A-level
GEOGRAPHY
7037/2
Paper 2 Human Geography

Mark scheme

June 2021

Version: 1.0 Final Mark Scheme

2 1 6 A 7 0 3 7 / 2 / M S

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

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

Further copies of this mark scheme are available from aqa.org.uk

Level of response marking instructions

Level of response mark schemes are broken down into levels, each of which has a descriptor. The descriptor for the level shows the typical performance for the level. There are marks in each level.

Before you apply the mark scheme to a student's answer read through the answer and annotate it (as instructed) to show the qualities that are being looked for. You can then apply the mark scheme.

The notes for answers provide indicative content. Students' responses may take a different approach in relation to that which is typical or expected. It is important to stress that examiners must consider all a student's work and the extent to which this answered the question, irrespective of whether a response follows an expected structure. If in doubt the examiner should contact their team leader for advice and guidance.

Step 1 Determine a level

Start at the lowest level of the mark scheme and use it as a ladder to see whether the answer meets the descriptor for that level. The descriptor for the level indicates the different qualities that might be seen in the student's answer for that level. If it meets the lowest level then go to the next one and decide if it meets this level, and so on, until you have a match between the level descriptor and the answer. With practice and familiarity you will find that for better answers you will be able to quickly skip through the lower levels of the mark scheme.

When assigning a level you should look at the overall quality of the answer and not look to pick holes in small and specific parts of the answer where the student has not performed quite as well as the rest. If the answer covers different aspects of different levels of the mark scheme you should use a best fit approach for defining the level and then use the variability of the response to help decide the mark within the level, ie if the response is predominantly level 3 with a small amount of level 4 material it would be placed in level 3 but be awarded a mark near the top of the level because of the level 4 content.

Step 2 Determine a mark

Once you have assigned a level you need to decide on the mark. The descriptors on how to allocate marks can help with this. The exemplar materials used during standardisation will help. There will be an answer in the standardising materials which will correspond with each level of the mark scheme. This answer will have been awarded a mark by the Lead Examiner. You can compare the student's answer with the example to determine if it is the same standard, better or worse than the example. You can then use this to allocate a mark for the answer based on the Lead Examiner's mark on the example.

You may well need to read back through the answer as you apply the mark scheme to clarify points and assure yourself that the level and the mark are appropriate.

Indicative content in the mark scheme is provided as a guide for examiners. It is not intended to be exhaustive and you must credit other valid points. Students do not have to cover all of the points mentioned in the indicative content to reach the highest level of the mark scheme.

An answer which contains nothing of relevance to the question must be awarded no marks.

Section A

Qu	Part	Marking guidance	Total marks
01	1	**Outline the spatial organisation of one transnational corporation (TNC) you have studied.** Point marked Allow 1 mark per valid point with extra mark(s) for developed points (d). For example: Notes for answers Allow credit for specific knowledge and understanding of the spatial organisation of any TNC. Max 3 marks if the TNC is not clearly identified. If more than one TNC used, credit the best response. • Apple is a global brand which has its main operations based across North America, Europe and Asia (1). Its HQ and research centre is based on its own campus – Apple Campus in Cupertino, California (1) (d). Assembly is mainly outsourced to Foxconn who have bases across China making use of a vast low-cost labour market (1). Foxconn has its main production base in its own purpose-built city, Foxconn City in Guangdong (1) (d). • The Indian Tata group is a made of several different companies involved in products as diverse as cars, coffee, steel and software (1). It operates in over 80 countries with most of the headquarters based in India (1). Over 60% of its revenue is accrued outside India (1). • Nestle is the world's biggest food company with its headquarters based in Vevey, Switzerland (1). It has operations in 86 countries across the world employing 328 000 people globally (1) (d). It is an umbrella organisation, which has acquired or has stakes in many other brands such as L'Oreal, Starbucks and Crosse and Blackwell (1). Nestle shows evidence of vertical and horizontal integration (1) (d). Although a Swiss company, nearly 45% of its sales occur in North America (1). • The TNC has its headquarters in the home country with subsidiary headquarters in three other continents where their operations are based (1). Research and development is based in the home country near to major universities (1) (d). This allows them to make use of the facilities and attract a graduate labour force (1). The notes for answers are not exhaustive. Credit any valid points.	**4** **AO1 = 4**

01	2	**Analyse the data shown in Figure 1a and Figure 1b.** **AO3** – Analysis of the compound line graph and divided bar graph showing data about UN peacekeeping forces. Mark scheme **Level 2 (4–6 marks)** **AO3** – Clear analysis of the quantitative evidence provided which makes appropriate use of data to support. Clear connections between different aspects of the data. **Level 1 (1–3 marks)** **AO3** – Basic analysis of the quantitative evidence provided which makes limited use of data to support. Basic or limited connections between different aspects of the data. Notes for answers This question requires analysis of the changing regions with forces in active service and origin of UN peacekeeping forces. There should be analysis of the compound line to show changes in the amount and distribution of forces in active service and the divided bar to look at the distribution of the origin of forces. Connections can be made between Figure 1a and 1b and within the data sets, for example by analysing the relationship between regions with forces in active service and origin of the forces. **AO3** • Figure 1a shows that the number of forces in active service has fluctuated considerably between 1955 and 2015. The highest number was in 2016 at 105 000 with the lowest numbers in 1956/57 and between 1968 and 1973 at only 5000. • The number of forces in active service has increased rapidly since 2003 with most of the increase seen in the Middle East/North Africa and Sub-Saharan Africa. Between 2005 and 2010 the Middle East/North Africa saw an increase of 40 000 personnel. • There was a spike showing an increase in forces around the mid-1990s with most of this increase in Europe and Sub-Saharan Africa. Since 2007 there hasn't been any UN forces in Europe. • Asia has had very little deployment of UN forces with its peak of around 10 000 troops seen in the early 2000s. In 2016 there were no personnel in Asia. The Middle East/North Africa has had a constant presence of UN forces, with the exception of 1968–1973. • The divided bar shows that the origins of the peacekeeping forces has changed over time – in 1995 over half came from Europe but in 2016 this had reduced by 46%. Whereas Sub-Saharan Africa supplies over 6 times the number of forces in 2016 compared to 1995. • 1b shows some relationships to 1a, for example in 1995 Europe accounted for about 50% of all forces in active service and this is reflected by the similar percentage of forces coming from Europe.	**6** **AO3 = 6**

		• However, the relationship between 1995 and 2016 is not always clear. For example, Asia accounts for over 1/5 of troops in 1995 and over a third in 2016 yet accounts for no deployments in either 1995 or 2016 in 1a. Similarly, Middle East/North Africa has a similar percentage in 1b in both years yet in 2016 in 1a it has 9 times the number of troops in active service. Credit any other valid analysis.	

01	3	**Using Figure 2 and your own knowledge, assess the importance of geographical location in trading relationships between major economies such as China and smaller less developed economies.** **AO1** – Knowledge and understanding of trading relationships between major economies and smaller less-developed economies **AO2** – Applies knowledge and understanding to the novel situation to analyse and evaluate the role of geographical location in trading relationships between major economies such as China and the rest of the world. <u>Mark scheme</u> **Level 2 (4–6 marks)** **AO1** – Demonstrates clear knowledge and understanding of concepts, processes, interactions and change. **AO2** – Applies knowledge and understanding to the novel situation offering clear analysis and evaluation drawn appropriately from the context provided. Connections and relationships between different aspects of study are evident with clear relevance. **Level 1 (1–3 marks)** **AO1** – Demonstrates basic knowledge and understanding of concepts, processes, interactions, change. **AO2** – Applies limited knowledge and understanding to the novel situation offering basic analysis and evaluation drawn from the context provided. Connections and relationships between different aspects of study are basic with limited relevance. <u>Notes for answers</u> This question requires knowledge of trading relationships across the globe. Students should apply this knowledge to assess the importance of geographical location in such relationships. There must be reference to evidence presented in figure 2, but they may also consider other trading relationships between major economies and smaller ones. There is no credit for AO3 analysis of the data shown in Figure 2 used in isolation. For Level 2 there must be reference to Figure 2 **AO1** • Global features in the pattern and volume of international trade. • The role of different factors in trading relationships, such as trade agreements, geographical location, political alliances, aid agreements. • Knowledge and understanding of the role of globalisation in trading relationships. • Trading relationships between large economies other than China, such as EU or US and smaller economies.	**6** **AO1 = 2** **AO2 = 4**

AO2

- Evaluation of the role played by geographical location in international trading relationships between major economies and smaller less developed economies.
- Figure 2 suggests that with the exception of the US the largest exports are to countries that are geographically close such as Japan and Hong Kong. So, trade between all sizes of economies typically displays distance decay perhaps reflecting regional political influence, cultural affinity and the role of transport costs.
- In general, when considering trade with smaller less-developed economies, location seems to be an important factor. Figure 2 shows that China exports considerably higher values to those smaller economies in closer proximity. This is typical of global patterns – trade having become more regionalised, particularly in Asia, where intra-regional trade increased 25% between 1990 and 2010.
- Analysis of the trading relationship between China’s exports and African economies suggests that the role of geographical location is not important and other factors such as economic development, trade deals and political relations may be more significant. For example, China has set-up special trade zones with some African countries, increasing its exports to those countries.
- There is some evidence that geographical location has limited impact on the trading relationship between China and other smaller less developed economies - for example, China exports relatively low amounts to close western neighbours such as Uzbekistan and Tajikistan, despite being in a trading agreement with them. This suggests that other factors are more important.
- Evaluation of the importance of location in trading relationships between other major economies and smaller economies. For example, trade between the US and Latin America, suggests the importance of location, however they may also suggest this is also related to favourable trade terms with Mercosur.

