

# INTERNATIONAL AS GEOGRAPHY GG02

Paper 2 Human Geography 1

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Mark scheme

June 2025

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Version: 0.1 Pre-Standardisation



2 5 6 X G G 0 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.

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# 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: <ul style="list-style-type: none"><li>• investigate geographical questions and issues</li><li>• interpret, analyse and evaluate data and evidence</li><li>• construct arguments and draw conclusions.</li></ul> |

### 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    | <p><b>Which of the following is an example of global environmental interdependence?</b></p> <p>Key – D: Several countries working together on a plan to limit global air pollution levels.</p>                                                                                     | <p><b>1</b></p> <p><b>AO1=1</b></p> |
| 01       | 2    | <p><b>What role do NGOs play in ocean protection?</b></p> <p>Key – C: They monitor human activities and suggest methods to help protect environments.</p>                                                                                                                          | <p><b>1</b></p> <p><b>AO1=1</b></p> |
| 01       | 3    | <p><b>‘Areas outside the control of individual nations, which all countries can access and use in a sustainable way.’</b></p> <p><b>This is a definition of which of the following?</b></p> <p>Key – D: The global commons</p>                                                     | <p><b>1</b></p> <p><b>AO1=1</b></p> |
| 01       | 4    | <p><b>Which of the following is a description of ocean trenches?</b></p> <p>Key – C: Long, narrow and deep sections that are usually 3 to 4 kilometres below the level of the surrounding ocean floor.</p>                                                                         | <p><b>1</b></p> <p><b>AO1=1</b></p> |
| 01       | 5    | <p><b>‘Rich countries reduce trade barriers and trade more goods between themselves, rather than trading with poorer countries.’</b></p> <p><b>This is an example of which of the following?</b></p> <p>Key – C: Differential access to markets linked to economic development</p> | <p><b>1</b></p> <p><b>AO1=1</b></p> |

| Question  | Part | Marking guidance                                                                                                                                                                                                                                                                                                                                                               | Total marks                  |
|-----------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| <b>02</b> |      | <p><b>Figure 1</b> shows the amount of money available in global regions, as well as flows and value of investments between global regions in 1999.</p> <p><b>Figure 2</b> shows the amount of money available in global regions, as well as flows and value of investments between global regions in 2007.</p> <p><b>Analyse the data shown in FIGURE 1 and FIGURE 2.</b></p> | <b>6</b><br><br><b>AO3=6</b> |

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

### Indicative Content

This question requires analysis of two different data maps, one showing the flows and value of investments between global regions in 1999, and the other showing this for 2007. Analysis could include key trends and locations within each map, such as data changes and high and low amounts, as well as comparison between the maps. There should be specific application of the data from the key.

### **AO3**

- The USA and Western Europe had the most different flow links to other regions in 1999, with eight each. In 2007 these had both gained a flow link, having nine in total.
- In 1999 there were only two flows worth 10% or more of global GDP, between the USA and the UK and the USA and Western Europe. By 2007 this had increased to three flows, with the UK to Western Europe increasing from only 5–10% of global GDP in 1999.
- The UK nearly doubled its flow links between 1999 and 2007, going from five to nine. All of the flows shown in 1999 increased in value apart from the one to the USA. However, a flow to Emerging Asia was either lost or reduced to less than 0.5% of world GDP.
- Whilst Russia and Eastern Europe was shown as a region in 1999 it was the only one without any flow links. By 2007 it had gained three though. Most of its existing links gained in value, including one to Western Europe worth 5–10% of world GDP and the fourth largest link shown on the map.
- Links to All Other Regions doubled between 1999 and 2007, going from three to six.
- Japan was the only region to lose flow links between 1999 and 2007, with one to Asian Tiger Countries going. Its link to the USA also lost value from 5–10% of world GDP to 1-5%.

