

INTERNATIONAL AS GEOGRAPHY GG02

Paper 2 Human Geography 1

Mark scheme

January 2025

Version: 1.1 Final



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 www.oxfordaqa.com

Copyright information

OxfordAQA retains the copyright on all its publications. However, registered schools/colleges for OxfordAQA are permitted to copy material from this booklet for their own internal use, with the following important exception: OxfordAQA cannot give permission to schools/colleges to photocopy any material that is acknowledged to a third party even for internal use within the centre.

Copyright © 2025 OxfordAQA International Examinations and its licensors. All rights reserved.

International AS Geography mark scheme

How to mark

Aims

When you are marking your allocation of scripts your main aims should be to:

- recognise and identify the achievements of students
- place students in the appropriate mark band and in the appropriate part of that mark band (high, low, middle) for **each** Assessment Objective
- record your judgements with brief notes, annotations and comments that are relevant to the mark scheme and make it clear to other examiners how you have arrived at the numerical mark awarded for each Assessment Objective
- ensure comparability of assessment for all students, regardless of question or examiner.

Approach

It is important to be **open-minded** and **positive** when marking scripts.

The specification recognises the variety of experiences and knowledge that students will have. It encourages them to study geography in a way that is relevant to them. The questions have been designed to give them opportunities to discuss what they have found out about geography. It is important to assess the quality of **what the student offers**.

Do not mark scripts based on the answer **you** would have written. The mark schemes have been composed to assess **quality of response** and not to identify expected items of knowledge.

Assessment Objectives

This component requires students to:

AO1	Demonstrate knowledge and understanding of places, environments, concepts, processes, interactions and change, at a variety of scales.
AO2	Apply knowledge and understanding in different contexts to interpret, analyse and evaluate geographical information and issues.
AO3	Use a variety of relevant quantitative, qualitative and fieldwork skills to: • investigate geographical questions and issues • interpret, analyse and evaluate data and evidence • construct arguments and draw conclusions.

The marking grids

Do not think of levels equalling grade boundaries.

Depending on the part of the examination, the levels will have different mark ranges assigned to them. This will reflect the different weighting of Assessment Objectives in particular tasks and across the examination as a whole.

Using the grids

Having familiarised yourself with the descriptors and indicative content, read through the answer and annotate it (as instructed below) to identify the qualities that are being looked for and that it shows. You can now check the levels and award a mark.

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 descriptors for that level. The descriptors for the level indicate the different qualities that might be seen in the student's answer for that level. If it meets all the descriptors for 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 descriptors and the answer. With practice and familiarity you will find that for better answers you will be able to skip through the lower levels of the mark scheme quickly.

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.

Step 2 Determine a mark

Once you have assigned a level you need to decide on the mark.

It is often best to start in the middle of the level's mark range and then check and adjust. If there is a lot of indicative content fully identifiable in the work you need to give the highest mark in the level. If only some is identifiable or it is only partially fulfilled, then give the lower mark.

The exemplar materials used during standardisation will also help. There will be an answer in the standardising materials that 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 of 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.

In addition to the levels descriptors, question specific indicative content is provided as a guide for examiners. This is not intended to be exhaustive and you must credit other valid points.

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

Annotating scripts

You should write a summative comment at the end for each Assessment Objective and indicate the marks for each Assessment Objective being tested at the end of the answer in the margin in sequence. It is vital that the way you arrive at a mark should be recorded on the script. This will help you with making accurate judgements and it will help any subsequent markers to identify how you are thinking. Please do not write negative comments about students' work or their alleged aptitudes.

Section A – Global systems and governance

Total for this section: 40 marks

Question	Part	Marking guidance	Total marks
01	1	Which of the following defines the bathypelagic ocean zone? Key – C: It extends from 1000 to 4000 meters below the ocean's surface and is in near constant darkness.	1 AO1=1
01	2	Which of the following is an example of communication as a factor in globalisation? Key – D: Using the Internet to send a message about a product	1 AO1=1
01	3	Which of the following are BOTH features of the Indian Ocean? Key – B: It lies to the south of central Asia and is located in both the northern and southern hemispheres.	1 AO1=1
01	4	'A developed country helps to build roads and factories in less-developed countries. In return, the developed country expects the less-developed countries to provide support in a border conflict.' This is an example of which of the following? Key – B: An unequal power relationship influencing a geopolitical event	1 AO1=1
01	5	Which of the following are BOTH features of global trade? Key – B: Most global goods are sent abroad on ships and there is an exchange of goods or services between countries.	1 AO1=1