Credit any other valid approach.

01	4	**'Climate change and pressures from economic growth mean that it is becoming more difficult to protect the global commons, such as Antarctica.'** **To what extent do you agree with this view?** **AO1** – Knowledge and understanding of the concept of the Global Commons and the need to protect it. Knowledge and understanding of the threats to Antarctica. **AO2** – Application of knowledge and understanding to analyse and evaluate the governance and protection of the Global Commons including Antarctica, in the light of threats from climate change and economic pressures. <u>Notes for answers</u> The question requires students to critically appraise the protection and governance of the global commons in terms of managing threats from climate change and economic pressures such as tourism or mineral exploitation. They have been given a steer of Antarctica but there is no requirement for them to refer to it and they could write their whole answer on other global commons. **AO1** • Knowledge of the concept of the global commons. • Understanding of the threats to the global commons and the rights of all to the benefits of the commons. • The contemporary geography of Antarctica. • Threats to Antarctica due to climate change. • Threats to Antarctica due to economic pressures – fishing & whaling, mineral exploration, tourism, scientific research. • Governance of Antarctica and other Global Commons – international organisations and NGOs. • Strategies for enhancing protection of Antarctica and other global commons. **AO2** • Analysis of the need for international governance of the global commons such as Antarctica in light of future economic pressures from mineral exploration as technology improves and global reserves decline. • The link between threats to Antarctica and other global commons and the need for management. The fragility of the ecosystem and need for protection. For example, overfishing of krill, essential to the Southern Ocean ecosystem, by more than one nation, needs international co-operation. • Critical appraisal of the challenges of managing the global commons. With the exception of coastal waters, no-one country owns the oceans, yet all countries can use the resources, if one country takes more fish, it alone benefits. Reference to the 'tragedy of the commons'.	**20** **AO1 = 10** **AO2 = 10**

		• Evaluation of the role of international government organisations in protecting Antarctica and the global commons. The Antarctic Treaty 1959 governs protection for a wide scope of activities from tourism to scientific research. The number of signatories has grown to 52 nations. Extra protection has also been added at later dates such as the Madrid Protocol in 1991, which designates Antarctica as a natural reserve devoted to peace and science. • The IUCN provides governance for the High Seas. They try to provide protection for areas where there are Areas Beyond National Jurisdiction (ABJN). This is challenging as there are few laws in place, so it is difficult to ensure compliance. • Evaluation of the role of international agreements to protect the global commons, for example the Paris Agreement to limit carbon emissions is trying to reduce the impact of climate change on our oceans and Antarctica. • Analysis of the role played by NGOs. Greenpeace has raised awareness of environmental issues via positive action campaigns such as ‘krill-gotten gains to fund Antarctic research’. They also have #FireDrillFriday to campaign for Green Deals to protect the atmosphere. • Alternative futures in terms of the role of international governance and NGOs would also be relevant. For example, the Madrid Protocol only runs until 2048 and new agreements will be needed to ensure the future protection. • The extent to which we are already seeing damage in the global commons may also be considered. They may take the view that despite all the measures in place, there has been limited success in preventing change. • Overall conclusion should seek to consider the extent to which the global commons can be protected. It should be supported by the body of the text and evidence provided. Any valid assessment will be credited.	

Marking grid for Question 1.4

Level/ Mark Range	Criteria/Descriptor
Level 4 (16–20 marks)	• Detailed evaluative conclusion that is rational and firmly based on knowledge and understanding which is applied to the context of the question (AO2). • Detailed, coherent and relevant analysis and evaluation in the application of knowledge and understanding throughout (AO2). • Full evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts (AO2). • Detailed, highly relevant and appropriate knowledge and understanding of place(s) and environments used throughout (AO1). • Full and accurate knowledge and understanding of key concepts and processes throughout (AO1). • Detailed awareness of scale and temporal change which is well integrated where appropriate (AO1).
Level 3 (11–15 marks)	• Clear evaluative conclusion that is based on knowledge and understanding which is applied to the context of the question (AO2). • Generally clear, coherent and relevant analysis and evaluation in the application of knowledge and understanding (AO2). • Generally clear evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts (AO2). • Generally clear and relevant knowledge and understanding of place(s) and environments (AO1). • Generally clear and accurate knowledge and understanding of key concepts and processes (AO1). • Generally clear awareness of scale and temporal change which is integrated where appropriate (AO1).
Level 2 (6–10 marks)	• Some sense of an evaluative conclusion partially based upon knowledge and understanding which is applied to the context of the question (AO2). • Some partially relevant analysis and evaluation in the application of knowledge and understanding (AO2). • Some evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts (AO2). • Some relevant knowledge and understanding of place(s) and environments which is partially relevant (AO1). • Some knowledge and understanding of key concepts, processes and interactions and change (AO1). • Some awareness of scale and temporal change which is sometimes integrated where appropriate. There may be a few inaccuracies (AO1).
Level 1 (1–5 marks)	• Very limited and/or unsupported evaluative conclusion that is loosely based upon knowledge and understanding which is applied to the context of the question (AO2). • Very limited analysis and evaluation in the application of knowledge and understanding. This lacks clarity and coherence (AO2). • Very limited and rarely logical evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts (AO2). • Very limited relevant knowledge and understanding of place(s) and environments (AO1). • Isolated knowledge and understanding of key concepts and processes (AO1). • Very limited awareness of scale and temporal change which is rarely integrated where appropriate. There may be a number of inaccuracies (AO1).
Level 0 (0 marks)	• Nothing worthy of credit.

Section B

Qu	Part	Marking guidance	Total marks
02	1	**Outline how topography can contribute to the character of a place**. Point marked Allow 1 mark per valid point with extra mark(s) for developed points (d). Allow one mark for a definition and / or example of topography. For example: Notes for answers • Topography, meaning the shape / form of the land and the distribution of its surface features and relationship between them (1). • Topography can lead to broad perceptions made about place character, for example, the rugged landscape of the Isle of Skye (1) due to the spiky nature of its basaltic mountains (1) (dp). This compares to the Cotswolds being ‘quaint’ with its landscape of rolling hills (1) (dp). • Some villages are built along the length of a valley, giving the village a linear structure with houses and roads built parallel to the valley (1). This can result in local people feeling a sense of containment, hemmed in by the valley sides (1) (d). This is turn can lead to greater sense of locality and place identity as the topography has resulted in isolation from other places (1) (d). • Topographical features such as mountains may be composed of a specific rock type (1). The local rock of the mountains may be used to build houses, making them have a distinct look and giving the place its character (1) (d). For example, the ‘slate villages’ of North Wales are known for the houses built of local slate, and the culture of the area is deeply connected with the slate (1) (d). The Notes for answers are not exhaustive. Credit any valid points.	**4** **AO1 = 4**

02	2	**Evaluate the usefulness of Figure 3a and Figure 3b in showing change in Ancoats.** **AO3 –** Evaluation and analysis of the qualitative data shown in **Figures 3a** and **3b** in showing change in Ancoats. Mark scheme **Level 2 (4–6 marks)** **AO3** – Clear evaluation and analysis of the qualitative evidence provided which makes appropriate use of data to support. Clear connections between different aspects of the data. **Level 1 (1–3 marks)** **AO3** – Basic evaluation and analysis of the qualitative evidence provided which makes limited use of data to support. Basic or limited connections between different aspects of the data. Notes for answers The question requires an evaluation of the figures in representing change in Ancoats. They should consider how useful they are at showing change. They may consider relative usefulness but this is not a requirement of the question. No credit for reference to places other than Ancoats or for generic evaluation of photos, poetry or other sources. No credit for simple description of the figures in isolation. **AO3** • Figure 3a gives us a snapshot in time – 1906. Therefore, it is difficult to assess change as we cannot assess whether anything has changed over time. The figure is more useful for assessing lived experience at the time. • The poem and sketch are useful at indicating characteristics which have not changed, in Ancoats such as the climate. It describes it as a 'rainy place' and this is also evident in the sketch. • We can clearly see aspects of life in Ancoats in 1906 which could be used to compare to present day lived experience. For example, it suggests an element of poverty – people wearing clogs. It also suggests that the area is very industrial with air pollution and this first-hand account is useful in assessing lived experience at the time. • The photo also shows a snapshot in time but its usefulness in showing change is more relevant when used in conjunction with 3a. We can clearly see evidence of how some characteristics have not changed, in the presence of large industrial buildings with large tall chimneys. Credit any other valid evaluation and analysis.	**6** **AO3 = 6**