- In 1999 the USA was the clear world leader in terms of amount of money available, with \$38 444 billion, nearly double the amount in Western Europe in second place. Japan was third with \$17 129 billion, just under half of the USA's amount, but no other region had even a sixth of the USA's money.
- In 2007 the USA was still the world leader in terms of amount of money available with \$61 194 billion, but Western Europe was a lot closer with 85% of the USA's money, having \$52 435 billion. Japan had declined in relative value, with less than a third of the USA's. Emerging Asia took third place instead, with just over a third of the USA's money available. The UK had just over a sixth of the USA's money available, but no other regions had even a seventh of the USA's money.
- In the 1999 to 2007 time period, Russia and Eastern Europe gained the most amount of relative available money, having nearly seven times its 1999 amount by 2007. Emerging Asia also gained a lot of available money, having nearly five times its 1999 amount by 2007. All other regions apart from the USA and Japan doubled their amounts in the time period.

| Question | Part | Marking guidance                                                                                                                                                                                                                                                                                                                                                                  | Total marks                                          |
|----------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| 03       |      | <p><b>Examine how globalisation can cause conflict.</b></p> <p><b>AO1</b> – Knowledge and understanding of globalisation critique. Knowledge and understanding of unequal flows of people, money, ideas and technology and their ability to create conflicts.</p> <p><b>AO2</b> – Application of knowledge and understanding to examine how globalisation can cause conflict.</p> | <p><b>9</b></p> <p><b>AO1=4</b><br/><b>AO2=5</b></p> |

| Level | Marks | Descriptor                                                                                                                                                                                                                                                                                                                                                                                         |
|-------|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3     | 7–9   | <p><b>AO1</b> – Demonstrates detailed knowledge and understanding of how globalisation can cause conflict.</p> <p><b>AO2</b> – Applies knowledge and understanding to the novel situation, offering detailed assessment, drawn appropriately from the context provided. Connections and relationships between different aspects of study are thorough and relevant.</p>                            |
| 2     | 4–6   | <p><b>AO1</b> – Demonstrates clear knowledge and understanding of how globalisation can cause conflict.</p> <p><b>AO2</b> – Applies knowledge and understanding to the novel situation, offering clear assessment, drawn appropriately from the context provided. Connections and relationships between different aspects of study are evident and relevant.</p>                                   |
| 1     | 1–3   | <p><b>AO1</b> – Demonstrates basic knowledge and understanding of how globalisation can cause conflict.</p> <p><b>AO2</b> – Applies limited knowledge and understanding to the novel situation, offering some basic assessment. Connections and relationships between different aspects of study are basic with limited relevance. Analysis and evaluation are basic and of limited relevance.</p> |
| 0     | 0     | No creditable content.                                                                                                                                                                                                                                                                                                                                                                             |

### Indicative Content

This question requires specific focus on the globalisation critique section of the specification on Global Systems and Governance, but connections may be made to the reference to how unequal flows of people, money, ideas and technology can create conflicts that is within the spec, as well as other relevant points within the spec that could lead to conflict creation. This knowledge should then be used to examine how globalisation can cause conflicts.

### **AO1**

- Knowledge and understanding of globalisation critique, specifically the costs of globalisation linked to conflict.
- Knowledge and understanding of unequal flows of people, money, ideas and technology and their ability to create conflicts.
- Knowledge and understanding of other areas of the specification that can be linked to the question.

## AO2

- Examination of different factors relating to the creation of conflict through globalisation:
  - as globalisation allows easier movement of people across borders, some regions experience an influx of migrants seeking job opportunities, while others witness a loss of skilled workers. This can lead to social tensions and conflicts, as local populations may feel threatened by competition for jobs, strain on social services, and cultural differences. In extreme cases, this can lead to xenophobia and discrimination, creating divisions within societies
  - globalisation has contributed to economic growth in some regions while leaving others behind, leading to significant global economic inequality. Trade disputes arise when countries or regions perceive that they are not benefiting equally from global trade agreements. Disagreements over tariffs, subsidies, and market access can sometimes then escalate into trade wars, damaging international relations and causing economic hardships for countries involved
  - the dominance of Western cultural values through media, entertainment, and technology can lead to cultural imperialism and Westernisation. This can cause conflicts as local cultures feel threatened or marginalised
  - transnational corporations, often from developed countries, can hold significant influence over global markets. This can result in the marginalisation of local businesses and industries, creating economic imbalances and cultural clashes between global and local interests
  - many transnational corporations outsource manufacturing to countries with lower labour costs, often resulting in the establishment of sweatshops where workers endure poor working conditions, low wages, and minimal job security. Trade unions, which advocate for workers' rights and improved working conditions, may face significant challenges in these scenarios. Conflicts can arise when workers strike or protest, or when the companies try to suppress the rights of the unions or workers. This creates conflicts of interest and, on occasion, has led to violence and damage
  - NGOs, including the MSC, work to establish and promote sustainable fishing practices through certifications and standards. However, conflicts can arise when different stakeholders, such as fishing communities and industries, perceive these standards as restrictive. Disagreements may occur over the allocation of fishing quotas, with some arguing for more stringent measures to protect marine biodiversity and others advocating for more lenient regulations to maintain livelihoods.
- Examination should be present throughout the answer for high levels but candidates may also want to provide a conclusion on the basis of the key points made. Any conclusion is acceptable as long as it is based on the balance of points made within the preceding answer.

