GCSE
GEOGRAPHY
8035/2

Paper 2 Challenges in the Human Environment

Mark scheme

June 2021

Version: 1.0 Final Mark Scheme

2 1 6 G 8 0 3 5 / 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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Point marked questions marking instructions

The mark scheme will state the correct answer or a range of possible answers, although these may not be exhaustive. It may indicate how a second mark is awarded for a second point or developed idea. It may give an indication of unacceptable answers. Each mark should be shown by placing a tick where credit is given. The number of ticks must equal the mark awarded. Do not use crosses to indicate answers that are incorrect.

Level of response marking instructions

Level of response mark schemes are broken down into levels, each of which has a descriptor. The descriptor is linked to the assessment objective(s) being addressed. The descriptor for the level shows the average performance for the level.

Before you apply the mark scheme to a student's answer read through the answer and annotate it (as instructed) to show the qualities that are being looked for. You can then apply the mark scheme. You should read the whole answer before awarding marks on levels response questions.

Step 1 Determine a level

Descriptors for the level indicate the different qualities that might be seen in the student's answer for that level. When assigning a level you should look at the overall quality of the answer and not look to pick holes in small and specific parts of the answer where the student has not performed quite as well as the rest. If the answer covers different aspects of different levels of the mark scheme you should use a best fit approach for defining the level and then use the variability of the response to help decide the mark within the level, ie if the response is predominantly Level 2 with a small amount of Level 3 material it would be placed in Level 2 but be awarded a mark near the top of the level because of the Level 3 content. For instance, in a 9 mark question with three levels of response, an answer may demonstrate thorough knowledge and understanding (AO1 and AO2) but fail to respond to command words such as assess or evaluate (AO3). The script could still access Level 2 marks. Note that the mark scheme is not progressive in the sense that students don't have to fulfil all the requirements of Level 1 in order to access Level 2.

Step 2 Determine a mark

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

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

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

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

Assessment of spelling, punctuation, grammar and use of specialist terminology (SPaG)

Accuracy of spelling, punctuation, grammar and the use of specialist terminology will be assessed via the indicated 9 mark questions. In each of these questions, three marks are allocated for SPaG as follows:

- **High performance** – 3 marks
- **Intermediate performance** – 2 marks
- **Threshold performance** – 1 mark

Responses with SPaG marks that gain a mark of 0 for the content/skills of the question can still be awarded SPaG marks if the response is judged to be a genuine attempt to answer the question.

General guidance

- Mark schemes should be applied positively. Examiners should look for qualities to reward rather than faults to penalise. They are looking to find credit in each response they mark. Unless the mark scheme specifically states, candidates must never lose marks for incorrect answers.
- The full range of marks should be used. Examiners should always award full marks if deserved, ie if the answer matches the mark scheme.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked unless the candidate has replaced it with an alternative response.
- Do NOT add ticks to level-marked questions – use the highlight tool/brackets to signify what is relevant.
- Sometimes there are specific "triggers" in the mark scheme that enable higher level marks to be awarded. For instance, an example or case study may be required for Level 3 if it is stated within the question.
- Where a source, such as a photograph or map, is provided as a stimulus it should be used if requested in the question, but credit can often be given for inferred as well as direct use of the source.
- Always be consistent – accept the guidelines given in the mark scheme and apply them to every script.
- If necessary make comments to support the level awarded and to help clarify a decision you have made.
- Examiners should revisit standardised script answers as they apply the mark scheme in order to confirm that the level and the mark allocated is appropriate to the response provided.
- Mark all answers written on the examination paper.

Section A

Qu	Pt	Marking Guidance	Total marks
01	1	**What is meant by rural-urban migration?** Movement of people from the countryside to the city. Credit words to that effect. Allow 'migration from the countryside to the city'. No credit for definition that re-uses the terms urban and rural. No credit for defining urban-rural, eg 'movement from city to countryside'. AO1 – 1 mark	1
01	2	**Describe the distribution of the cities shown in Figure 1.** The question focuses on description, it should be clear the candidate is referring to this and not offering explanation. One mark for an initial overall descriptive comment eg: • The majority are in Asia / north of the Equator (1) • There are two in Africa / the Middle East (1) • There are no new megacities expected in the Americas (1) • Mostly near the coast (1) Second mark may be a second separate point or developed point for further descriptive clarity eg: • The majority are in Asia / north of the equator (1) with 4/10 in China alone (d)(1) / these adding double the number expected in the rest of the world (d)(1) • There are two in Africa / the Middle East (1) which is double the number expected in Europe / far less than expected in Asia (d)(1) • There are no new megacities expected in the Americas (1) so they and Oceania/Australasia (accept either) are the only two continents shown with no new megacities expected (d)(1) No credit for explanation of the pattern. AO4 – 2 marks	2