02	3	**Using Figure 4a, Figure 4b and your own knowledge, to what extent do you agree that place-meaning is based on different perspectives?** **AO1 –** Knowledge and understanding of how people form attachments to place. Knowledge and understanding of how place-meaning is based on different perspectives **AO2 –** Application of knowledge and understanding to this novel situation. Interpretation of **Figure 4a and 4b** to assess the extent to which place meaning in Grasmere is based on different perspectives. Mark scheme **Level 2 (4–6 marks)** **AO1 –** Demonstrates clear knowledge and understanding of concepts, processes, interactions and change. **AO2 –** Applies knowledge and understanding to the novel situation offering clear analysis and evaluation drawn appropriately from the context provided. Connections and relationships between different aspects of study are evident with clear relevance. **Level 1 (1–3 marks)** **AO1 –** Demonstrates basic knowledge and understanding of concepts, processes, interactions, change. **AO2 –** Applies limited knowledge and understanding to the novel situation offering basic analysis and evaluation drawn from the context provided. Connections and relationships between different aspects of study are basic with limited relevance. Notes for answers The question requires an understanding of how place-meaning is based on different perspectives. Candidates must look for evidence of different perspectives within the figures and assess the extent to which place-meaning is based on these different perspectives. The question does not require candidates to assess the usefulness of the sources, so do not credit reference to subjectivity or the reliability of the sources. Reference to places other than Grasmere can be credited as AO1 knowledge. For L2 there must be reference to **Figure 4**. **AO1** • Knowledge and understanding of the way humans form attachments to places and how they represent the world to others. • The concept of place-meaning. • Positionality and its impact on different perspectives. • Perspectives on place-meaning in places other than Grasmere. **AO2** • Interpretation of **Figure 4a** and **4b** suggests that local people are not happy about the houseboats. The tweet is from someone in Grasmere and local people are quoted in 4b. They believe that Grasmere is ‘tranquil and beautiful’. They believe it has an environmental value which houseboats would destroy.	**6** **AO1 = 2** **AO2 = 4**

		- **Figure 4b** suggests that the idea of a local perspective of ‘tranquillity and beauty’ is long established in Grasmere, as Wordsworth described this in his poetry. - There is some evidence to suggest that the perspective of a peaceful Grasmere is shared by lots of different stakeholders – from local people to politicians and poets. - Lowther Estates may have a different perspective on Grasmere – seeing it as an area for commercial gain. Perhaps believing that encouraging more tourism is more important than the tranquillity of the area. - The National Park authority must be considering the plans, and this clearly shows how corporate bodies can shape place-meaning. This is clearly impacting on the behaviour of local people who are protesting at the change. - Both **Figure 4a** and **4b** suggest that perspectives on place are emotionally driven because people form strong emotional attachments to places, and they don’t like change. - Candidates may come to a conclusion on the extent to which place-meaning is based on perspectives in Grasmere. Credit any other valid assessment.	

02	4	**With reference to your local place, assess the extent to which qualitative sources (for example songs, artwork) present contrasting images to quantitative sources (for example census data, maps).** **AO1 –** Knowledge and understanding of their local place. Knowledge and understanding of qualitative and quantitative sources and how they may present contrasting images. **AO2 –** Applies this knowledge and understanding to assess the extent to which qualitative and quantitative sources presents a contrasting image in the local place studied. Notes for answers The question links different parts of the theme of Changing places, specifically the representation of place by different sources and the local place study. The question is very open-ended, and candidates may attempt this in a variety of ways. However, there should be a focus on contrasting the ways in which different sources represent their local place. If they refer to more than one place, credit the best response. **AO1** • Knowledge and understanding of qualitative sources such as photography, art, stories. • Knowledge and understanding of quantitative sources such as census data and cartography. • Local place study – character and lived-experience of the place. • The local place characteristics over time. Changing socio-economic and demographic characteristics. • The concept of place-meaning and identity. The individual or collective perception of place. • How places can be represented in a variety of different forms such as advertising, art and how this might show a different viewpoint to census data for example. **AO2** • Analysis of qualitative sources representing their local place. For example, some street art might represent the harsh realities of life in an inner-city area. • Analysis of quantitative sources representing their local place. Census data can be used to show different demographics and employment types, levels of education etc. Specific reference to the changing characteristics shown by the statistical source. For example, census data shows how gentrification and urban regeneration has caused influx of professional young people into inner city areas. • Evaluation of the usefulness of quantitative sources in representing the local place. They may consider the relative usefulness or in isolation. Consideration of the limitations of the sources in showing the characteristics. For example, they may consider that statistics can be manipulated. Many people don’t complete the census.	**20** **AO1 = 10** **AO2 = 10**

		• Evaluation of the reliability of qualitative sources in providing an accurate representation of characteristics of the local place studied. A consideration of the intended audience and subsequent subjectivity. • The contrasts between qualitative sources and quantitative sources in representing the local place. Qualitative sources may exaggerate both positive and negative perspectives of place whereas statistics may not give an indication of actual lived experience. • The similarities between different sources – for example the poem written about weather in a place may be supported by Met Office data. • Analysis of how and the reasons why the local place studied is represented in different forms. How the representations of the place may change over time and how place characteristics might change over time. • A critical assessment of how their place may be represented in a variety of forms and all of these may be used by different audiences and have different meanings to different groups of people. • Critical assessment of the extent to which there are contrasts in representing the local place. Reflection on the effectiveness of how the place studied is represented. A valid response would be to consider the ways in which their own lives have been affected by the ways in which their place is represented. • There should be an overall conclusion. Any conclusion is valid as long as it is supported by evidence in the body of the response. Credit any other valid approach. Evaluation should be based upon preceding content.	

Marking grid for Question 2.4

Level/ Mark Range	Criteria/Descriptor
Level 4 **(16–20 marks)**	• Detailed evaluative conclusion that is rational and firmly based on knowledge and understanding which is applied to the context of the question (AO2). • Detailed, coherent and relevant analysis and evaluation in the application of knowledge and understanding throughout (AO2). • Full evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts (AO2). • Detailed, highly relevant and appropriate knowledge and understanding of place(s) and environments used throughout (AO1). • Full and accurate knowledge and understanding of key concepts and processes throughout (AO1). • Detailed awareness of scale and temporal change which is well integrated where appropriate (AO1).
Level 3 **(11–15 marks)**	• Clear evaluative conclusion that is based on knowledge and understanding which is applied to the context of the question (AO2). • Generally clear, coherent and relevant analysis and evaluation in the application of knowledge and understanding (AO2). • Generally clear evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts (AO2). • Generally clear and relevant knowledge and understanding of place(s) and environments (AO1). • Generally clear and accurate knowledge and understanding of key concepts and processes (AO1). • Generally clear awareness of scale and temporal change which is integrated where appropriate (AO1).
Level 2 **(6–10 marks)**	• Some sense of an evaluative conclusion partially based upon knowledge and understanding which is applied to the context of the question (AO2). • Some partially relevant analysis and evaluation in the application of knowledge and understanding (AO2). • Some evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts (AO2). • Some relevant knowledge and understanding of place(s) and environments which is partially relevant (AO1). • Some knowledge and understanding of key concepts, processes and interactions and change (AO1). • Some awareness of scale and temporal change which is sometimes integrated where appropriate. There may be a few inaccuracies (AO1).
Level 1 **(1–5 marks)**	• Very limited and/or unsupported evaluative conclusion that is loosely based upon knowledge and understanding which is applied to the context of the question (AO2). • Very limited analysis and evaluation in the application of knowledge and understanding. This lacks clarity and coherence (AO2). • Very limited and rarely logical evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts (AO2). • Very limited relevant knowledge and understanding of place(s) and environments (AO1). • Isolated knowledge and understanding of key concepts and processes (AO1). • Very limited awareness of scale and temporal change which is rarely integrated where appropriate. There may be a number of inaccuracies (AO1).
Level 0 **(0 marks)**	• Nothing worthy of credit.

Section C

Qu	Part	Marking guidance	Total marks
03	1	**Outline the role that world cities play in the global economy.** Point marked Allow 1 mark per valid point with extra mark(s) for developed points (d). Max 1 for a qualified example of a world city. For example: Notes for answers • World cities are those that have the greatest influence on a global scale (1). For example, London is an Alpha ++ city due to it being a global financial centre (1). • World cities play a critical role in the well-being of the world economy – only 100 cities accounting for 30% of the global economy (1). They have a disproportionate role in the global economy (1) (d). • World cities are 'hubs' through which wealth, trade, people and culture flow (1). They serve not only the country / region in which they are based but the rest of the world (1) (d). • World cities are seen as centres of innovation, which in turn attracts even more companies and migration of people (1). They are seen as centres of learning, where ideas are shared through universities and science parks (1) (d). • World cities are also important in the role of global politics. They host international summits such as G8 (1) where leaders use their influence to drive trade deals and develop economic links with other countries (1) (d). The notes for answers are not exhaustive. Credit any valid points.	**4** **AO1 = 4**
03	2	**Analyse the data shown in Figure 5a and Figure 5b.** **AO3 –** Analysis of population change in London. Analysis of the distribution of population change and peak population across London boroughs. Mark scheme **Level 2 (4–6 marks)** **AO3 –** Clear analysis of the quantitative evidence provided which makes appropriate use of data to support. Clear connections between different aspects of the data.	**6** **AO3 = 6**

		Level 1 (1–3 marks) **AO3 –** Basic analysis of the quantitative evidence provided which makes limited use of data to support. Basic or limited connections between different aspects of the data. Notes for answers The question requires analysis of the population data shown in Figure 5. Connections may be made both within the data sets and between the graph and map. **AO3** • Until 1900, the population of inner and outer London was increasing rapidly. The rate of increase was higher in Inner London, increasing by 3.5 million in 80 years, compared to about 2.3 in outer London. • After 1900 the population of Inner London begins to decrease, slowly at first and then more rapidly after 1920. This is also supported in 5b where peak populations in the Inner London boroughs are all 1931 or before. • Before 1940 the population of Inner London is higher than that of outer London but after this point outer London exceeds Inner London reaching it maximum difference in 1980 with 1.5 million people more. • Between 1950 and 1980 the population of London is declining both in inner and outer areas. After 1980 both areas see urban resurgence at similar rates. In 5b Outer London boroughs have all seen their peak population in 1951 or after, with the exception of Waltham Forest. • There is a clear pattern shown in 5b between outer London and inner London. All the inner London boroughs had a peak population in 1931 or before with the most central having the earliest peaks. In outer London peak population is for every borough is post 1931, with the majority reaching their pea population in 2011 • They may consider that the pattern may well have changed as the most recent data point is 2011. The outer London boroughs may well still be growing and may have exceeded their previous peaks. Credit any other valid analysis.	