Question	Part	Marking guidance	Total marks
02		Figure 1 shows the percentage of people born in that country that lived abroad in 2019. Figure 2 shows the percentage of the population in 2019 that were born in another country. Analyse the data shown in FIGURE 1 and FIGURE 2.	6 AO3=6

Level	Marks	Descriptor
2	4–6	AO3 – Clear selection and analysis of the evidence that has been provided which makes appropriate use of data to support observations. Clear connections between different aspects of the data.
1	1–3	AO3 – Some basic selection and analysis of the evidence that has been provided which makes limited use of data to support observations. Basic or limited connections between different aspects of the data.
0	0	No creditable content.

Indicative Content

This question requires analysis of two different data maps, one showing the percentage of people living outside of their country of birth in 2019 and one showing the percentage of people within the same countries that were born in another country. Analysis could include key trends and locations within each map, such as data changes and high and low percentages, as well as comparison between the maps. There should be specific application of the data from the key.

AO3

- For people living outside of their country of birth (**Figure 1**) there is a clear trend with countries to the north-west of Asia generally have a higher amount of nationals living abroad, with seven countries having more than 10% of nationals living abroad. In comparison most of the rest of Asia have less than 10% and the majority have less than 4%. Laos stands out as bit of an anomaly with 10–19.9% as many countries around it have less than 4%, but it does border Myanmar and Cambodia that have 4–9.9%. Yemen could also be considered an anomaly as it has a higher amount than all surrounding countries.
- For people living in Asian countries that were born in another country (**Figure 2**) there is a lot less variation between countries with the vast majority having the lowest figure of 0–4.9% born in another country. There is a similar western increase trend though, although much more in the Arabian peninsular than north-west this time, with five countries having more than 30% born in another country. Thailand and Malaysia both stand out as anomalies with 5–14.9% born in another country, as they are surrounded by countries with less than 4.9%. Again, Yemen is also another anomaly, this time surrounded by countries with higher amounts.
- In both maps Kazakhstan stands out as having high figures for both people living outside of the country and people born in another country. Malaysia has higher amounts than most other countries too.

- China and India both have low percentages on both maps and Russia has similar, relatively low percentages on both maps.
- Big contrasts between the maps include Afghanistan and Laos with both having high percentages of people living outside of the country (10–19.9%) but low percentages of people born in another country (0–4.9%). Kuwait and United Arab Emirates have the opposite with low percentages of people living outside of the country (0–3.9 %) but high percentages of people born in another country (more than 50%).

Question	Part	Marking guidance	Total marks
03		Examine the purpose of governance of the world's oceans. AO1 – Knowledge and understanding of the developing governance of the world's oceans. Knowledge and understanding of the global commons, the rights of all to their benefits as well as their sustainable use and protection. Knowledge and understanding of the vulnerability of the global commons as well as their potential for exploitation. Knowledge and understanding of the role of NGOs in monitoring threats and enhancing protection of the oceans. AO2 – Application of knowledge and understanding to examine different factors linked to the purpose of governance of the world's oceans and making a judgement on the key purpose.	9 AO1=4 AO2=5

Level	Marks	Descriptor
3	7–9	AO1 – Demonstrates detailed knowledge and understanding of the purpose of governance of the world's oceans. AO2 – Applies knowledge and understanding to the novel situation, offering detailed examination, drawn appropriately from the context provided. Connections and relationships between different aspects of study are thorough and relevant.
2	4–6	AO1 – Demonstrates clear knowledge and understanding of the purpose of governance of the world's oceans. AO2 – Applies knowledge and understanding to the novel situation, offering clear examination, drawn appropriately from the context provided. Connections and relationships between different aspects of study are evident and relevant.
1	1–3	AO1 – Demonstrates basic knowledge and understanding of the purpose of governance of the world's oceans. AO2 – Applies limited knowledge and understanding to the novel situation, offering some basic examination. Connections and relationships between different aspects of study are basic with limited relevance. Analysis and evaluation are basic and of limited relevance.
0	0	No creditable content.