| Question | Part | Marking guidance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Total marks                                             |
|----------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| 04       |      | <p><b>‘Global marketing is the most important aspect allowing for the success of transnational corporations (TNCs).’</b></p> <p><b>To what extent do you agree with this statement?</b></p> <p><b>Refer to ONE OR MORE TNC(s) that you have studied to help support your answer.</b></p> <p><b>AO1</b> – Knowledge and understanding of the nature and role of transnational corporations (TNCs), including their spatial organisation, production, linkages, trading and marketing patterns, with a detailed reference to a specified TNC and its impacts on those countries in which it operates. Knowledge and understanding of the geographical consequences of global systems. Knowledge and understanding of the globalisation critique.</p> <p><b>AO2</b> – Application of knowledge and understanding to form an extent to which there is agreement with the statement or not on whether global marketing is the most important aspect allowing for the success of transnational corporations.</p> | <p><b>20</b></p> <p><b>AO1=10</b><br/><b>AO2=10</b></p> |

| Level | Marks | Descriptor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4     | 16–20 | <p><b>AO2</b> –Detailed evaluative conclusion that is rational and firmly based on knowledge and understanding which is applied to the context of the question.</p> <p><b>AO2</b> – Detailed, coherent and relevant analysis and evaluation in the application of knowledge and understanding throughout.</p> <p><b>AO2</b> – Full evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts.</p> <p><b>AO1</b> – Detailed, highly relevant and appropriate knowledge and understanding of place(s) and environments used throughout.</p> <p><b>AO1</b> – Full and accurate knowledge and understanding of key concepts and processes throughout.</p> <p><b>AO1</b> – Detailed awareness of scale and temporal change which is well integrated where appropriate.</p> |
| 3     | 11–15 | <p><b>AO2</b> – Clear evaluative conclusion that is based on knowledge and understanding which is applied to the context of the question.</p> <p><b>AO2</b> – Generally clear, coherent and relevant analysis and evaluation in the application of knowledge and understanding.</p> <p><b>AO2</b> – Generally clear evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts.</p>                                                                                                                                                                                                                                                                                                                                                                                    |

|          |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |             | <p><b>AO1</b> – Generally clear and relevant knowledge and understanding of place(s) and environments.</p> <p><b>AO1</b> – Generally clear and accurate knowledge and understanding of key concepts and processes.</p> <p><b>AO1</b> – Generally clear awareness of scale and temporal change which is integrated where appropriate.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>2</b> | <b>6–10</b> | <p><b>AO2</b> – Some sense of an evaluative conclusion partially based upon knowledge and understanding which is applied to the context of the question.</p> <p><b>AO2</b> – Some partially relevant analysis and evaluation in the application of knowledge and understanding.</p> <p><b>AO2</b> – Some evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts.</p> <p><b>AO1</b> – Some relevant knowledge and understanding of place(s) and environments which is partially relevant.</p> <p><b>AO1</b> – Some knowledge and understanding of key concepts, processes and interactions and change.</p> <p><b>AO1</b> – Some awareness of scale and temporal change which is sometimes integrated where appropriate. There may be a few inaccuracies.</p>                                          |
| <b>1</b> | <b>1–5</b>  | <p><b>AO2</b> – Very limited and/or unsupported evaluative conclusion that is loosely based upon knowledge and understanding which is applied to the context of the question.</p> <p><b>AO2</b> – Very limited analysis and evaluation in the application of knowledge and understanding. This lacks clarity and coherence.</p> <p><b>AO2</b> – Very limited and rarely logical evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts.</p> <p><b>AO1</b> – Very limited relevant knowledge and understanding of place(s) and environments.</p> <p><b>AO1</b> – Isolated knowledge and understanding of key concepts and processes.</p> <p><b>AO1</b> – Very limited awareness of scale and temporal change which is rarely integrated where appropriate. There may be a number of inaccuracies.</p> |
| <b>0</b> | <b>0</b>    | No creditable content.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

### Indicative Content

The question links different parts of the Global Systems and Governance part of the specification. The main focus is on the nature and role of transnational corporations (TNCs), including their spatial organisation, production, linkages, trading and marketing patterns, with a detailed reference to a specified TNC and its impacts on those countries in which it operates. The question requires candidates

to form an extent to which they agree with the statement or not on whether global marketing is the most important aspect allowing for the success of transnational corporations. To do this they may use other sections of the specification to help, most likely the geographical consequences of global systems and the globalisation critique. Answers should consider a range of points linked to at least one TNC example studied and form an overall extent based on these points.

