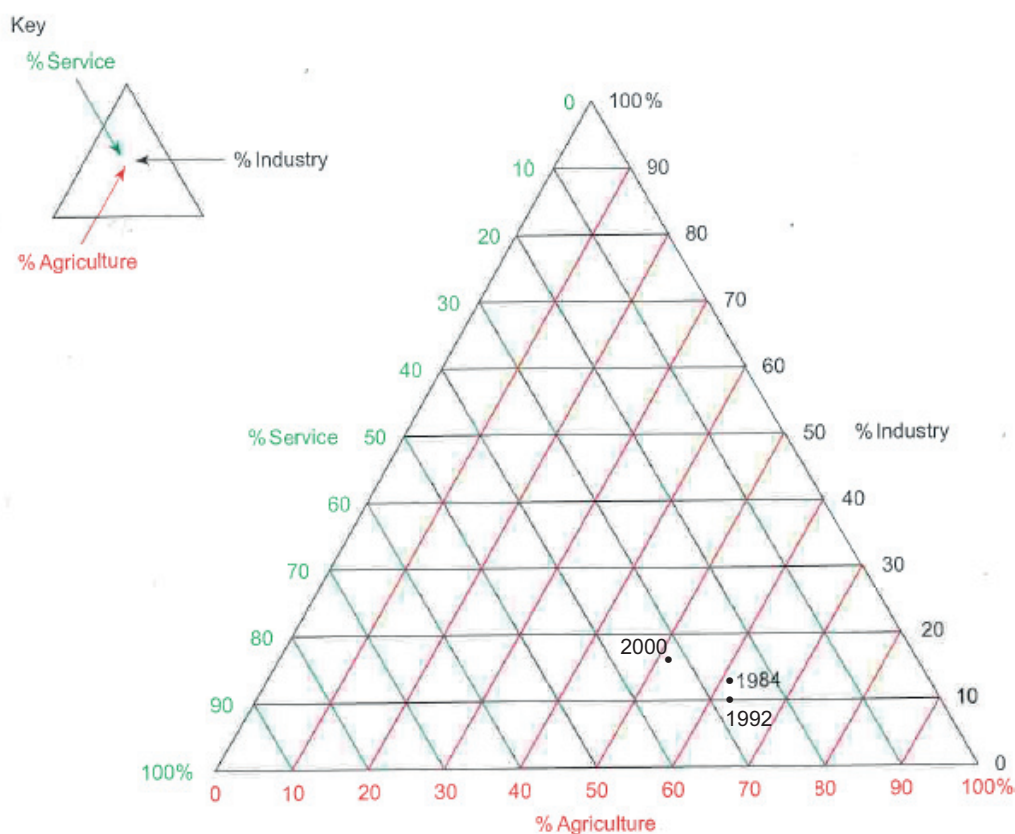
- Although limited advantages exist it may be necessary to deviate from more rigorous sampling methods for practical reasons such as risk avoidance.
- This sampling method should yield data which could be processed and subsequently it may be possible to make reasonable judgements or estimates. [2]

[5]

Candidates who only look at advantages or disadvantages should get max [3]/[4]

(c) (i)

Resource 1F



[2] for each correctly positioned dot

[1] for correctly added labels

[3]

(ii) Triangular graphs need:

- three sets of data that need to be displayed and
- The cumulative total of the three sets is 100%.

[2]

- (d) (i) The mode is 4 [1]
- (ii) The range is 0.19 [1]
- (iii) The average depth was calculated for each part of the river. However, the average value hides any extreme values that were recorded. The extreme values may have also had a disproportionate impact on the final figure used. This cannot be noted from the data in the table. [2]

**Section A**AVAILABLE  
MARKS

30

30

## Section B

AVAILABLE  
MARKS

- 2 (a) In Florida there are larger than average numbers of elderly dependents. In Alaska there is a significant increase in the number of economically active age group, although this is more evident with the male population. For example, in Alaska the 40–45 age group has 14% of the male population but this is only 2% in Florida. However, in Florida the 85–90 age group is 5.5% of the population and this is 0% in Alaska. [4] If no figures are provided then max [2]. If no relation to US pyramid as a whole, maximum [3]. [4]

- (b) In Alaska there are an above average number of economically active males. Alaska has higher latitude and is therefore much colder and would provide a harsher living environment not suited to elderly people. We can see from the resource that the oil industry accounts for one third of employment in this area. The bulge in the economically active male population would be caused by temporary workers moving to the area for this employment. Few families would move to here permanently due to the harsh conditions.