Indicative Content

This question requires specific focus on the Oceans as a Global Common section of the specification on Global Systems and Governance, especially the critical appraisal of the developing governance of the world's oceans. This knowledge will be used to examine different factors relating to the purpose of governance of the world's oceans. Links may be made to the global governance and global commons sections within the specification. Examination requires detailed information and information selection, so will require careful consideration of what the key purpose of governance is, or if there are multiple purposes.

AO1

- Knowledge and understanding of the developing governance of the world's oceans.
- Knowledge and understanding of the global commons, the rights of all to their benefits as well as their sustainable use and protection.
- Knowledge and understanding of the vulnerability of the global commons as well as their potential for exploitation.
- Knowledge and understanding of the role of NGOs in monitoring threats and enhancing protection of the oceans.

AO2

- Examination of the purpose of governance of the world's oceans. This may include:
 - Many organisations play key roles in establishing and maintaining frameworks designed for ocean protection and safety. This is often considered to be a key purpose. For example, the Marine Stewardship Council (MSC) emphasises traceability and transparency in the seafood supply chain. This helps combat illegal, unreported, and unregulated fishing, promoting good governance by ensuring that the seafood industry operates ethically and in compliance with international regulations. International efforts, such as those under the Convention on Biological Diversity (CBD), aim to conserve marine biodiversity by establishing marine protected areas and implementing measures to prevent the loss of species and ecosystems. The purpose of governance of the world's oceans could therefore be seen as protecting vulnerable marine habitats and species
 - Another purpose could be viewed to be maintaining access and use of the oceans. For instance, the International Maritime Organisation (IMO) plays a crucial role in a comprehensive regulatory framework for the shipping industry worldwide. This includes the development of international conventions and codes to address safety, environmental concerns and the efficient operation of ships. The United Nations Convention on the Law of the Sea (UNCLOS) serves as the primary legal framework governing the use and protection of the world's oceans. It establishes rules for maritime boundaries, navigation, resource management, environmental protection and scientific research. For example, UNCLOS sets forth regulations on the rights and responsibilities of states in the exploitation of marine resources in their Exclusive Economic Zones (EEZs)
 - A purpose may also be to respond to specific and targeted issues when they arise, such as addressing the impact of climate change on the oceans. Initiatives like the Paris Agreement acknowledge the role of oceans in climate regulation and call for measures to reduce greenhouse gas emissions, mitigate ocean acidification, and adapt to the changing climate
 - It could be argued that a key purpose is to get different countries and organisations to work together towards the same goals. Effective governance of the world's oceans often involves international organisations, conventions and agreements, working together effectively in order to ensure the sustainable use of marine resources, such as preventing pollution and addressing global challenges such as climate change.
- Examination of purpose should be present throughout the answer for high levels but candidates may also want to form an overall judgement based on a range of examined purposes. Any conclusion is acceptable as long as it is based on the balance of points made within the preceding examination.

Question	Part	Marking guidance	Total marks
04		Evaluate the impacts of world trade in EITHER one food commodity OR one product of manufacturing that you have studied. AO1 – Knowledge and understanding of world trade in a food commodity or product of manufacturing. Knowledge and understanding of negative impacts, such as unequal flows, inequalities, conflict, injustice and differential access to markets. Knowledge and understanding of positive impacts, such as the development of systems, stability, growth and development. Knowledge and understanding of globalisation critique. AO2 – Application of knowledge and understanding to evaluate the impacts of world trade in a food commodity or product of manufacturing that has been studied. Application of knowledge and understanding to form overall judgements.	20 AO1=10 AO2=10

Level	Marks	Descriptor
4	16–20	AO2 – 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. AO1 – 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.
3	11–15	AO2 – 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. AO1 – 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.
2	6–10	AO2 – 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. AO1 – 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.
1	1–5	AO2 – 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. AO1 – 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.
0	0	No creditable content.

Indicative Content

The question links different parts of the Global Systems and Governance part of the specification. The main focus is the international trade and access to markets section, especially the world trade in at least one food commodity or one product of manufacturing, but links will also need to be made to the global systems and globalisation critique sections of the specification. The question requires candidates to evaluate the impacts of world trade in a food commodity or product of manufacturing that they have studied. Answers should consider a range of impacts and form an overall evaluative judgement.