### AO1

- Knowledge and understanding of the nature and role of transnational corporations (TNCs), including their spatial organisation, production, linkages, trading and marketing patterns, with a detailed reference to a specified TNC and its impacts on those countries in which it operates.
- Knowledge and understanding of the geographical consequences of global systems.
- Knowledge and understanding of the globalisation critique.
- Knowledge and understanding of other areas of the specification that can be linked to the question.

### AO2

- Points linked to the importance of global marketing for TNCs. For instance:
  - McDonald's employs a 'think global, act local' strategy, customising its marketing campaigns to fit local cultures, which is also referred to as 'glocalisation'. In India, for example, McDonald's promotes vegetarian menu items and uses Bollywood celebrities in its advertisements to appeal to local tastes and cultural norms, which has significantly contributed to its success in the region
  - Nike uses its iconic 'Just Do It' slogan and Swoosh logo in marketing campaigns worldwide. By maintaining a consistent brand image while incorporating local sports figures and cultural elements in different regions, Nike ensures a strong, unified brand presence. This strategy has made Nike one of the most recognisable and trusted brands globally, linked to its simplicity
  - Coca-Cola's 'Share a Coke' campaign, including the option to personalise Coke bottles with popular names, used social media to encourage consumers to share their experiences online. This campaign was adapted for various markets by including locally popular names and languages, applying the power of digital marketing to create a global yet locally relevant campaign. The result was increased brand engagement and a significant boost in sales worldwide.
- Points linked to the importance of spatial distribution for TNCs. For instance:
  - Unilever operates in over 190 countries, catering to a wide range of consumers with products tailored to local needs. This extensive distribution network allows Unilever to focus on growth opportunities in emerging markets, whilst also maintaining strong positions in developed economies, contributing significantly to its global revenue streams
  - Toyota has manufacturing plants and suppliers strategically located around the world. This spatial distribution enables Toyota to source parts from different regions, reducing production costs and ensuring supply chain resilience. For instance, during the 2011 tsunami in Japan, Toyota's ability to source components from other regions helped it recover more quickly compared to competitors heavily dependent on Japanese suppliers
  - Apple's global spatial distribution strategy includes design, research and development in the United States, manufacturing in China, and components sourced from various countries like Japan and South Korea. This strategic distribution allows Apple to benefit from the advanced technological expertise in Silicon Valley, cost-effective manufacturing in China, and high-quality component production in Asia, leading to a highly efficient and competitive operation.
- Points linked to the importance of production for TNCs. For instance:
  - Samsung operates multiple large-scale manufacturing facilities across different countries, including South Korea, China, and Vietnam. These facilities enable Samsung to produce high volumes of electronics at lower costs, benefiting from economies of scale. This approach has helped Samsung maintain competitive pricing and high profit margins in the global market