01	3	**Outline one reason why managing transport is important for urban sustainability.** One mark for a basic statement, eg: • To reduce carbon emissions (1) • To reduce congestion (1) • To cut down on air pollution (1) Two marks for a developed idea, eg: • To reduce carbon emissions (1) which will reduce the greenhouse effect and climate change (d) (1) • To reduce congestion (1) which will mean less time is wasted in travel so businesses stay profitable / so people can comfortably travel to work and won't therefore leave the city (d) (1) • To cut down on air pollution (1) so residents won't leave the city for a healthier environment elsewhere (d) (1) Credit any aspect of sustainability: economic; social; environmental. No credit for description of urban transport improvements. AO1 – 2 marks	2

01	4	**Explain why creating green space is important for sustainable urban living.** **Use Figure 2 and your own understanding.**	4

Level	Marks	Description
2 (Clear)	3–4	AO2 – Shows clear understanding of urban greening and the concept of sustainable urban living. AO3 – Applies knowledge and understanding to **Figure 2** effectively and offers development to explain the link between green space and sustainability.
1 (Basic)	1–2	AO2 – Shows limited understanding of urban greening and the concept of sustainable urban living. AO3 – Applies knowledge and understanding to **Figure 2** OR own understanding to begin to explain the link between green space and sustainability.
	0	No relevant content.

- **Level 2 responses** will apply geographical knowledge and understanding in combination with the figure to present a reasoned explanation.
- **Level 1 responses** will be simplistic or simply assert a cause / effect link.

Indicative content

- Answers should apply knowledge and understanding to **Figure 2** which should be clear through reference to what is visible such as the plants on balconies or the idea of 'green walls' / 'vertical planting'.
- Development need not be through named places but use of an example is likely to add clarity. Development may also be found in explanation of processes of urban greening and the associated effects.
- Credit both social and environmental sustainability

Figure 2 eg:

- Use of the balconies creates space where it would otherwise not be available in a built up urban area with high rise buildings.
- Plants on the balconies will provide a green view for the residents.
- Trees so close to the buildings will help to cool them so reducing need for power for air conditioning.

Own understanding eg:

- Trees absorb CO_2 and so act as a carbon sink helping to reduce carbon emissions.
- Trees and hedging help to absorb harmful pollutants, especially at ground level where they are closer to the source of emissions from car exhausts. This helps reduce illness and reduces the emissions circulating in the atmosphere.

		• Green space, especially trees which create shade, will create pockets of cooler air, reducing urban heat levels. • Green space helps to make cities more liveable and reduce stress amongst residents. • No credit for description of urban problems in isolation. AO2 – 2 marks AO3 – 2 marks	

01	5	**Using Figure 3, give the four-figure grid reference for the park and ride.** One mark for the correct answer. **C.** 8606 No credit if two or more statements are shaded. AO4 – 1 mark	1

01	6	**Using Figure 3, what is the distance along the A944 from the junction at 854063 to the edge of the built up area at 890066?** One mark for the correct answer. **C.** 3.8km No credit if two or more statements are shaded. AO4 – 1 mark	1

01	7	**Suggest how urban sprawl and the growth of commuter settlements have impacts on the rural-urban fringe.** **Use Figure 3 and Figure 4 and your own understanding.**	6

Level	Marks	Description
3 (Detailed)	5–6	AO2 – Shows detailed understanding of the relationship between urban sprawl / commuter settlements and the rural-urban fringe. AO3 – Demonstrates thorough application of knowledge and understanding to offer analysis of the example provided and the link in broader terms
2 (Clear)	3–4	AO2 – Shows clear understanding of the relationship between urban sprawl / commuter settlements and the rural-urban fringe. AO3 – Demonstrates some application of knowledge and understanding by analysis of the example provided and / or the link in broader terms
1 (Basic)	1–2	AO2 – Shows limited understanding of the relationship between urban sprawl / commuter settlements and the rural-urban fringe. AO3 – Demonstrates limited application of knowledge and analysis of the example provided and / or the link in broader terms
	0	No relevant content.