AO1

- Knowledge and understanding of world trade in a food commodity or product of manufacturing.
- Knowledge and understanding of negative impacts, such as unequal flows, inequalities, conflict, injustice and differential access to markets.
- Knowledge and understanding of positive impacts, such as the development of systems, stability, growth and development.
- Knowledge and understanding of globalisation critique.

AO2

- Evaluation of positive impacts linked to world trade in a food commodity could include the discussion of impacts such as those linked to the coffee trade. World trade in coffee has led to the development of efficient supply chain systems that have improved over time to meet the demands of global markets. This development has not only benefited the coffee industry but has also created opportunities for other related industries, such as logistics and packaging. Countries that are major coffee producers experience economic growth through export earnings. This revenue can be used for infrastructure development, education and healthcare, contributing to overall economic development. The demand for coffee also creates employment opportunities, especially in rural areas where coffee is often cultivated. Competition in the global coffee market drives innovation and technological advancements. This includes improvements in agricultural practices, processing techniques, and packaging technologies. These advancements not only enhance the efficiency of coffee production but also have spill-over effects into other sectors, promoting overall economic development.
- Evaluation of negative impacts linked to world trade in a food commodity could include the discussion of impacts such as those linked to the coffee trade. The benefits of global coffee trade are not evenly distributed. Some countries and large corporations may dominate the market, leaving smaller producers with limited bargaining power. Large plantation owners may profit significantly, while smallholder farmers might struggle to make a decent living. This economic inequality can lead to social issues and hinder broader societal development. In regions where coffee is a major economic commodity, there is a potential for conflict over land, resources and market access. Competition among producers and conflicts over trade terms can lead to tensions and, in some cases, contribute to broader geopolitical issues. The terms of trade can be unjust, particularly for smaller producers who may face challenges in accessing global markets. Unfavourable trade agreements, price volatility, and market concentration can create conditions that are not conducive to fair and just trade, leaving some participants at a disadvantage.
- Issues of labour exploitation and environmental impacts can be significant if increasing trade generates increasing demand/production.
- Evaluation of positive impacts linked to world trade in a product of manufacturing could include the discussion of impacts such as those linked to the smartphone trade. The global trade in smartphones has driven the development of intricate supply chain and manufacturing systems. This includes the creation of a complex network involving raw material suppliers, component manufacturers, assembly plants, and distribution networks. This development has not only enhanced the efficiency of smartphone production but has also facilitated the growth of related industries such as electronics and telecommunications. The stability in the supply of smartphones benefits both producers and consumers by ensuring a consistent availability of products. Countries involved in the manufacturing of smartphones experience economic growth through export earnings. The revenue generated can be invested in infrastructure, education and research and development, contributing to overall economic development. Additionally, the manufacturing sector creates job opportunities and skill development, further supporting economic growth. The intense competition in the global smartphone market stimulates continuous innovation and technological advancements. This includes improvements in hardware, software, and user experience. These innovations not only benefit the smartphone industry but also have spill-over effects into other sectors, driving technological progress on a broader scale.

- Evaluation of negative impacts linked to world trade in a product of manufacturing could include the discussion of impacts such as those linked to the smartphone trade. The global smartphone trade can result in unequal flows of benefits, with dominant manufacturers or regions capturing a disproportionate share of profits. This can lead to economic imbalances and may contribute to the concentration of wealth in certain areas. Large multinational corporations may reap significant profits, while factory workers may face issues related to working conditions, wages, and job security. This economic inequality can lead to social challenges and labour disputes. Competition for market share and access to resources in the smartphone industry can lead to conflicts among countries, companies, or stakeholders. Disputes over intellectual property, trade policies, and market dominance can contribute to tensions and trade-related conflicts. Unfair trade practices, such as intellectual property disputes, tariff barriers, or discriminatory trade agreements can lead to injustice and hinder the ability of certain countries or companies to access global markets on equal terms. This can create barriers to entry for emerging players and limit opportunities for fair competition.
- Issues of labour exploitation and environmental impacts can be significant.
- An overall judgement should be made based on the balance and severity of the different impacts considered within the chosen example.