03	3	**Using Figure 6a, Figure 6b and your own knowledge, assess the factors that contribute to cities such as these scoring highly on the liveability index.** **AO1 –** Knowledge and understanding of the concept of liveability and characteristics of liveability in urban areas. **AO2** - Application of knowledge and understanding to assess the factors that contribute to liveability in the cities shown in Figure 6a and 6b. Mark scheme **Level 3 (7–9 marks)** **AO1 –** Demonstrates detailed knowledge and understanding of concepts, processes, interactions and change. These underpin the response throughout. **AO2 –** Applies knowledge and understanding appropriately with detail. Connections and relationships between different aspects of study are fully developed with complete relevance. Analysis and evaluation is detailed and well supported with appropriate evidence. A well balanced and coherent argument is presented. **Level 2 (4–6 marks)** **AO1 –** Demonstrates some appropriate knowledge and understanding of concepts, processes, interactions and change. These are mostly relevant though there may be some minor inaccuracy. **AO2 –** Applies some knowledge and understanding appropriately. Connections and relationships between different aspects of study are emerging/evident with some relevance. Analysis and evaluation evident and supported with some appropriate evidence. A clear but partial argument is presented. **Level 1 (1–3 marks)** **AO1 –** Demonstrates basic/limited knowledge and understanding of concepts, processes, interactions and change. These offer limited relevance with inaccuracy. **AO2 –** Applies limited knowledge and understanding. Connections and relationships between different aspects of study are basic with limited relevance. Analysis and evaluation basic and supported with limited appropriate evidence. A basic argument is presented. Notes for answers This question requires consideration of the factors that make cities ‘liveable’. The focus should be an assessment of the factors that might have contributed to Vienna and other cities in 6a being considered in the top 10 most liveable cities. There is no requirement for detailed knowledge about the cities in Figure 6a – candidates should try to apply their knowledge of factors that make cities liveable to the cities in 6a.	**9** **AO1 = 4** **AO2 = 5**

		AO1 • Knowledge and understanding of the concept of liveability – the qualities of a place that contribute to the quality of life for its residents. • The liveability index – The Economist ranks cities according to their liveability. • Knowledge and understanding of the factors contributing to liveability such as housing, education, infrastructure and culture. • Examples of liveability in cities not shown in Figures 6a or 6b. **AO2** • Analysis of the factors that contribute to liveability in Figure 6a. All cities are found in high income countries. 6 of the top 10 are found in 2 countries, suggesting that governance might be an important factor in liveability. • Evaluation of the importance of factors contributing to liveability in Figure 6a. Wealth obviously determines liveability as all 10 are in high income countries. Without wealth it would be difficult to score highly for housing and infrastructure. • Analysis of the link between location and liveability. For example, 7 of the cities found at similar latitudes so climate may improve the environmental scores. 7 cities appear to be coastal, improving well-being. • Analysis of the factors that make Vienna liveable as seen in Figure 6b. For example, housing is not densely packed with large gardens in these suburbs. There is a lot of green space and opportunities for outdoor recreation. • The extent to which Figure 6b shows a liveable city may also be considered. For example, we are only seeing a portion of the city so it is difficult to assess what life is like for people living in the centre of Vienna. • They may evaluate the concept of liveability and this is creditworthy. For example, the liveability index is just an average so therefore whilst these 10 cities have scored highest there will be large variations in terms of liveability across the city. • They may also consider how some factors that contribute to quality of life are not considered as a part of the index. For example, it doesn't consider racial tolerance or level of equality. • They should come to an overall conclusion that assesses the factors that contribute to the 10 cities being the most liveable. Any view is acceptable as long as it is supported by the rest of the response. Credit any other valid approach.	

03	4	**Using an example you have studied, assess the impact of a river restoration project on urban drainage.** **AO1 –** Knowledge and understanding of urban drainage. Knowledge and understanding of a specified river restoration project. **AO2** - Application of knowledge and understanding to analyse and evaluate the impact of the river restoration scheme on urban drainage. <u>Mark scheme</u> **Level 3 (7–9 marks)** **AO1 –** Demonstrates detailed knowledge and understanding of concepts, processes, interactions and change. These underpin the response throughout. **AO2 –** Applies knowledge and understanding appropriately with detail. Connections and relationships between different aspects of study are fully developed with complete relevance. Analysis and evaluation is detailed and well supported with appropriate evidence. A well balanced and coherent argument is presented. **Level 2 (4–6 marks)** **AO1 –** Demonstrates some appropriate knowledge and understanding of concepts, processes, interactions and change. These are mostly relevant though there may be some minor inaccuracy. **AO2 –** Applies some knowledge and understanding appropriately. Connections and relationships between different aspects of study are emerging/evident with some relevance. Analysis and evaluation evident and supported with some appropriate evidence. A clear but partial argument is presented. **Level 1 (1–3 marks)** **AO1 –** Demonstrates basic/limited knowledge and understanding of concepts, processes, interactions and change. These offer limited relevance with inaccuracy. **AO2 –** Applies limited knowledge and understanding. Connections and relationships between different aspects of study are basic with limited relevance. Analysis and evaluation basic and supported with limited appropriate evidence. A basic argument is presented. <u>Notes for answers</u> This question links two different parts of the specification, namely urban drainage and a specific river restoration project. Students need to link their knowledge of the river restoration project and apply this to their knowledge and understanding of urban drainage. There should be reference to a specific named restoration project. The focus of the question should be the impact of the project on the drainage system rather than environmental improvements. However, water quality could be considered as part of the urban drainage system	**9** **AO1 = 4** **AO2 = 5**

		AO1 • Knowledge and understanding of urban drainage systems – altered storage capacity due to urban reservoirs, channelisation, replacement of vegetation by impermeable surfaces, less soil storage capacity. • Urban water cycles – Reduced evapotranspiration, large surface run-off, reduced infiltration, wastewater discharge. • Urban flood hydrographs – lower base-flows, short lag times, higher peak discharge, steep falling limb. • Catchment management in urban areas – flooding, water quality and environmental issues. • Knowledge and understanding of a specific river restoration project – aims of the project, nature of the project. • Impacts of the river restoration project not related to urban drainage, for example, recreation opportunities or employment. **AO2** • Analysis of the aims of the project in altering urban drainage – reducing flood risk, improving water quality. For example, the river restoration scheme aimed to reduce flood risk by increasing vegetation, thereby increasing interception. • Analysis of the project on a flood hydrograph – increased tree planting would increase the lag-time. • Analysis of the link between the project and the impact on urban drainage. For example, restoration involving restoring meanders from previously straightened channels will slow discharge. • Evaluation of the restoration project in achieving its aims in relation to urban drainage. The extent to which it was successful in its outcomes. • Evaluation of the project may consider unintended outcomes on the urban drainage. For example, changes in river discharge as a result of building gravel banks to encourage greater biodiversity. • The extent to which the restoration project changed urban drainage should be considered. • Response should incorporate a view on the impact of the project on urban drainage. Credit any other valid approach.	

03	5	**‘Strategies used to manage issues associated with economic inequality are usually unsuccessful.’** **With reference to two contrasting urban areas that you have studied, how far do you agree with this statement?** **AO1** – Knowledge and understanding of issues associated with economic inequality and social inequality. Knowledge and understanding of strategies used to manage economic inequality. Knowledge and understanding of two contrasting urban areas.	**20** **AO1 = 10** **AO2 = 10**

AO2 – Application of knowledge and understanding to analyse and evaluate the success of strategies used to manage issues associated with economic inequality in two contrasting urban areas.

Notes for answers

The question links various aspects of the contemporary urban environments section of the specification, specifically the study of two contrasting urban areas and the management of issues associated with economic inequality. The focus is on the evaluation of strategies used in the two urban areas to manage economic inequality. The question is quite broad, and they could tackle the question in a variety of ways. There should be reference to contrasting areas, however the contrast can be seen in a number of ways, for example wealth, scale, location. The contrasting areas could be two different parts of one city.

AO1

- An understanding of the issues associated with economic inequality for example, housing, access to services, employment, environment.
- Associated issues with social segregation and cultural diversity.
- Knowledge and understanding of the strategies used to manage the issues associated with economic inequality.
- Knowledge of urban policies in Britain and other countries.
- Spatial patterns of economic inequality and social segregation in urban areas.
- Knowledge and understanding of the physical and human characteristics of two contrasting urban areas.
- Processes – urbanisation, suburbanisation, counter-urbanisation and urban-resurgence.
- Urban change – deindustrialisation, decentralisation and rise of the service economy.