- Toyota's production system (also referred to as TPS) emphasises continuous improvement (kaizen) and quality control. By implementing stringent quality control measures across its global production facilities, Toyota ensures that its vehicles meet high standards of quality and reliability, contributing to its reputation for durability and customer satisfaction worldwide
- Nestlé, one of the world's largest food and beverage companies, operates research, development and production facilities worldwide. This global network allows Nestlé to develop and produce products tailored to local tastes and preferences. For instance, in India, Nestlé produces Maggi noodles with flavours and ingredients suited to Indian consumers. This ability to innovate and customise products locally helps Nestlé maintain its market leadership and appeal to diverse consumer bases.
- Points linked to the importance of trading patterns for TNCs. For instance:
  - Siemens, the German-based company, operates in over 200 countries. By trading in a wide range of international markets, Siemens can mitigate risks associated with economic downturns in any single region. For instance, while Europe and North America are significant markets, Siemens has also established a strong presence in emerging markets like China and India, ensuring a balanced and stable revenue stream globally
  - Apple sources components for its products from various countries, including rare earth elements from China, semiconductors from Taiwan, and displays from South Korea. This global trading pattern allows Apple to maintain a steady supply chain, incorporate the latest technologies, and ensure the production of high-quality products, contributing to its leadership in the tech industry
  - Walmart, the world's largest retailer, utilises an extensive global supply chain to source products from countries with lower production costs. By trading with suppliers from China, India, and other countries, Walmart can offer a wide range of products at competitive prices. This strategy not only helps Walmart maintain its price leadership but also ensures a diverse product offering that meets the needs of its global customer base.
- Points linked to the importance of other links for TNCs. For instance:
  - Google, part of Alphabet Inc, has research and development centres around the world, including in the United States, India, Israel, and the United Kingdom. By tapping into the expertise and innovative capabilities of diverse talent pools, Google enhances its ability to develop cutting-edge technologies and maintain its competitive edge in the tech industry. This global network of talent contributes significantly to advancements in areas like artificial intelligence, cloud computing, and machine learning
  - Unilever has implemented its 'Sustainable Living Plan' globally, aiming to improve health and well-being, reduce environmental impact, and enhance livelihoods. Through partnerships with local NGOs, governments, and communities in countries like Brazil, India, and Kenya, Unilever addresses issues such as water scarcity, sanitation, and sustainable agriculture. These global initiatives not only enhance Unilever's brand reputation but also contribute to positive social and environmental impacts worldwide
  - Microsoft operates in over 190 countries and must comply with a wide range of local laws and regulations. By maintaining strong relationships with local governments and regulatory bodies, Microsoft can effectively navigate complex legal landscapes. For instance, in Europe, Microsoft has engaged with the European Union to address antitrust concerns and adapt its business practices accordingly. These global links are crucial for ensuring regulatory compliance and mitigating political risks, enabling Microsoft to operate smoothly across diverse regions.
- An overall extent to which there is agreement with the statement or not should be made. Any extent is acceptable as long as it is based on the balance of points made within the preceding key points.

## Section B – Resource security

Total for this section: 40 marks

| Question | Part | Marking guidance                                                                                                                                                                                                                                                                                              | Total marks                         |
|----------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| 05       | 1    | <p><b>Which of the following is an example of a geopolitical factor affecting energy distribution?</b></p> <p>Key – A: A country blocks the supply of gas to another country during a conflict.</p>                                                                                                           | <p><b>1</b></p> <p><b>AO1=1</b></p> |
| 05       | 2    | <p><b>Which of the following is an example of a water future caused by change in the physical environment?</b></p> <p>Key – C: Rainwater collection and storage is put in place within a region due to increased rainfall from climate change.</p>                                                            | <p><b>1</b></p> <p><b>AO1=1</b></p> |
| 05       | 3    | <p><b>‘A raw material is thought to be present in a certain area because related materials are found in the same area. However, no geological sampling or drilling has taken place to be certain the material is present.’</b></p> <p><b>What is this describing?</b></p> <p>Key – B: A possible resource</p> | <p><b>1</b></p> <p><b>AO1=1</b></p> |
| 05       | 4    | <p><b>Which of the following is a definition of the enhanced greenhouse effect?</b></p> <p>Key – B: Human processes create more greenhouse gases than normal. These trap heat radiation in the atmosphere which warms the Earth over time.</p>                                                                | <p><b>1</b></p> <p><b>AO1=1</b></p> |
| 05       | 5    | <p><b>Which of the following is a geological factor affecting water supply?</b></p> <p>Key – B: The natural storage of groundwater within a country due to its rock type.</p>                                                                                                                                 | <p><b>1</b></p> <p><b>AO1=1</b></p> |

| Question  | Part | Marking guidance                                                                                                                                                                                                                                                                                           | Total marks                         |
|-----------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| <b>06</b> |      | <p><b>Figure 3</b> shows the percentage share of electricity production from renewable energy by country in 2001.</p> <p><b>Figure 4</b> shows the percentage share of electricity production from renewable energy by country in 2021.</p> <p><b>Analyse the data shown in FIGURE 3 and FIGURE 4.</b></p> | <p><b>6</b></p> <p><b>AO3=6</b></p> |

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

### Indicative Content

This question requires analysis of a two choropleth maps showing the percentage share of electricity production from renewable energy by country in 2001 and in 2021. Analysis could include data trends, high and low amounts, key differences, regional variance and anomalies. There should be specific application of the data from the key.