Section B – Resource security

Total for this section: 40 marks

Question	Part	Marking guidance	Total marks
05	1	Which of the following describes an environmental impact assessment (EIA)? Key – C: Evaluating the likely effects of a proposed project or development on its natural surroundings	1 AO1=1
05	2	Which of the following defines primary energy? Key – B: Energy created directly from a natural resource	1 AO1=1
05	3	Which of the following is an example of a water future created by technological development? Key – B: A method to remove pollution from water is invented in a university. This allows for safer access to water and water treatment.	1 AO1=1
05	4	Which of the following are BOTH features of nuclear power? Key – D: It uses uranium as a fuel and involves nuclear fission as a process.	1 AO1=1
05	5	The creation of a new lake or reservoir by people is an example of which of the following? Key – C: Water storage	1 AO1=1

Question	Part	Marking guidance	Total marks
06		Figure 3 shows China's liquefied natural gas (LNG) imports from 2001 to 2019. Figure 4 shows South Korea's liquefied natural gas (LNG) imports from 2001 to 2019. Analyse the data shown in FIGURE 3 and FIGURE 4.	6 A03=6

Level	Marks	Descriptor
2	4–6	A03 – Clear selection and analysis of the evidence that has been provided which makes appropriate use of data to support observations. Clear connections between different aspects of the data.
1	1–3	A03 – Some basic selection and analysis of the evidence that has been provided which makes limited use of data to support observations. Basic or limited connections between different aspects of the data.
0	0	No creditable content.

Indicative Content

This question requires analysis of two compound line graphs showing the liquified natural gas (LNG) imports to China and South Korea from 2000 to 2019. Analysis could include comparison of the data trends, high and low amounts, key differences and anomalies. There should be specific application of the data from the axis.

A03

- LNG imports to China (**Figure 3**) only started in 2005, whereas for South Korea (**Figure 4**) there have been imports for the whole time period.
- Chinese LNG imports quickly increased from a start in 2005 to approximately 28 billion cubic metres of LNG in 2014, before a slight dip in 2015 followed by a sudden rise to 85 billion cubic metres of LNG in 2019. South Korean imports have had more of a gradual increase over the time period as a whole, going from approximately 23 billion cubic metres of LNG in 2000 to a peak of 60 cubic metres of LNG in 2018 and there have been three times as many dips, in 2009, 2014–2015 and 2019.
- Over the time period, China's LNG imports has had a range of 85 billion cubic metres, whereas South Korean imports have only had a range of less than 40 billion cubic metres, less than half the amount.
- Throughout the time period Australia has been the dominant LNG supplier to China, apart from 2012–2014 where it was Qatar, and at its peak in 2019 Australian LNG made up nearly half of the total amount. Australian LNG imports to South Korea have been more limited in comparison, making up no more than 2 billion cubic metres until 2014 when it steadily increased to 10 billion cubic metres until 2019, making up less than a fifth of the total imports.
- Qatar has been a consistent supplier to China, steadily increasing from 2008 to a peak of over 10 billion cubic metres of LNG in 2013, with gradual dips and increases from there to make up an eighth of its total supply in 2019. For South Korea it has been a more significant contributor, being the biggest single source for almost the whole time period, providing over a third of imports in South Korea's import peak of 2018.

- Malaysia and Indonesia have both had consistent levels through time in both countries, with Malaysia slightly edging the amounts. In recent years they have made up similar proportions of LNG imports to both countries, but provide nearly double the amount to China.
- Imports from the US have been the most recent addition to both graphs, starting in 2016 for China, but only making up 1–2 billion cubic metres of LNG from then on. Imports to South Korea also started in 2016, but there was a more significant rise, to nearly 8 billion cubic metres of LNG by 2019.
- Other suppliers have made more of a significant contribution to China's import mix, peaking at over a third of imports in 2013, and making up a quarter of imports for most years shown. South Korea has had a more even amount of imports from other suppliers, although there has been an increase since 2017 with others making up just over a fifth of total imports in 2019.