However, Naples in Florida has a much higher than average annual temperature, we know this from its lower latitude on the map. These pleasant living conditions have attracted a lot of elderly people in their retirement. They see this as a nice area to retire to and thus the above average number of elderly people. If only one area discussed, maximum [2]. [4]

- (c) Candidates will find it hard to focus on the political issues here, but do not award those who discuss the economic impacts. They may focus on increased campaigning towards issues that will win the 'grey' vote at the expense of issues affecting younger voters. They may also discuss increased political debates over issues such as euthanasia. These are only examples so mark on individual merit. If only one case used, maximum [3]. [4]

12

- 3 (a) The zone where the rural and urban area meets is called the rural–urban fringe. As the urban area increases in size it encroaches on former rural environments. The specification names suburbanisation, counterurbanisation, transport infrastructure and Greenfield developments as the main issues which affect these areas.

Candidates need to only discuss 2. Mark as  $2 \times [3]$ . So no levels required. If no reference to the resource is made, max [4]. If no reference to place made, max [4] ( $2 \times [2]$ ). They should discuss the photographs showing Greenfield development in the rural–urban fringe of Belfast and the impact that this would have on the local area and its people. No reference to resource, maximum [5]. No reference to place, maximum [5]. [6]

- (b) The specification highlights population change and service provision as the main issues faced in remote rural environments so candidates will focus on these. Remote rural areas are affected by out migration especially by the young and economically active age groups. This leaves behind an elderly population structure. With falling population numbers and an increasingly ageing population some services are no longer viable, e.g. primary schools close, post offices close, public transport services are reduced or withdrawn in some cases. Consequently the area becomes even more isolated which leads to even more out migration and the area goes into a downward spiral of neglect. Candidates have to identify and describe two problems and they must discuss them with reference to place for illustration. Mark as  $2 \times [3]$ , so levels are not required. Max [5] if no valid place is referenced. [6]

12



- 4 (a) A trade pattern is the relationship between a country's imports and their exports and their subsequent trade balance. If a country is exporting more than they are importing they have a positive trade balance and will be earning money. If they are importing more than they are exporting then they will have a trade deficit as they are buying more than they are selling. Trade balance is the relationship between the value of imports and the value of exports. We can see from the resource that India has always had a negative trade balance where the value of its imports is less than the value of its exports. However, this deficit has increased significantly over the time period shown; in 2007 this deficit reached –70 000 but in 1991 it was only –1000. However, even though they are in a trade deficit we can clearly see that their total trade has increased significantly over the time period. [4]  
 India will have less money for investment as they have a trade deficit. This means development will be slower. Until it is selling (exporting) more than it is buying (importing) its development will be lower than it could be. [2]  
 Mark as [4] and [2]. So no levels required. [6]  
 No deficit and only total trade, maximum [2] out of [4] for description; maximum [1] out of [2] for influence.  
 No total trade discussed, only deficit described, maximum [3] out of [4] for description.  
 No figures given, maximum [3] out of [4] for description.
- (b) They can choose any composite measure of development but most will identify the Human Development Index. For their chosen indicator they need to name it correctly, that is, fully and need to correctly state all the indicators used in its measurement. [2]
- (c) There are a range of positive impacts they could offer to explain this result.
- The increased range of foods that they may now have access to
  - The increased exposure to different cultures and increasing cultural diversity within their country.
  - The increased travel now available to them
  - The increased employment opportunities
  - Economic growth through investment
- There are many reasons they may offer so mark on individual merit.  
 They need a social and an economic impact so mark as 2 × [2].  
 No reward for negative impacts. [4]

**Section B****AVAILABLE  
MARKS**

12

**36**

## Section C

AVAILABLE  
MARKS

- 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 but 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])**

Candidates who discuss population structures will be limited to this level (time or space). Candidates who only offer description and no explanation are also limited to this level. There may be poor geographical terminology. [12]

12

- 6 CHOICE A:** The candidates need to have named a specific regional development agency working in a remote rural area and outline how this agency has tried to deliver economic regeneration. They need to have all the depth associated with a case study producing place names and figures. Better candidates will offer some discussion on how successful this agency has been, but this is not necessary for Level 3.