- **Level 3 responses** will cover the figure and either a named example or well developed geographical understanding and provide a considered analysis of the link.
- **Level 2 responses** will show reasonable understanding of the link using the figure and an example / clear geographical understanding or more considered analysis for just the figure or example used.
- **Level 1 responses** will show simple understanding of the link using the figure and / or a named example / simple geographical knowledge.
- **Max L2** if Fig 3/4 or own understanding only.

<u>Indicative content</u>

- The specification requires urban sprawl and its impact on the rural-urban fringe to be studied in the context of a named city and candidates may well use such an example but the question does not explicitly state this so it is possible to answer in a range of ways.
- Answers should make use of both figures 3 and 4 and appropriate geography, balance is not required.
- Any comment making reference to changes and using map evidence may be

		assumed to use both maps. • Reference to figures 3/4 may be inferred even if not explicitly stated through such comments as: the growth on the Western edge of the city; the upgrading / dualling of the road running W-E. • The command 'suggest' requires a link to be established between urban sprawl / commuter settlements and the associated impacts. • Impacts may be positive as well as negative. • Impacts are varied and any reasonable ones should be credited: × Loss of green space at the edge of the city for housing and expanded roads × Increased flooding due to more impermeable surfaces × Loss of habitat leading to reduced biodiversity × Original villages dominated by new modern estates × Loss of 'sense of place' as many such developments look the same × Increased congestion / air and noise pollution with rise in commuter traffic × Rising housing costs so that many such commuter villages become unaffordable ✓ Improvements in transport infrastructure to meet commuter needs ✓ Improvements in social facilities eg pubs / leisure as there is a market ✓ Increase in the supply of housing in a pleasant area on the edge. Max L1 for description of differences between the two maps with no explanation of impact(s) AO2 – 3 marks AO3 – 3 marks	

01	8	**At what time of day is air pollution the highest?** One mark for correct answer: 8.am Accept 0800 or '8 in the morning'. No credit for '8 o'clock' AO4 – 1 mark	1

01	9	**Calculate the range in air pollution levels shown in Figure 5.** 260 AO4 – 1 mark	1

01	10	**Outline one reason why levels of air pollution are so high in many LIC/NEE cities.** One mark for a basic statement, eg: • Many of the vehicles lack technology to reduce emissions(1) • Factories are unregulated (1) • Many people still rely on fuelwood / kerosene (1) Two marks for a developed idea, eg: • Many of the vehicles are old (1) so they lack technology to reduce emissions (1) which means they emit higher levels of particulates / have 'dirtier' exhausts (d) (1) • Factories are unregulated (1) which means no-one makes them cut down emissions (d) (1) • Many people still rely on fuelwood / kerosene (1) which leads to high levels of smoke in the air (d) (1) Credit any reasonable cause of air pollution which must relate to LIC/NEE cities for credit. Allow 1 mark for generic comment about air pollution. No credit for any pollution other than air. AO1 – 2 marks	2

01	11	**Assess the extent of the challenges created by urban growth in LICs/NEEs.** **Use a case study of a city in an LIC/NEE.**	9

Level	Marks	Description
3 (Detailed)	7–9	AO1 – Demonstrates detailed knowledge of places and processes in urban environments. AO2 – Shows a thorough understanding of how urban growth in an LIC/NEE creates challenges. AO3 – Demonstrates thorough application of knowledge and understanding to make thorough assessment of the extent of challenges in an LIC/NEE city.
2 (Clear)	4–6	AO1 – Demonstrates reasonable knowledge of places and processes in urban environments. AO2 – Shows clear understanding of how urban growth in an LIC/NEE creates challenges. AO3 – Demonstrates reasonable application of knowledge and understanding to make partial assessment of the extent of challenges in an LIC/NEE city.
1 (Basic)	1–3	AO1 – Demonstrates limited knowledge of places and processes in urban environments. AO2 – Shows limited understanding of how urban growth in an LIC/NEE creates challenges. AO3 – Demonstrates limited application of knowledge and understanding to make limited assessment of the extent of challenges in an LIC/NEE city.
	0	No relevant content.