Question	Part	Marking guidance	Total marks
07		Assess the role of transnational corporations (TNCs) in the global supply and distribution of energy. AO1 – Knowledge and understanding of energy supplies in a globalised world: competing national interests and the role of transnational corporations in energy production, processing and distribution. Knowledge and understanding of the geopolitics of energy distribution, trade and management. Knowledge and understanding of energy security issues. AO2 – Application of knowledge and understanding to assess the role of transnational corporations (TNCs) in the global supply and distribution of energy.	9 AO1=4 AO2=5

Level	Marks	Descriptor
3	7–9	AO1 – Demonstrates detailed knowledge and understanding of the role that transnational corporations have in the global supply and distribution of energy. AO2 – Applies knowledge and understanding to the novel situation, offering detailed analysis and evaluation, drawn appropriately from the context provided. Connections and relationships between different aspects of study are thorough and relevant.
2	4–6	AO1 – Demonstrates clear knowledge and understanding of the role that transnational corporations have in the global supply and distribution of energy. 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 and relevant.
1	1–3	AO1 – Demonstrates basic knowledge and understanding of the role that transnational corporations have in the global supply and distribution of energy. AO2 – Applies limited knowledge and understanding to the novel situation, offering some basic analysis and evaluation. Connections and relationships between different aspects of study are basic with limited relevance. Analysis and evaluation are basic and of limited relevance.
0	0	No creditable content.

Indicative Content

This question requires links to be made between different parts of the specification content on Resource Security, specifically the energy security section, focussing on energy supplies in a globalised world, competing national interests and the role of transnational corporations in energy production, processing and distribution. Links may also be made with the natural resource issues section of the specification. Assessment needs to be made on the role of transnational corporations in the global supply and

distribution of energy. A summary may also be provided, based on the assessment of the overall impact of TNCs in the global supply and distribution of energy.

AO1

- Knowledge and understanding of energy supplies in a globalising world: competing national interests and the role of transnational corporations in energy production, processing and distribution.
- Knowledge and understanding of the geopolitics of energy distributions, trade and management.
- Knowledge and understanding of energy security issues.

AO2

- Assessment of the role that transnational corporations have in the global supply and distribution of energy. This may include:
 - A key role of transnational corporations in the global supply and distribution of energy is the creation of infrastructure such as refineries, processing facilities and pipelines. This allows them to refine raw materials into usable energy products such as gasoline, diesel, and various forms of electricity, and without this there would arguably be no global supply and distribution of energy at all. For example, Gazprom has built over 100 000 km of pipelines to help distribute gas from extraction and refinery units to destinations. This therefore allows for secure transfer and supply of gas, and energy security for destinations
 - Linked to the point above, having efficient processes and methods of production can also be seen to be important for effective supply and distribution, so a diverse global spread may be seen to be important. For example, both Exxon Mobil and Royal Dutch Shell have a large global reach, with drilling and distribution networks in most continents in the world. This therefore allows for global consistency of processes
 - Another important role that transnational corporations play is to work with other stakeholders, organisations and governments in allowing the safe transfer and distribution of energy. For example, Royal Dutch Shell has collaborated with the Nigerian government to secure and enhance oil production in the Niger Delta, investing in infrastructure improvements and security measures to stop the illegal theft of oil and damage to pipelines. This has helped to develop secure supplies and stability in the region
 - Transnational corporations contribute to technological advancements in energy production which is key for sustainability of supply and distribution in the future. They invest in research and development into better and quicker processes that will save on time and cost. For example, ExxonMobil has been developing advanced technologies for more efficient oil and gas extraction and distribution, such as its Fast Drill technology, which significantly reduces drilling time and costs. These innovations not only enhance operational efficiency but also help in meeting energy demands more effectively and sustainably
 - A key role connected to research and sustainability is the need for alternative and renewable sources of energy in the future. Many transnational corporations are therefore investing in renewable energy sources such as solar, wind, and hydropower. Ørsted, a Danish energy company, is a global leader in offshore wind energy. It develops, constructs, and operates offshore wind farms in various countries, contributing to the growth of renewable energy. This will help to provide a more energy secure and sustainable future
 - Linked to environmental sustainability, a key role could also be that current environmental issues are reduced or managed, in order for a more environmentally sustainable energy future. For example, Chevron has implemented advanced leak detection and repair (LDAR) processes to minimise methane emissions from its oil and gas operations. By using infrared cameras and other technologies to quickly identify and fix leaks, Chevron has significantly reduced air pollution and the environmental impact of its activities. This therefore helps to allow for increased environmental safety and sustainability, alongside energy security.
- Assessment should be included throughout for high levels, but an overall summary may also be provided based on the preceding on-going assessment. Any conclusion is acceptable as long as it is based on the balance of points made within the preceding discussion.