AO2

- Analysis of the extent of issues associated with economic inequality in two urban areas.
- Physical and human factors contributing to economic inequality in the two urban areas.
- Analysis of the varying aims of strategies in tackling economic inequality. Temporal change may be considered as strategies evolve over time. For example, in the UK from property-led schemes of the 1980s through to the more community focused projects of the 21st century.
- Evaluation of the effectiveness of strategies in tackling economic inequality. For example, in London the ‘London Living Wage’ strategy has lifted 10,000 families out of poverty. However, 21% of earners in London still don’t earn the Living Wage and this has increased by 50% since 2005.
- The extent to which some strategies have amplified issues and widened the gap between rich and poor. For example, redevelopment of New Islington in Manchester resulted in gentrification of surrounding streets, pushing out less-wealthy residents, hence widening the gap.

		• Evaluation of specific strategies focusing on economic inequality such as access to job schemes and living wage schemes. • Analysis of the severity of economic inequality in the urban areas. The gap between rich and poor will be greater in some urban areas than others. Therefore, the success of strategies may be dependent on the severity of the gap in the first place. • Analysis of how the context of the urban area may impact on the success or otherwise of different strategies. • Students may consider the challenges of measuring the success of strategies to tackle inequality. For example, the biased nature of reports or selection of statistics may be considered. Similarly, they could consider different value and attitudes of stakeholders, such as the reporting of success or failure of projects by governments may be to gain a political advantage. • Evaluation of the success of management strategies may consider other factors that have had an impact on economic inequality, widening the gap between rich and poor, for example global recession, conflict. • Overall conclusion may highlight the complexity of managing economic inequality. Success can be measured in a wide-variety of ways and it is difficult to be accurate in measuring that success. • An overall judgement of the extent to which they agree with the statement should be considered. Any conclusion is valid as long as it is supported by the body of the essay. Credit any other valid approach.	

Marking grid for Question 3.5

Level/ Mark Range	Criteria/Descriptor
Level 4 **(16–20 marks)**	• Detailed evaluative conclusion that is rational and firmly based on knowledge and understanding which is applied to the context of the question (AO2). • Detailed, coherent and relevant analysis and evaluation in the application of knowledge and understanding throughout (AO2). • Full evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts (AO2). • Detailed, highly relevant and appropriate knowledge and understanding of place(s) and environments used throughout (AO1). • Full and accurate knowledge and understanding of key concepts and processes throughout (AO1). • Detailed awareness of scale and temporal change which is well integrated where appropriate (AO1).
Level 3 **(11–15 marks)**	• Clear evaluative conclusion that is based on knowledge and understanding which is applied to the context of the question (AO2). • Generally clear, coherent and relevant analysis and evaluation in the application of knowledge and understanding (AO2). • Generally clear evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts (AO2). • Generally clear and relevant knowledge and understanding of place(s) and environments (AO1). • Generally clear and accurate knowledge and understanding of key concepts and processes (AO1). • Generally clear awareness of scale and temporal change which is integrated where appropriate (AO1).
Level 2 **(6–10 marks)**	• Some sense of an evaluative conclusion partially based upon knowledge and understanding which is applied to the context of the question (AO2). • Some partially relevant analysis and evaluation in the application of knowledge and understanding (AO2). • Some evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts (AO2). • Some relevant knowledge and understanding of place(s) and environments which is partially relevant (AO1). • Some knowledge and understanding of key concepts, processes and interactions and change (AO1). • Some awareness of scale and temporal change which is sometimes integrated where appropriate. There may be a few inaccuracies (AO1).
Level 1 **(1–5 marks)**	• Very limited and/or unsupported evaluative conclusion that is loosely based upon knowledge and understanding which is applied to the context of the question (AO2). • Very limited analysis and evaluation in the application of knowledge and understanding. This lacks clarity and coherence (AO2). • Very limited and rarely logical evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts (AO2). • Very limited relevant knowledge and understanding of place(s) and environments (AO1). • Isolated knowledge and understanding of key concepts and processes (AO1). • Very limited awareness of scale and temporal change which is rarely integrated where appropriate. There may be a number of inaccuracies (AO1).
Level 0 **(0 marks)**	• Nothing worthy of credit.

Qu	Part	Marking guidance	Total marks
04	1	**Outline characteristics of an agricultural system.** Point marked If more than one agricultural system chosen, credit the best response. Allow 1 mark per valid point with extra mark(s) for developed points (d). Credit examples where appropriate. For example: Notes for answers • Agricultural systems are characterised by the application of human inputs such as labour and capital to natural factors and elements such as climate and soil (1). Processes convert the inputs into outputs and include cultivation and harvesting, animal husbandry and livestock management (1). Outputs such as food and raw material crop and animal products (1). Such systems are particularly sensitive to environmental factors and relatively prone to the impact of natural environmental hazards, resulting in losses from the system (1) (d). • Intensive farming has large amounts of human inputs such as labour and / or capital (1). They have high levels of productivity from relatively small plots (1) (d). • Hill-sheep farming is an example of an extensive pastoral agricultural system (1) where there are low inputs of labour and machinery but large inputs of an extensive upland area (1) (d). Yields are low in relation to the area of land used (1). • In Almeria, there are large human inputs in the form of labour, greenhouses and fertilisers (1). This means there is large capital investment with many farms being owned by co-operatives (1) (d). Due to the greenhouses, the process of growing fruit and vegetables can take place year-round (1). The system is prone to losses due to natural weather hazards, for example in 2018 many greenhouses were destroyed by severe gales (1) (d). • Subsistence farming is when produce is grown for personal or community consumption (1). This system is most commonly found in LICs and is particularly prone to losses due to natural hazards such as drought (1) (dp). The Notes for answers are not exhaustive. Credit any valid points.	**4** **AO1 = 4**
04	2	**Analyse population change shown in Figures 7a, 7b and 7c**. **AO3** – Analysis of the trends, connections and relationships between the population data and population pyramids. Mark scheme **Level 2 (4–6 marks)**	**6** **AO3 = 6**

		AO3 – Clear analysis of the quantitative evidence provided which makes appropriate use of data to support. Clear connections between different aspects of the data. **Level 1 (1–3 marks)** **AO3** – Basic analysis of the quantitative evidence provided which makes limited use of data to support. Basic or limited connections between different aspects of the data. <u>Notes for answers</u> The question requires analysis of trends and relationships between the population pyramids and the data shown in Figures 7a , 7b and 7c. **AO3** • Figure 7a clearly shows evidence of demographic change. in 1980 31.7% of the population were under 15, whereas in 2010 this had nearly halved to only 17.6%. • The falling proportion of children is also supported by Figure 7c where the birth rate has fallen by 6.1/1000 between 1980 and 2018. • Life expectancy is clearly increasing rising by 14.9 years in the period shown in 7c. In 1980, only about 8% were over 65, whereas in 2010 it has increased to 12.6%. • In 2010, Figure 7a shows that there is a bulge in the working population amongst 35–49 year olds. These three cohorts account for over a quarter of the population. • Figure 7c suggests that the death rate increases between 2000 and 2018, mirrored by the increasing proportion of elderly people seen in 7a and 7b. Credit any other valid analysis.	

04	3	**Using Figure 8 and your own knowledge, assess links between water quality and health.** **AO1** – Knowledge and understanding of the relationship between water quality and health. **AO2** – Application of knowledge and understanding to evaluate the relationship between water quality and health as shown in Figure 8. <u>Mark scheme</u> **Level 3 (7–9 marks)** **AO1** – Demonstrates detailed knowledge and understanding of concepts, processes, interactions and change. These underpin the response throughout. **AO2** – Applies knowledge and understanding appropriately with detail. Connections and relationships between different aspects of study are	**9** **AO1 = 4** **AO2 = 5**

fully developed with complete relevance. Analysis and evaluation are detailed and well supported with appropriate evidence. A well balanced and coherent argument is presented.

Level 2 (4–6 marks)
AO1 – Demonstrates some appropriate knowledge and understanding of concepts, processes, interactions and change. These are mostly relevant though there may be some minor inaccuracy.
AO2 – Applies some knowledge and understanding appropriately. Connections and relationships between different aspects of study are emerging/evident with some relevance. Analysis and evaluation evident and supported with some appropriate evidence. A clear but partial argument is presented.

Level 1 (1–3 marks)
AO1 – Demonstrates basic/limited knowledge and understanding of concepts, processes, interactions and change. These offer limited relevance with inaccuracy.
AO2 – Applies limited knowledge and understanding. Connections and relationships between different aspects of study are basic with limited relevance. Analysis and evaluation basic and supported with limited appropriate evidence. A basic argument is presented.

Notes for answers
The question requires an understanding of the link between water quality and health. Candidates should consider the link between life expectancy and access to clean water as shown in Figure 8. They may also consider the extent to which access to clean water varies by income group and the impact this has on health.

AO1
- Knowledge and understanding of the relationship between environmental variables and incidence of disease.
- The link between water quality and health, including specific diseases such as typhoid and bilharzia.
- Global patterns of health, mortality and morbidity.
- Knowledge of management and mitigation strategies to improve water quality.