- **Level 3 responses** will provide a considered assessment with conclusion of the extent of the challenge, supported with precise knowledge.
- **Level 2 responses** will give reasoned assessment supported with either precise or generically accurate knowledge.
- **Level 1 responses** will show simple understanding of whether or not challenges arise.
- **Max level 2** if no conclusion about the extent of the challenges.
- **Max Level 1** if no named city or named city not LIC/NEE**.**

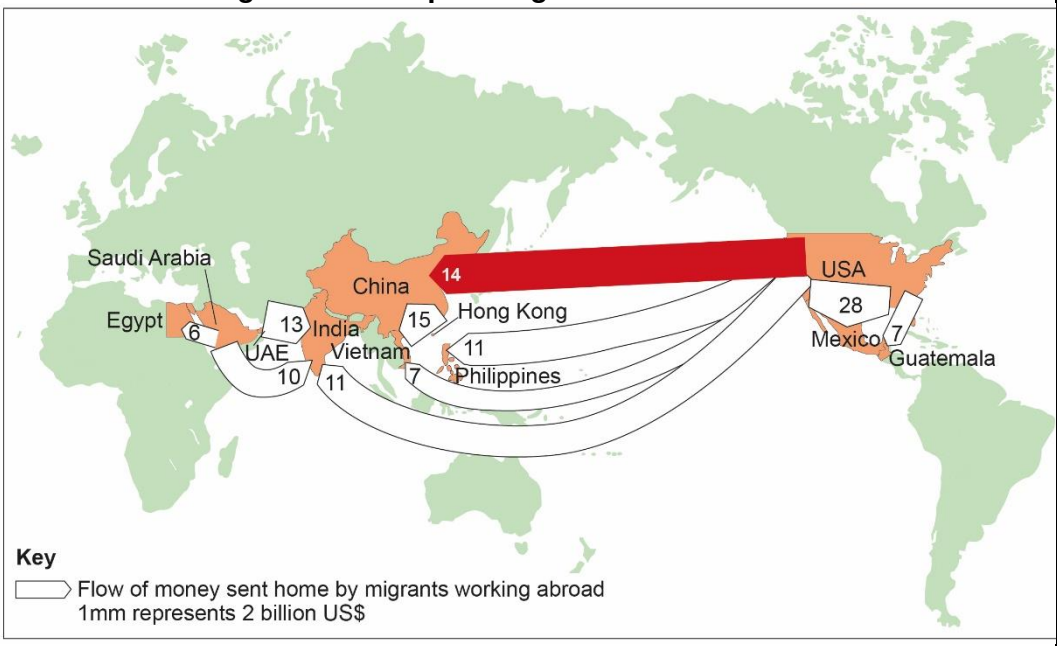
<u>Indicative content</u>

- The question does not specify the challenges so accept any social, economic or environmental challenges. Answers must refer to a named

		LIC/NEE city to access L2/L3. • The command 'assess' along with 'the extent of' requires some judgement of the size or difficulty in tackling the problems associated with LIC/NEE cities: • Problem of providing services with such rapid population growth eg 600 000 growth per year in Lagos, when the resources available to meet demand are limited in poorer countries. Also poor existing provision of physical services when there is a challenging point from which to start eg in Lagos: only 40% of waste currently collected. • Much of the population growth in LIC/NEE cities has been in slum areas eg Mumbai has more than doubled from 9 million in 1991 to 20 million in 2018 with 41% (c. 8 million) living in slum settlements. • Some 78% of community toilets in Mumbai's slums lack water supply, 58% have no electricity, and many don't have proper doors, so this is toilets for 6 million people that will need to be improved, showing the size of the problem. • Infrastructure cannot improve fast enough to cope with the demand eg despite a BRT system and expressways many in Lagos face a 2 hour+ commute. • There is also challenge in providing access to social services eg only 55% of Rio's population having access to a health clinic and only half of children continue education past the age of 14. • Many people work in the informal economy, eg it is estimated to account for 60% of Rio's workforce and these informal workers do not have any rights or protection and will create less tax revenue for the city governments. • Rapid industrial growth in emerging economies means emissions will rise from factories faster than they can be controlled. • Candidates may argue that the challenges themselves can be solved but the real obstacle is corruption on the part of city / government officials so the challenge lies there. • Assessment may also cover ideas that historically many squatter settlements and urban areas have improved themselves so that eg in Rocinha, Rio de Janiero, 90% of the housing is now brick built and with electricity, running water and sewerage and the favela has its own newspapers and radio station. Equally Nigeria and Lagos in particular are regarded as the economic future of Africa and will solve these problems as they develop, so therefore the challenge is limited. No credit for any opportunities created by urban growth. AO1 – 3 marks AO2 – 3 marks AO3 – 3 marks	
		Spelling, punctuation and grammar (SPaG) **High performance** • Learners spell and punctuate with consistent accuracy. • Learners use rules of grammar with effective control of meaning overall. • Learners use a wide range of specialist terms as appropriate. **Intermediate performance** • Learners spell and punctuate with considerable accuracy.	**3** **2**