Question	Part	Marking guidance	Total marks
08		Evaluate the environmental impacts of a major water supply scheme that you have studied. AO1 – Knowledge and understanding of the environmental impacts of a major water supply scheme incorporating a major dam and/or barrage and associated distribution networks. Knowledge and understanding of water security issues. Knowledge and understanding of resource development issues. Knowledge and understanding of natural resource issues. AO2 – Application of knowledge and understanding to evaluate the environmental impacts of a major water supply scheme.	20 AO1=10 AO2=10

Level	Marks	Descriptor
4	16–20	AO2 – 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. AO1 – 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.
3	11–15	AO2 – 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. AO1 – 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.
2	6–10	AO2 – 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. AO1 – 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.
1	1–5	AO2 – 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. AO1 – 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.
0	0	No creditable content.

Indicative Content

The question links different parts of the Resource Security part of the specification, with specific reference to the water security section, focussing on environmental impacts of a major water supply scheme incorporating a major dam and/or barrage and associated distribution networks. Links may also be made to the resource development and natural resource issues section of the specification with regards to resource development and sustainability. Focus can be on a specific water supply scheme or a multi-use water scheme where water supply is a significant part of the whole scheme. Water supply can be seen in its broadest context (supply for people/agriculture/industry/energy generation/control of flow). Evaluation needs to be made on the environmental impacts of a major water supply scheme. An

overall evaluative judgement may also be provided based on the information presented about the chosen example.

If there is only discussion of non-environmental impacts, the answer will be limited to a maximum of Level 2.

AO1

- Knowledge and understanding of the environmental impacts of a major water supply scheme incorporating a major dam and/or barrage and associated distribution networks.
- Knowledge and understanding of water security issues.
- Knowledge and understanding of resource development issues.
- Knowledge and understanding of natural resource issues.

AO2

- Evaluation of the positive impacts of a major water supply scheme studied. Eg the Three Gorges Dam generates a significant amount of renewable energy through hydroelectric power. This reduces the dependence on fossil fuels, decreasing greenhouse gas emissions and mitigating climate change effects. The dam's clean energy production is estimated to reduce carbon dioxide emissions by millions of tons annually. The dam provides effective flood control along the Yangtze River, reducing the frequency and severity of floods downstream. This has positive implications for both human settlements and ecosystems, protecting lives, property, and agricultural lands. The controlled release of water during the wet season helps regulate downstream water levels. The dam facilitates smoother navigation along the Yangtze River by regulating water levels and reducing the variability of flow. This benefits transportation, enabling more efficient movement of goods and people. Improved navigation can also lead to reduced reliance on other, less environmentally-friendly transportation modes, such as road or rail.
- Evaluation of the negative impacts of a major water supply scheme studied. Eg the construction of the Three Gorges Dam resulted in the flooding of large areas of land, submerging ecosystems and displacing numerous plant and animal species. The altered flow regime and submerged habitats have led to the loss of biodiversity, impacting both terrestrial and aquatic ecosystems. For instance, the dam has been linked to declines in fish populations downstream. The dam traps sediment that would naturally flow downstream, leading to reduced sediment deposition downstream. This impacts the nutrient cycles and fertility of downstream agricultural lands, affecting both aquatic and terrestrial ecosystems. It can also contribute to erosion downstream, affecting riverbank stability. The weight of the water reservoir behind the dam has been associated with an increase in seismic activity in the region. While the dam was designed to withstand earthquakes, the induced seismicity can pose risks to nearby infrastructure and ecosystems. It has raised concerns about the long-term stability of the area and potential geological consequences.
- An overall evaluative summary should be provided based on information presented about the chosen example.

Assessment Objective grid

	AO1	AO2	AO3	Total
Section A				
01.1	1			1
01.2	1			1
01.3	1			1
01.4	1			1
01.5	1			1
02			6	6
03	4	5		9
04	10	10		20
Section B				
05.1	1			1
05.2	1			1
05.3	1			1
05.4	1			1
05.5	1			1
06			6	6
07	4	5		9
08	10	10		20
Unit total	38	30	12	80