### **AO3**

- In 2001 approximately half of the world has only 0–20% of electricity production from renewables, especially the majority of Europe and Asia.
- South America stands out as having the most consistently high percentages in 2001, with four countries at 61–81% (including Ecuador and Venezuela) and another four at 81–100% (including Brazil and Uruguay). Only one country (Suriname) is in the lowest level of 0–20%.
- Central to southern Africa also stands out with a cluster of countries with high percentages – there are more than 10 with 80–100%, including Tanzania and Zambia.
- Apart from Ecuador in South America, other anomalies in 2001 include Norway and Iceland in Europe as they are much higher than the rest of Europe with 81–100%, apart from a few countries in the centre of the continent. Similarly, Nepal and Georgia stand out with high amounts of 81–100% in Asia. New Zealand also stands out with 61–80% next to Australia with only 0–20%.
- In 2021 there is less of the world's countries with 0–20% electricity production from renewables, down to approximately a quarter of the world. Most countries in Europe have now progressed onto at least 21–40%, with some even higher, such as Portugal with 61–80%, moving from 21–40% in 2001. Large parts of Asia still remain at 0–20%, although some countries have progressed, such as China which is now at 21–40% and Japan which is now at 41–60%. The three main countries in North America (Mexico, USA and Canada) have each progressed up by one percentage category.
- South America still stands out as having the most consistently high percentages, with Suriname moving up to 41–60%, meaning that all countries are at least 21–40%. However, six countries have

dropped to lower percentage categories, including Brazil going down to 61–80%. Alongside Suriname, Ecuador has also increased, moving from 61–80% in 2001 to 81–100% in 2021.

- Central to southern Africa also still stands out as a cluster of high amounts, although some countries have dropped to lower percentages, including Tanzania which is now only 21–40%. Some countries in this region have increased too, such as Kenya which has gone from 41–60% in 2001 to 81–100% in 2021.
- New Zealand is now less of an anomaly as Australia has increased to 21–40%, but Indonesia has notably done the reverse, moving from 21–40% in 2001 to 0–20% in 2021.
- Apart from Portugal, Suriname and Kenya as already mentioned, another notable increase of more than one category is Turkey, moving from 0–20% in 2001 to 41–60% in 2021. It is surrounded by much lower percentage countries to the south, so seems an anomaly, although Georgia to the north east is 81–100% and was in 2001. Sierra Leone also stands out, having moved from 0–20% in 2001 to 81–100% in 2021, although it is less of a clear anomaly as the countries that surround it have also increased to 61–80%. Interestingly Ghana, along the coast to the east, has done the reverse, moving from 81–100% in 2001 to only 21–40% in 2021

| Question | Part | Marking guidance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Total marks                                          |
|----------|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| 07       |      | <p><b>Assess environmental impacts of a major energy resource development and its associated distribution networks.</b></p> <p><b>Use an example that you have studied to help support your answer.</b></p> <p><b>AO1</b> – Knowledge and understanding of the environmental impacts of a major energy resource development such as an oil, coal or gas field and associated distribution networks.</p> <p><b>AO2</b> – Application of knowledge and understanding to assess the environmental impacts of the example.</p> | <p><b>9</b></p> <p><b>AO1=4</b><br/><b>AO2=5</b></p> |

| Level | Marks | Descriptor                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3     | 7–9   | <p><b>AO1</b> – Demonstrates detailed knowledge and understanding of the environmental impacts of a major energy resource development and its associated distribution networks.</p> <p><b>AO2</b> – Applies knowledge and understanding to the novel situation, offering detailed assessment, drawn appropriately from the context provided. Connections and relationships between different aspects of study are thorough and relevant.</p>                            |
| 2     | 4–6   | <p><b>AO1</b> – Demonstrates clear knowledge and understanding of the environmental impacts of a major energy resource development and its associated distribution networks.</p> <p><b>AO2</b> – Applies knowledge and understanding to the novel situation, offering clear assessment, drawn appropriately from the context provided. Connections and relationships between different aspects of study are evident with and relevant.</p>                              |
| 1     | 1–3   | <p><b>AO1</b> – Demonstrates basic knowledge and understanding of the environmental impacts of a major energy resource development and its associated distribution networks.</p> <p><b>AO2</b> – Applies limited knowledge and understanding to the novel situation, offering some basic assessment. Connections and relationships between different aspects of study are basic with limited relevance. Analysis and evaluation are basic and of limited relevance.</p> |
| 0     | 0     | No creditable content.                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

### Indicative Content

This question requires specific focus on the environmental impacts of a major energy resource development section of the specification on Resource Security. Connections may be made to other parts of the specification if they link to the example resource development, such as sustainable resource development and sustainability issues associated with energy production. This knowledge should then be used to assess the environmental impacts of the energy resource development by applying an example studied.