AO2
- Analysis of the link between life expectancy and access to improved drinking water. Life expectancy is highest in those countries with 100% access to improved drinking water. People are less likely to die from diseases such as typhoid or cholera.
- However, in countries with low life expectancy below 50, the link is less clear as the percentage with access to improved water varies between 57% and 99%. Clearly factors other than access to clean water must be impacting on life expectancy, such as, diet, conflict etc.
- Evaluation of the extent to which income impacts on access to clean water and life expectancy. High income countries have the highest access to clean water. It may be considered therefore that this is not

		important in terms of the impact on life expectancy. It appears to have more of an impact in lower income groups. • Lower income groups can make the biggest improvements and therefore see a rise in life expectancy. Every year about 500 000 children die from diarrhoea caused by unsafe water. • Evaluation of the impact of management strategies may be considered. For example, the WHO claims that 4% of global diseases could be reduced by improving access to clean water. • Analysis of the link between water quality unrelated to drinking water may be considered. Life expectancy is low in countries with high burdens of malaria. Stagnant water due to man-made reservoirs have increased the incidence of malaria and hence reducing life expectancy in such questions. • They may consider the extent to which improving access to clean water can improve health and life expectancy. Some low-income countries have >90% access to clean water but low life expectancies below 50. • Alternative possible futures may also be considered by looking at impact of climate change on the availability of improved drinking water. There may greater challenges in the future and therefore health may well deteriorate and life expectancies fall. Alternatively there may be technological advancements which improve life expectancies. • There may be an overall conclusion assessing the link between the water quality and life expectancy as shown in Figure 8. It should be supported by evidence in the response. Credit any other valid approach.	

04	4	**To what extent can economic migrants enable countries to achieve a Demographic Dividend?** **AO1** – Knowledge and understanding of the implications of migration. Knowledge and understanding of the concept of demographic dividend **AO2** – Applies knowledge and understanding to analyse and evaluate the extent to which economic migration can lead to a demographic dividend. <u>Mark scheme</u> **Level 3 (7–9 marks)** **AO1** – Demonstrates detailed knowledge and understanding of concepts, processes, interactions and change. These underpin the response throughout. **AO2** – Applies knowledge and understanding appropriately with detail. Connections and relationships between different aspects of study are fully developed with complete relevance. Analysis and evaluation is detailed and well supported with appropriate evidence. A well balanced and coherent argument is presented.	**9** **AO1 = 4** **AO2 = 5**

		Level 2 (4–6 marks) **AO1** – Demonstrates some appropriate knowledge and understanding of concepts, processes, interactions and change. These are mostly relevant though there may be some minor inaccuracy. **AO2** – Applies some knowledge and understanding appropriately. Connections and relationships between different aspects of study are emerging/evident with some relevance. Analysis and evaluation evident and supported with some appropriate evidence. A clear but partial argument is presented. **Level 1 (1–3 marks)** **AO1** – Demonstrates basic/limited knowledge and understanding of concepts, processes, interactions and change. These offer limited relevance with inaccuracy. **AO2** – Applies limited knowledge and understanding. Connections and relationships between different aspects of study are basic with limited relevance. Analysis and evaluation basic and supported with limited appropriate evidence. A basic argument is presented. Notes for answers This question makes connections across two different parts of the specification within the population change section – the concept of a demographic dividend and international migration. Links should be made between the impact of economic migration and whether this can lead to a demographic dividend. The specification refers only to international migration but accept any type of economic migration. There is no requirement to refer to specific countries but credit examples where relevant. **AO1** • Knowledge and understanding of the concept of the Demographic Dividend – the accelerated economic growth as a result of changes in population structures. • Characteristics and reasons for natural population change; demographic transition model. • Populations models such as the DTM and age-sex composition. • Knowledge and understanding of the causes of economic migration. • Demographic, economic and social impacts of economic migration. • Knowledge and understanding of a case-study of a country experiencing specific patterns of population change. **AO2** • Analysis of the impacts of economic migration on population structures for example, an increase in working age. Falling dependency ratio. • The extent of the link between economic growth and economic migration may be considered. For example, remittances to country of origin may reduce some economic benefits. • Assessment of the link between the DTM and Demographic Dividend, suggesting that the first demographic dividend occurs in stage 3. This	

		is when accelerated growth is possible and encouraging economic migration can maximise this potential. • Change over time – there may be an initial boost from economic migrants but a large labour supply just provides a window of opportunity and other conditions such as family planning are needed. • They may consider that economic migrants can work against the dividend as it may increase fertility rates and thus increase the dependency ratio. • The relative importance of economic migrants in achieving a demographic dividend. For example, social health, education and family planning policies might be more important as they reduce fertility rates and encourage sustainable population growth. • The impacts of economic migration in achieving a second dividend. • Some candidates may consider that economic migrants have little impact on a country achieving a dividend as it is a reduction in fertility rates that is the key. • The impacts on the country of origin may be considered. They may link impacts to the difficulties in achieving a demographic dividend where out-migration is high, leaving an ageing population. • Conclusion should consider the extent to which economic migrants help a country achieve a dividend. Any conclusion is valid as long as it supports the preceding content. Credit any other valid approach.	

04	5	**‘Current levels of world population growth heading towards a total of 8 billion, along with the impacts of climate change, justify a Malthusian viewpoint.’** **To what extent do you agree with this statement?** **AO1** – Knowledge and understanding of perspectives on population growth and its implications. Knowledge and understanding of global population futures. **AO2** – Application of knowledge and understanding to assess the extent to which Malthus’s perspective on population growth is applicable to alternative futures of population growth. Notes for answers The question requires links between several aspects of the Population and the Environment section of the specification, including perspectives on population growth, population growth dynamics, global population futures. It is a very-open ended question with a variety of routes to success. **AO1** • Knowledge and understanding of different perspectives on population growth – Malthusian, neo-Malthusian and alternatives such as those suggested by Boserup and Simon.	**20** **AO1 = 10** **AO2 = 10**

- Knowledge and understanding of positive and negative feedback loops associated with population growth.
- The concept of carrying capacity and ecological footprints and their implications.
- An understanding of the concept of overpopulation and the balance between population and resources.
- Knowledge and understanding of key population parameters such as population density, natural change, migration. Global patterns of population change.
- Health impacts of global environment change relating to climate change eg thermal stress, increasing and changing distribution of vector borne diseases.
- Knowledge and understanding of the impact of climate change on agricultural productivity and food security.
- Understanding of current strategies to increase food security.
- Knowledge and understanding of future prospects for global population. Alternative futures

AO2

- Evaluation of evidence that supports Malthusian perspectives on population. For example, food insecurity.
- Evidence supporting Malthus suggests there are conflicts due to lack of resources and population pressures. The Congo war in the early 21st century caused over 3 million deaths.
- Analysis of arguments in favour of Boserup / Simon perspectives on population growth. For example, there is 17% more food available per person than there was in 1990. This happens due to technological advancements.
- Positive feedback loops can be used to support Malthusian arguments – population pressure causes farming to take place on marginal lands, leading to increase in desertification and reducing agricultural productivity, causing subsequent famines.
- Evaluation of the link between climate change and food insecurity. Unpredictable rainfall and increased temperatures in some areas are increasing the number of famine events. The number of people needing food assistance has increased by 50% in the past two years.
- The link between climate change and conflict. Rising food prices due to poor harvests and competition over water supplies have created conflicts. Conflict also exacerbates the famine, disrupting the movement of food.
- Analysis of the impact of climate change on health and disease. Supports a Malthusian perspective as many diseases such as Malaria may increase in number and distribution. The changing map of temperature and moisture which may lead to latitudinal and altitudinal shifts in the distribution of certain vectors, potentially exposing local populations to new diseases.
- Analysis of alternative population futures for population growth. It is difficult to accurately predict population growth – different agencies

		have different models of growth. This makes it difficult to implement strategies to mitigate against the impacts of overpopulation. • Evaluation of the importance of technological advancements in improving population and resource scenarios. For example, use of strategies to increase food supplies have already improved global food harvests. However, there are environmental costs. • Evaluation of the effectiveness of strategies to mitigate against the impacts of climate change may be considered as an alternative to Malthusian perspectives. • Critical appraisal of Malthus's viewpoints in terms of future population growth. For example, whilst there is certainly evidence to support the viewpoint in Sub-Saharan Africa, much of the globe is seeing falling population growth and innovation is improving our ability to cope with climate change. • Any conclusion is valid as long as it is supported by the preceding content. Credit any other valid approach.	