		• Learners use rules of grammar with general control of meaning overall. • Learners use a good range of specialist terms as appropriate. **Threshold performance** • Learners spell and punctuate with reasonable accuracy. • Learners use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall. • Learners use a limited range of specialist terms as appropriate. **No marks awarded** • The learner writes nothing. • The learner's response does not relate to the question. • The learner's achievement in SPaG does not reach the threshold performance level, for example errors in spelling, punctuation and grammar severely hinder meaning.	**1** **0**

Section B

Qu	Pt	Marking Guidance	Total marks
02	1	**Use the following data to complete Figure 6.**  One mark for an arrow of correct width. Width need not be correct along entire length but should be so at the base. Width to be approximately the same, but not greater than, the width of the arrow from the Hong Kong to China. Second mark for accurate start and finish in USA / China respectively. Max 1 if arrow pointing in wrong direction or arrowhead missing. AO4 – 2 marks	2
02	2	**Guatemala's gross national income (GNI) in 2016 was US$135 billion. The amount Guatemala receives from migrants in the USA is US$7 billion.** **Calculate the percentage of Guatemala's GNI that comes from payments sent home by people who have migrated to the USA.** **Answer to the nearest whole %.** 5% No credit if decimal places given. AO4 – 1 mark	1

02	3	**Outline how uneven development can cause international migration.** Candidates are not expected to make any use of Figure 6 and there is no credit for doing so, however they may use this to inform their answer by realising that the migration has taken place in the opposite direction to that shown by the remittance flows. People move from poorer countries to richer ones for better paid jobs / as economic migrants (1) and for a higher quality of life. (1) The wealth difference need not be large, it is the development gap which causes people to move (1) for example the estimated 900 000 Polish migrants in the UK. (1) Many people flee conflict in LICs and move to safer HICs (1) for example more than one million migrants to Europe from sub Saharan Africa 2010-2017. (1) Migrants may also be encouraged to move to other countries as a source of cheap labour (1) illustrated by the number of poorly paid Indian Sub-continent workers in gulf states such as Qatar / Mexicans moving to the USA. (1) No credit for description or use of Figure. AO1 – 3 marks	3

02	4	**Describe the social or cultural background of a named LIC/NEE country.** Candidates should clarify the social or cultural background for a named country. Content will clearly vary widely according to the one selected. Credit a wide interpretation of social / cultural to include religious. One mark for a basic statement, eg: • There are a number of different ethnic groups in Nigeria. (1) • Three tribal groups dominate Nigeria. (1) • There is religious conflict in Nigeria. (1) Two marks for a developed idea, eg: • There are a number of different ethnic groups in Nigeria (1) who have religious differences as some are Christian and others Muslim. (d) (1) • Three tribal groups dominate Nigeria (1) the Hausa in the north and Igbo and Yoruba in the south. (d) (1) • There is religious conflict in Nigeria (1) which has led to the rise of the Boko Haram terror group. (d) (1) No credit for environmental or political. AO1 – 2 marks	2

02	5	**Using Figure 7, which trading group in South America has the most member countries?** MERCOSUR AO4 – 1 mark	1

02	6	**Explain how one country's trading relationships with the wider world have changed.** **Use Figure 7 and a LIC/NEE you have studied.**	4

Level	Marks	Description
2 (Clear)	3–4	AO2 – Shows clear understanding of changing trading relationships. AO3 – Applies knowledge and understanding to **Figure 7** effectively and offers development to interpret changes in trading relationships.
1 (Basic)	1–2	AO2 – Shows limited understanding of changing trading relationships. AO3 - Applies knowledge and understanding to **Figure 7** or uses own understanding to begin to interpret changes in trading relationships.
	0	No relevant content.