## AO1

- Knowledge and understanding of the environmental impacts of a major energy resource development such as an oil, coal or gas field and associated distribution networks.
- Knowledge and understanding of other areas of the specification that can be linked to the question.

## AO2

- Assessment of the environmental impacts of a major energy resource development and its associated distribution networks using an example studied. This may include:
  - the extraction and transportation of oil from the Alberta oil sands in Canada contribute significantly to greenhouse gas emissions. The production of oil sands emits about 20% more greenhouse gases compared to conventional oil. This suggests that it is a fairly significant negative impact
  - the construction and operation of oil fields in the Alberta oil sands have resulted in habitat destruction and fragmentation, impacting boreal forest ecosystems with over 500 000 hectares of boreal forest being lost or impacted on. Again, this is a significant negative impact, although more at a local scale than with global repercussions
  - the Alberta oil sands energy creation generates large amounts of waste, including drill cuttings, produced water, and other byproducts. Improper disposal can lead to soil and water contamination, affecting landscapes, ecosystems and human settlements. This is another key negative impact affecting the physical landscape of the surrounding area, with arguably more local impacts than the forest and ecosystem loss
  - companies operating in the Alberta oil sands are investing in technologies like carbon capture and storage capture and store emissions. The industry is also exploring more energy-efficient extraction processes to help minimise the overall carbon footprint. This is a positive environmental impact put in place to minimise greenhouse gas emissions, although it still means that carbon is created, so this could arguably go further and apply renewable energy with no emissions instead
  - to help address water pollution concerns, the oil sands industry is implementing improved water management practices. This involves enhanced wastewater treatment processes to reduce the environmental impact of produced water and other byproducts. This is a positive environmental impact if it reduces the issues of localised water pollution and contamination
  - companies involved in tar sands are also investing in environmental improvement initiatives, such as habitat protection and carbon offsetting through tree planting, in order to minimise their negative environmental impact. This therefore has a positive environmental impact where this takes place, but arguably not enough to counter the destruction to the physical landscape and greenhouse gas emissions caused by the activities.
- Assessment should be included throughout for high levels, but an overall assessment summary may also be provided based on the preceding 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       |      | <p><b>Evaluate the sustainability of water management strategies.</b></p> <p><b>Your answer should include reference to ONE OR MORE examples of water management, such as virtual water trade, conservation, recycling, ‘grey water’ and groundwater management.</b></p> <p><b>AO1</b> – Knowledge and understanding of the sustainability issues associated with water management: virtual water trade, conservation, recycling, ‘grey water’ and groundwater management. Knowledge and understanding of sustainable resource development. Knowledge and understanding of the geopolitics of water management. Knowledge and understanding of strategies to manage water consumption.</p> <p><b>AO2</b> – Application of knowledge and understanding to evaluate the sustainability of different water management techniques.</p> | <p><b>20</b></p> <p><b>AO1=10</b><br/><b>AO2=10</b></p> |

| Level | Marks | Descriptor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4     | 16–20 | <p><b>AO2</b> – Detailed evaluative conclusion that is rational and firmly based on knowledge and understanding which is applied to the context of the question.</p> <p><b>AO2</b> – Detailed, coherent and relevant analysis and evaluation in the application of knowledge and understanding throughout.</p> <p><b>AO2</b> – Full evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts.</p> <p><b>AO1</b> – Detailed, highly relevant and appropriate knowledge and understanding of place(s) and environments used throughout.</p> <p><b>AO1</b> – Full and accurate knowledge and understanding of key concepts and processes throughout.</p> <p><b>AO1</b> – Detailed awareness of scale and temporal change which is well integrated where appropriate.</p> |
| 3     | 11–15 | <p><b>AO2</b> – Clear evaluative conclusion that is based on knowledge and understanding which is applied to the context of the question.</p> <p><b>AO2</b> – Generally clear, coherent and relevant analysis and evaluation in the application of knowledge and understanding.</p> <p><b>AO2</b> – Generally clear evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts.</p> <p><b>AO1</b> – Generally clear and relevant knowledge and understanding of place(s) and environments.</p>                                                                                                                                                                                                                                                                          |