Marking grid for Question 4.5

Level/ Mark Range	Criteria/Descriptor
Level 4 **(16–20 marks)**	• Detailed evaluative conclusion that is rational and firmly based on knowledge and understanding which is applied to the context of the question (AO2). • Detailed, coherent and relevant analysis and evaluation in the application of knowledge and understanding throughout (AO2). • Full evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts (AO2). • Detailed, highly relevant and appropriate knowledge and understanding of place(s) and environments used throughout (AO1). • Full and accurate knowledge and understanding of key concepts and processes throughout (AO1). • Detailed awareness of scale and temporal change which is well integrated where appropriate (AO1).
Level 3 **(11–15 marks)**	• Clear evaluative conclusion that is based on knowledge and understanding which is applied to the context of the question (AO2). • Generally clear, coherent and relevant analysis and evaluation in the application of knowledge and understanding (AO2). • Generally clear evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts (AO2). • Generally clear and relevant knowledge and understanding of place(s) and environments (AO1). • Generally clear and accurate knowledge and understanding of key concepts and processes (AO1). • Generally clear awareness of scale and temporal change which is integrated where appropriate (AO1).
Level 2 **(6–10 marks)**	• Some sense of an evaluative conclusion partially based upon knowledge and understanding which is applied to the context of the question (AO2). • Some partially relevant analysis and evaluation in the application of knowledge and understanding (AO2). • Some evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts (AO2). • Some relevant knowledge and understanding of place(s) and environments which is partially relevant (AO1). • Some knowledge and understanding of key concepts, processes and interactions and change (AO1). • Some awareness of scale and temporal change which is sometimes integrated where appropriate. There may be a few inaccuracies (AO1).
Level 1 **(1–5 marks)**	• Very limited and/or unsupported evaluative conclusion that is loosely based upon knowledge and understanding which is applied to the context of the question (AO2). • Very limited analysis and evaluation in the application of knowledge and understanding. This lacks clarity and coherence (AO2). • Very limited and rarely logical evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts (AO2). • Very limited relevant knowledge and understanding of place(s) and environments (AO1). • Isolated knowledge and understanding of key concepts and processes (AO1). • Very limited awareness of scale and temporal change which is rarely integrated where appropriate. There may be a number of inaccuracies (AO1).
Level 0 **(0 marks)**	• Nothing worthy of credit.

Qu	Part	Marking guidance	Total marks
05	1	**Outline a strategy used to manage energy consumption.** Point marked Allow 1 mark per valid point with extra mark(s) for developed points (d). Allow maximum 1 mark for an explanation of the concept of managing energy consumption. Allow one mark only for simple naming of an example of a strategy. The question refers to 'a' strategy but the answer may refer to more than one if it is linked to an initial strategy. For example: Notes for answers • Strategies to manage energy consumption can be achieved by maximising energy efficiency and reducing demand at a variety of scales (1). An international agreement such as Agenda 21 (1) sets targets on carbon emissions which each country must employ (1)(d). Government incentives then try to reduce emissions at a national scale, for example, in the UK by higher taxes on 'gas guzzling' vehicles (1) (d). • The EU directive on Energy Performance of Buildings is designed to reduce consumption (1). Every time a building is constructed or sold it has to have an energy performance certificate scaled A - G (1) (d). To get a good rating and therefore be more appealing to buyers, it has to consider installing energy efficient appliances and improving insulation of lofts and wall (1) (d). • Sustainable transport strategies reduce energy consumption by lowering vehicle emissions (1). In London, the congestion charge (1) means that vehicles are discouraged from entering central London, so people walk, cycle or use public transport instead (1) (d). The notes for answers are not exhaustive. Credit any valid points.	**4** **AO1 = 4**

Qu	Part	Marking guidance	Total marks
05	2	**Analyse the data shown in Figure 9a and Figure 9b.** **AO3** - Analysis of the location and amount of economically viable oil reserves in 2016 and the average oil price between 2004 and 2020. Mark scheme **Level 2 (4–6 marks)** **AO3 –** Clear analysis and interpretation of the quantitative evidence provided, which makes appropriate use of data in support. Clear connection(s) between different aspects of the data and evidence.	**6** **AO3 = 6**

Level 1 (1–3 marks)
AO3 – Basic analysis and interpretation of the quantitative evidence provided, which makes limited use of data and evidence in support. Basic connection(s) between different aspects of the data and evidence.

<u>Notes for answers</u>
The question requires analysis of the location and amount of economically viable oil reserves in 2016 and the fluctuating oil barrel prices between 2004 and 2020. Students should seek connections between and within the data sets. For example, they may consider the relationship between the amount of oil in selected countries at different prices or they may consider which countries would have had viable oil reserves between 2004 and 2020.

AO3

- **Figure 9a** shows that as the price of oil per barrel increases the amount of viable oil increases as does the number of countries with viable oil. For example, at $20 there is about 350gb whereas at $100 there is nearly four times the amount.
- At $20 the amount of viable oil is dominated by 5 countries only, with Saudi Arabia accounting for over a third whereas at >$150, Saudi Arabia only accounts for about 12% of viable oil.
- Over $40, some countries such as Saudi Arabia and Iran have approximately the same amount of viable oil regardless of price. Whereas others have an increasing amount.
- **Figure 9b** shows that the average oil price has fluctuated over time between 2004 and 2020. It reached its highest price in 2008 at $165 and its lowest in 2016 at $30.
- The overall price trend has decreased since its height in 2008.
- In Jan 2016, at approximately $30 a barrel, many countries shown in Figure 9a wouldn't have had economically viable oil. At $40 there is only about 550gb so it would have been below this figure, with production being dominated by only 5 countries in the middle east, Saudi Arabia, Iran, Iraq, Kuwait and UAE.

Credit any other valid analysis.

05	3	**Using Figure 10a, Figure 10b and your own knowledge, to what extent do you agree that the environmental impacts of the development of a major energy source such as this are always negative?** **AO1** – Knowledge and understanding of the environmental impacts of a major energy resource development. Knowledge and understanding of the sustainability issues associated with energy production. **AO2** – Applies knowledge and understanding to assess the extent to which the environmental impacts of energy resource development such as oil fields shown in **Figure 10a** and **10b** are always negative.	**9** **AO1 = 4** **AO2 = 5**

Mark scheme

Level 3 (7–9 marks)
AO1 – Demonstrates detailed knowledge and understanding of concepts, processes, interactions and change. These underpin the response throughout.
AO2 – Applies knowledge and understanding appropriately with detail. Connections and relationships between different aspects of study are fully developed with complete relevance. Analysis and evaluation are detailed and well supported with appropriate evidence.

Level 2 (4–6 marks)
AO1 – Demonstrates clear knowledge and understanding of concepts, processes, interactions and change. These are mostly relevant though there may be some minor inaccuracy.
AO2 – Applies clear knowledge and understanding appropriately. Connections and relationships between different aspects of study are evident with some relevance. Analysis and evaluation are evident and supported with clear and appropriate evidence.

Level 1 (1–3 marks)
AO1 – Demonstrates basic knowledge and understanding of concepts, processes, interactions and change. This offers limited relevance with inaccuracy.
AO2 – Applies limited knowledge and understanding. Connections and relationships between different aspects of study are basic with limited relevance. Analysis and evaluation are basic and supported with limited appropriate evidence.

Notes for answers
The question requires understanding of the environmental impacts of major energy resource developments. The focus of the response should be centred around the evidence shown in **Figure 10a** and **10b** relating to the Tar Sands of Alberta but credit can also be given to other resource developments. They should assess the extent to which the environmental impacts are negative. There is no credit for impacts that are not environmental in nature.

AO1
- Knowledge and understanding of the environmental impacts of a major resource development – oil, coal or gas fields.
- Strategies to increase energy supplies – oil and gas exploration.
- Knowledge and understanding of primary sources of energy.
- Knowledge and understanding of sustainability issues associated with energy production – acid rain, enhanced greenhouse effect, nuclear waste and energy conservation.
- Alternative resource futures – technological advancements, environmental and political developments.

		AO2 • Analysis of **Figure 10a** suggests that carbon capture technology removed 1.14 megatonnes of CO2, although this only reduced CO2 emissions by 1.4% which is not a large reduction, especially as oil is a fossil fuel and therefore more environmentally damaging than renewables or nuclear. • However, due to other technological advancements and sustainable practices, **Figure 10a** suggests that greenhouse gas emissions have reduced by 32%, so whilst still a negative environmental impact, there is improvement. • Analysis of **Figure 10b** suggest a variety of environmental impacts are present. There appears to be flooding and water pollution due to waste products – clearly visible in the ponds of water in **10b**. This could be toxic to aquatic wildlife. • There is considerable evidence of land degradation in **Figure 10b**, with scarring of the landscape both for extraction and communication networks. • Evaluation of the extent to which environmental impacts are negative may consider that whilst the scale of the Tar Sands development is large, much of the area shown in **Figure 10b** has been unaffected and looks like the natural landscape. • They may also consider that there will be environmental impacts that are not visible in **10a** and **10b**. For example, seismic exploration may disturb wildlife. The distribution networks such as oil pipelines will also cause significant environmental damage. • Evaluation of the extent to which technological advancements may make the extraction of Tar sands more sustainable in the future. **Figure 10a** already suggests that this has reduced the carbon footprint by a third. • They may consider the subjectivity of **Figure 10a**. This would be a creditworthy point. **Figure 10a** is produced by the Canadian government and they have a vested interest in trying to appease voters who are concerned about environmental impacts. • Students should come to a conclusion as to the extent to which the environmental impacts are always negative. Any conclusion is valid as long as it supports the content of the response. Credit any other valid assessment.	