**Level 3 ([9]–[12])**

A good answer that has named a regional development agency working in a remote rural area. They have clearly identified how this agency aimed to bring economic regeneration. They have produced case study specifics and the quality of communication is good.

**Level 2 ([5]–[8])**

Still a good answer, but the depth of knowledge on either the workings of the regional development agency or the case study is less or candidates with no case study will be limited to this level.

**Level 1 ([1]–[4])**

A poor answer that lacks key elements of the question and depth of knowledge is very poor. Quality of communication is poor or limited.

**CHOICE B:** The candidate needs to name a protected area and outline with case study specifics how this area has been managed. They need to outline how this management has catered for the needs of conservation, recreation and tourism within their protected area. Place names and, where appropriate, figures are expected for Level 3.

**Level 3 ([9]–[12])**

A good answer that has named a protected area. They have clearly identified how this area has been managed for conservation, recreation and tourism and have discussed all three. They have produced case study specifics and the quality of communication is good.

**Level 2 ([5]–[8])**

Still a good answer but the depth of knowledge may be less. Candidates who do not discuss one of the management issues (recreation, tourism or conservation) will be limited to this level. Candidates with a poor case study will be limited to this level.

**Level 1 ([1]–[4])**

A poor answer that lacks key elements of the question and depth of knowledge is very poor. Quality of communication is poor or limited. [12]

AVAILABLE  
MARKS

12

7 There are two main elements to this question – the causes and solutions of debt. Causes for the debt burden may include:

- Many LEDCs borrowed heavily from the 1960s onward in an attempt to develop industrialisation. At this stage the MEDCs and the World Bank were willing to lend at relatively low interest rates. The loans were used to finance capital-intensive projects such as power stations, often using western technology and expertise. In the 1970s, partly due to the downturn in the global economy, these interest rates were increased.
- The increase in the price of oil had a further serious impact on many LEDCs. Many LEDCs were heavily dependent on imported oil, and some were forced to borrow still more to maintain their levels of progress.
- Trade problems also affected the LEDCs. In the west the cost of manufactured products increased but the price of primary goods or commodities fell. As LEDCs exported mostly commodities and imported manufactured goods, their balance of trade deteriorated, pushing them further into debt.
- In some cases the loans were spent unwisely on large capital schemes and the LEDCs did not have an adequate trained workforce to make these schemes operational.

Solutions: In the late 1990s many LEDCs received some help with their mounting debt burden. These included additional loans at much lower rates of interest, but most were tied to strict conditions such as SAPs. In 2000 the Millennium Development Goals were set up along with the Make Poverty History Campaign to highlight awareness of the problems in many LEDCs. The proposed measures that were set out to improve the situation in Africa included an extension of the debt relief scheme known as the Heavily Indebted Poor Country Initiative. The poorest 18 countries are to have their debts completely written off.

Candidates need to address both but a balance is not needed.

**Level 3 ([9]–[12])**

A good answer that clearly understands the causes of debt and is able to offer a number of ideas as to the solutions to this problem. Quality of language is good.

**Level 2 ([5]–[8])**

Still a good answer but one of the elements to the question may be weaker or poorly attempted. The depth of knowledge will be less. Candidates who have only poorly developed reference to place and those who omit either the cause or the solution cannot get more than Level 2.

**Level 1 ([1]–[4])**

The understanding is poor and there may be inaccuracies. The quality of communication will be poor.

[12]

**Section C****Total****AVAILABLE  
MARKS**

12

**24****90**