|          |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |             | <p><b>AO1</b> – Generally clear and accurate knowledge and understanding of key concepts and processes.</p> <p><b>AO1</b> – Generally clear awareness of scale and temporal change which is integrated where appropriate.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>2</b> | <b>6–10</b> | <p><b>AO2</b> – Some sense of an evaluative conclusion partially based upon knowledge and understanding which is applied to the context of the question.</p> <p><b>AO2</b> – Some partially relevant analysis and evaluation in the application of knowledge and understanding.</p> <p><b>AO2</b> – Some evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts.</p> <p><b>AO1</b> – Some relevant knowledge and understanding of place(s) and environments which is partially relevant.</p> <p><b>AO1</b> – Some knowledge and understanding of key concepts, processes and interactions and change.</p> <p><b>AO1</b> – Some awareness of scale and temporal change which is sometimes integrated where appropriate. There may be a few inaccuracies.</p>                                          |
| <b>1</b> | <b>1–5</b>  | <p><b>AO2</b> – Very limited and/or unsupported evaluative conclusion that is loosely based upon knowledge and understanding which is applied to the context of the question.</p> <p><b>AO2</b> – Very limited analysis and evaluation in the application of knowledge and understanding. This lacks clarity and coherence.</p> <p><b>AO2</b> – Very limited and rarely logical evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts.</p> <p><b>AO1</b> – Very limited relevant knowledge and understanding of place(s) and environments.</p> <p><b>AO1</b> – Isolated knowledge and understanding of key concepts and processes.</p> <p><b>AO1</b> – Very limited awareness of scale and temporal change which is rarely integrated where appropriate. There may be a number of inaccuracies.</p> |
| <b>0</b> | <b>0</b>    | No creditable content.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

### Indicative Content

The question links different parts of the Resource Security part of the specification, with specific reference to sustainability issues associated with water management. Links may also be made to sustainable resource development, the geopolitics of water management and strategies to manage water consumption. Candidates need to evaluate the sustainability of different water management techniques. An overall judgement may also be provided based on the evaluation.

## AO1

- Knowledge and understanding of the sustainability issues associated with water management: virtual water trade, conservation, recycling, 'grey water' and groundwater management.
- Knowledge and understanding of sustainable resource development.
- Knowledge and understanding of the geopolitics of water management.
- Knowledge and understanding of strategies to manage water consumption.

## AO2

- Evaluation of the sustainability issues associated with different water management techniques. For instance:
  - virtual water trade can be sustainable as it allows regions with water scarcity to import water-intensive goods rather than using their own water resources. However, dependence on virtual water trade without considering local water availability can lead to over-extraction of water in exporting regions, causing environmental degradation and social issues
  - water conservation is often sustainable as it focuses on reducing overall water use, promoting efficient water use practices and technologies. But implementation of water conservation measures may face challenges if they are not culturally or economically feasible, leading to resistance or lack of uptake by people
  - water recycling is usually sustainable as it reduces the demand on freshwater sources and can contribute to a more circular water use system, with treatment and re-use of waste water. However, if not properly treated, recycled water may contain contaminants, posing health risks. Additionally, the energy-intensive nature of some recycling processes may contribute to environmental issues, and it can be costly to set up processing plants and power the process
  - the use of 'grey water' in households is sustainable as it reduces the demand for fresh water and can allow households to save money and be less reliant on water infrastructure. However, improper treatment or use of grey water without following health and safety guidelines can lead to waterborne diseases. It also relies on the set up of household processes to collect and store waste water, which can be difficult in terms of space and resources in some households
  - implementing efficient irrigation techniques, promoting water-efficient appliances, and educating the public on responsible water use are other sustainable strategies that may be linked to managing water consumption. All of these are sustainable in reducing water use and allowing more for the future, but any that involve excessive withdrawal or diversion of water without considering ecological balance and biodiversity can be unsustainable. Additionally, if water management policies disproportionately impact vulnerable communities, they can lead to social and environmental injustice. Some may also be too economically costly for some locations
- Evaluation should be included throughout for high levels, but an overall evaluation may also be provided based on the preceding discussion. Any conclusion is acceptable as long as it is based on the balance of points made within the preceding discussion.

**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    |