05	4	**To what extent are the geopolitics of mineral ore determined by global patterns of consumption?** **AO1 –** Knowledge and understanding of the global pattern of mineral ore consumption. Knowledge and understanding of the geopolitics of mineral ores. **AO2 –** Application of knowledge and understanding to evaluate the extent to which the pattern of consumption determines geopolitics of mineral ore. Mark scheme **Level 3 (7–9 marks)** **AO1 –** Demonstrates detailed knowledge and understanding of concepts, processes, interactions and change. These underpin the response throughout. **AO2 –** Applies knowledge and understanding appropriately with detail. Connections and relationships between different aspects of study are fully developed with complete relevance. Analysis and evaluation are detailed and well supported with appropriate evidence. **Level 2 (4–6 marks)** **AO1 –** Demonstrates clear knowledge and understanding of concepts, processes, interactions and change. These are mostly relevant though there may be some minor inaccuracy. **AO2 –** Applies clear knowledge and understanding appropriately. Connections and relationships between different aspects of study are evident with some relevance. Analysis and evaluation are evident and supported with clear and appropriate evidence. **Level 1 (1–3 marks)** **AO1 –** Demonstrates basic knowledge and understanding of concepts, processes, interactions and change. This offers limited relevance with inaccuracy. **AO2 –** Applies limited knowledge and understanding. Connections and relationships between different aspects of study are basic with limited relevance. Analysis and evaluation are basic and supported with limited appropriate evidence. Notes for answers The question requires links to be made between two different parts of the Resource Security specification, the pattern of consumption of mineral ores and the geopolitics of mineral ores. There is no requirement to look at more than one mineral ore but the responses may refer to more than one. **AO1** • Knowledge and understanding of the global pattern of consumption of mineral ores such as copper, iron or manganese. • Global patterns of supply and extraction of mineral ores. • Knowledge and understanding of the mineral ore trade and the role of TNCs.	**9** **AO1 = 4** **AO2 = 5**

- Knowledge and understanding of the factors affecting the location of mineral ore – physical geography and geology.
- Factors affecting the demand and supply of mineral ores.
- Knowledge and understanding of the concept of geopolitics and the issues that arise from the unequal distribution of resources.
- The geopolitics of mineral ores.

AO2

- Analysis of the factors affecting consumption of mineral ores – industrial and manufacturing diversity and financial strength. The largest importers of ore minerals tend to be countries with extensive agricultural and industrial bases.
- Consumption of resources is often found in countries without physical access to the mineral ore. This is particularly true for some advanced economies with smaller territories in the EU and East Asia. This creates geopolitical issues as trade has to be negotiated.
- Analysis of factors affecting trade access to mineral ores – restrictive trade agreements, conflicts, political isolationism.
- Temporal and spatial change in the consumption of, and demand for mineral ores. Over the course of the twentieth century increasing demand and consumption in Asia.
- Evaluation of the role of TNCs in mineral ore trade and consumption. TNCs dominate the trade – very few state-run operations with the exception of Chinese operations, but even this is being diverted to more private enterprises.
- Evaluation of the link between TNCs and geopolitics. TNCs tend to negotiate exploration and land-leasing from national governments, controlling the operation. This makes governments very dependent on the TNC. This can lead to greater social and environmental impacts.
- Analysis of the factors affecting the value of mineral ore deposits to a country – size of deposits, ease of extraction, market demand, environmental impacts of extraction.
- Factors affecting demand for mineral ores. For example, the increase in demand of rare earth elements used in electronic devices.
- Analysis of the link between demand for ores and geopolitics. China controls 95% of production of rare earth elements but is also the world's largest consumer. Therefore it has begun restricting exports which caused panic buying and has led to greater prospecting in countries outside China.
- Evaluation of the extent to which other aspects of the global trade of mineral ore determine geopolitics. For example, extraction and processing locations are often the cause of geopolitical issues, with environmental problems crossing national borders.
- Students should come to a conclusion as to the extent to which the pattern of consumption leads to geopolitical issues. Any conclusion is valid as long as it is supported by the preceding content.

Credit any other valid approach.

05	5	**Assess the relative importance of physical and human factors in creating water conflicts at different scales.** **AO1** – Knowledge and understanding of water conflicts at a variety of scales. Knowledge and understanding of the physical and human factors contributing to water supply and demand. **AO2** – Application of knowledge and understanding to evaluate relative importance of physical and human factors in creating water conflicts at different scales. Notes for answers The question links different parts of the water security section. They need to show an understanding of how physical factors (such as climate, geology) and human factors (such as strategies to increase supply, politics) affect supply and demand and how these can lead to water conflicts. They are asked to consider different scales so there should be reference to more than one conflict and they should be different scales such as international, regional or local. However, scale can be considered in a broad context, so the scale could refer to time, size or level of economic development, for example. The emphasis of the question is on relative importance of the physical and human factors – so the response should have an evaluative focus considering the relative importance. **AO1** • Knowledge and understanding of the sources of water, components of demand and the concept of water stress. • Relationship of physical geography (eg climate, soils, geology, drainage) and water supply. • Strategies used to increase water supply such as, dams, reservoirs, water transfer schemes, desalinisation. • Environmental impacts of strategies used to increase supply. • Geopolitics of water supply and distribution. • Knowledge and understanding of water conflicts at different scales – local, national, international. **AO2** • Analysis of the links between physical geography and water stress which may lead to conflict. For example, in areas of low precipitation water shortages can lead to supply issues. • Evaluation of the importance of physical factors in causing water conflicts. Water shortages due to drought in Spain have fuelled conflicts between Catalonia and the Madrid government. Although there is a political dimension due to on-going tensions, the drought is the source of the problem. • Analysis of the link between human factors leading to water stress and possible conflict – wealth, population, industry, political intervention. • The link between strategies used to increase water supply and the possibility of conflict. Any strategy employed to increase supply in one area is likely to have an impact on neighbouring areas.	**20** **AO1 = 10** **AO2 = 10**

		• Evaluation of strategies to increase supply. River diversion in the former Soviet Union successfully transferred water to enable mass cotton production in Uzbekistan but at the expense of the Aral Sea which has shrunk by 90%. • Evaluation of the role played by geopolitics may be considered. For example, in the constitution of Spain, if a river flows through more than one of the regions, the national government must make decisions on water diversion. This has exacerbated the conflict with Catalonia. • Analysis of the role of physical and human factors in the scale of the water conflict. International conflicts are more likely to be the result of large water transfer or storage projects that cross international borders, whereas in smaller local conflicts, physical water scarcity can often play a larger role. • Relative importance over time may be considered. For example, physical factors are becoming increasingly important due to climate change. Whereas a greater environmental understanding means that EIAs are able to mitigate and reduce potential for conflicts. • They may also consider the role of attempts to mitigate or resolve conflicts. For example, whilst physical factors such as climate change can cause conflicts, human factors may resolve them. For example, the EU has funded two desalinisation plants in Catalonia to try and increase supply and thereby reduce the tensions with the Spanish government. • Alternative futures may also be considered. Water conflicts at all scales are likely to increase as water shortages increase as a result of climate change and population pressure. Political instabilities in many areas will exacerbate the problems leading to more conflicts. • Answers should evaluate the relative importance of the two sets of factors and reach a conclusion. This balance of physical and human factors may change over time and at different scales. In reality the two sets of factors interrelate with each other. Any conclusion is valid as long as it is supported by the preceding content. Credit any other valid approach.	

Marking grid for question 5.5

Level/ Mark Range	Criteria/Descriptor
Level 4 (16–20 marks)	• Detailed evaluative conclusion that is rational and firmly based on knowledge and understanding which is applied to the context of the question (AO2). • Detailed, coherent and relevant analysis and evaluation in the application of knowledge and understanding throughout (AO2). • Full evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts (AO2). • Detailed, highly relevant and appropriate knowledge and understanding of place(s) and environments used throughout (AO1). • Full and accurate knowledge and understanding of key concepts and processes throughout (AO1). • Detailed awareness of scale and temporal change which is well integrated where appropriate (AO1).
Level 3 (11–15 marks)	• Clear evaluative conclusion that is based on knowledge and understanding which is applied to the context of the question (AO2). • Generally clear, coherent and relevant analysis and evaluation in the application of knowledge and understanding (AO2). • Generally clear evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts (AO2). • Generally clear and relevant knowledge and understanding of place(s) and environments (AO1). • Generally clear and accurate knowledge and understanding of key concepts and processes (AO1). • Generally clear awareness of scale and temporal change which is integrated where appropriate (AO1).
Level 2 (6–10 marks)	• Some sense of an evaluative conclusion partially based upon knowledge and understanding which is applied to the context of the question (AO2). • Some partially relevant analysis and evaluation in the application of knowledge and understanding (AO2). • Some evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts (AO2). • Some relevant knowledge and understanding of place(s) and environments which is partially relevant (AO1). • Some knowledge and understanding of key concepts, processes and interactions and change (AO1). • Some awareness of scale and temporal change which is sometimes integrated where appropriate. There may be a few inaccuracies (AO1).
Level 1 (1–5 marks)	• Very limited and/or unsupported evaluative conclusion that is loosely based upon knowledge and understanding which is applied to the context of the question (AO2). • Very limited analysis and evaluation in the application of knowledge and understanding. This lacks clarity and coherence (AO2). • Very limited and rarely logical evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts (AO2). • Very limited relevant knowledge and understanding of place(s) and environments (AO1). • Isolated knowledge and understanding of key concepts and processes (AO1). • Very limited awareness of scale and temporal change which is rarely integrated where appropriate. There may be a number of inaccuracies (AO1).
Level 0 (0 marks)	• Nothing worthy of credit.