- **Level 2 answers** will apply geographical knowledge and understanding in combination with the figure to present a reasoned explanation.
- **Level 1 answers** will be simplistic, perhaps simply descriptive with limited reasoning.
- **Max L1** if no named LIC/NEE country or country is not LIC/NEE.

<u>Indicative content</u>

- Case study content will clearly much depend on country chosen.
- **Figure 7** use will be from naming trading blocs shown on the map.
- Countries that were once colonies used to serve as sources for primary products solely for the colonising country which was an unfair / exploitative relationship.
- This has changed because these countries are now independent and can choose with whom to trade and it is more equal and intra-continental trade has increased.
- Arguably colonial relationships have simply been replaced by 'economic colonialism' through FDI by companies such as Glencore in Zambia (copper) and the DRC (cobalt); Shell in Nigeria or even countries such as the $60 billion China pledged to invest in Africa in 2018 alone.
- Because they now choose trading partners many countries now are part of

		regional trading blocs, therefore reducing the dominance of the former colonising countries. Eg Nigeria , from being a colony dependant on the UK now only has $1.2 bn of trade with the UK but $15 bn with the USA and India combined. • From being suppliers or sources of raw materials some LIC/NEE and rather a 'junior partner' in trade, some are now significant service providers, eg India now gaining 45% of its GDP from services provided to HICs No credit for description of the map shown. AO2 – 2 marks AO3 – 2 marks	

02	7	**Use Figure 8 to state one source of Asha's funding.** Any one from: Indian/British/Australian governments, some UK schools, international banks, other charities. AO4 – 1 mark	1

02	8	**Use Figure 8 to state one way that Asha helps slum dwellers financially.** Access to banks; open accounts with no money; benefit from loans at extremely good rates; tripled their incomes. AO4 – 1 mark	1

02	9	**'Aid is the best way to reduce the development gap.'** **To what extent do you agree?** **Use Figure 8 and your own understanding.**	6

Level	Marks	Description
3 (Detailed)	5–6	AO2 – Shows thorough understanding of ways to reduce the development gap. AO3 – Demonstrates thorough application of knowledge and understanding to evaluate the options for reducing the development gap.
2 (Clear)	3–4	AO2 – Shows clear understanding of way(s) to reduce the development gap. AO3 – Demonstrates reasonable application of knowledge and understanding to evaluate the option(s) for reducing the development gap.
1 (Basic)	1–2	AO2 – Shows limited understanding of way(s) to reduce the development gap. AO3 – Demonstrates limited application of knowledge and understanding to make limited evaluation of the option(s) for reducing the development gap.
	0	No relevant content.

- **Level 3 responses** will provide reasoned assessment of the efficacy of aid in comparison to other options for development supported by evidence from the figure.
- **Level 2 responses** will either provide reasoned assessment of the efficacy of aid with implicit use of the evidence or generic assessment of aid's value with precise use of the evidence.
- **Level 1 responses** will give basic link(s) between aid and development or merely assert the value or lack of it.
- **Max Level 2** if options other than aid are not considered.

<u>Indicative content</u>

- The specification lists: investment, industrial development, tourism, aid, intermediate technology, Fairtrade, debt relief and microfinance loans as strategies to reduce the development gap.
- Clearly these are far too numerous to all be expected in any one answer and candidates need only refer to one other in addition to aid to fulfil the comparative element of the question.
- **Figure 8** use should be indicated by referencing the 'bottom up' / direct to those in most need aspect of aid and may be addressed as microfinance.

		Some development beyond quoting the text would be needed for credit beyond L1. • Credit should be given to any reasoned points regarding strategies and any view regarding aid as the best strategy. Some suggested comments are: • **Aid** – can help if spent on projects such as schools and health clinics but can be mis-spent and encourage dependency. • **Investment** – can improve technology and infrastructure but is easily withdrawn by foreign investors. • **Tourism** – generates increased income but much of the money is lost in leakage. • **Intermediate technology** – simple and effective at a 'grassroots' level but can be limited in scale. • **Fairtrade** – helps secure income for farmers but prices remain low. • **Debt relief** – frees money to be spent on development projects but relies on goodwill of HICs. • **Microfinance loans** – allow financial independence, especially for women but scale and impact remain small. AO2 – 3 marks AO3 – 3 marks	

02	10	**Social and economic changes in the UK rural landscape are:** • **positive in an area of population growth** • **negative in an area of population decline.** **Do you agree?** **Justify your answer, using one or more examples.**	9

Level	Marks	Description
3 (Detailed)	7–9	AO1 – Demonstrates detailed knowledge of social and economic changes in the UK rural landscape. AO2 – Shows a thorough understanding of the impact of social and economic changes in the UK rural landscape. AO3 – Demonstrates thorough application of knowledge and understanding in reaching a judgement on the impacts of social and economic changes in the UK rural landscape.
2 (Clear)	4–6	AO1 – Demonstrates clear knowledge of social and economic changes in the UK rural landscape. AO2 – Shows a reasonable understanding of the impact of social and economic changes in the UK rural landscape. AO3 – Demonstrates reasonable application of

			knowledge and understanding in reaching a judgement on the impacts of social and economic changes in the UK rural landscape.
	1 (Basic)	1–3	AO1 – Demonstrates basic knowledge of social and economic changes in the UK rural landscape. AO2 – Shows a limited understanding of the impact of social and economic changes in the UK rural landscape. AO3 – Demonstrates limited application of knowledge and understanding in reaching a judgement on the impacts of social and economic changes in the UK rural landscape.
		0	No relevant content.

- **Level 3 responses** will provide specific detail of the consequences of population growth and decline in rural areas with a conclusion showing well-judged assessment of (a) change(s) and the impact on these areas.
- **Level 2 responses** will either provide specific detail of consequences with implicit links to the assessing the impact of change(s) or well-judged assessment of (a) generic rural change(s).
- **Level 1 responses** will give basic link(s) between (a) change(s) and the rural area(s) or merely assert an opinion.
- **Max L2** if area(s) not named or cannot be inferred
- **Max L2** if only one of areas of population growth / decline covered
- **Max L2** for non UK areas of rural population growth / decline.

<u>Indicative content</u>

- Clearly specific content will vary according to locations chosen, some generic suggestions that could be applied to many areas are shown below.
- Credit should be given for any reasonable area used to illustrate growth / decline.
- Whilst the question does not state the need for an example the specification does state the need for 'one area' of each so support of points with exemplification is to be expected.
- The questions asks for a rationale for whether changes are **always** positive or negative so some judgement as to the appropriateness of this term should be expected.

Areas of population growth:

✓ Increased supply of housing on the outskirts of cities in accessible rural areas
✓ Opportunities for farmers and developers to make profits from land / house sales
✓ Business opportunities due to more customers / more affluent customers in the area
× House prices can rise, pricing out locals

		× Roads are congested so that the commute becomes stressful and roads more damaged × Services such as schools and doctors surgeries are over crowded **Areas of population decline**: × Social sustainability of communities is reduced with declining / increasingly elderly population × Environmental quality can decline as buildings and spaces are not maintained × Shops and other services close due to lack of custom × Schools close due to few children in the area and remaining children have to travel further to school ✓ Strong community spirit can emerge as a response to 'keeping these areas alive' ✓ Villages and small communities remain unchanged / unspoilt by modern 'identikit' developments. AO1 – 3 marks AO2 – 3 marks AO3 – 3 marks	

Section C

Qu	Pt	Marking Guidance	Total marks
03	1	**Suggest how access to clean water may influence the differences in levels of well-being shown in Figure 9.** Credit any reasonable idea or explanation of the link. Must make use of Figure 9 for any marks, this could be through naming places or inferred through use of the well-being scale. Candidates should clarify how differences arise for both marks. One mark for a basic statement, which might only explain one level of well-being, eg: • Less clean water in Egypt leads to low well-being. (1) • Young people in the UK have high well-being because clean water is always available. (1) • Low well-being results from childhood illness from dirty water. (1) Two marks for a development or alternative idea which focusses on the differences, eg: • Less clean water in Egypt leads to lower well-being (1) than some African countries which might have better water supplies. (d)(1) • Young people in the UK have high well-being because clean water is always available (1) and this is typical of Europe in being higher than Asian countries. (d) (1) • Low well-being results from childhood illness from dirty water (1) as seen in Africa where well-being is always lower than HICs. (d)(1) No credit for opposites. AO3 – 2 marks	2

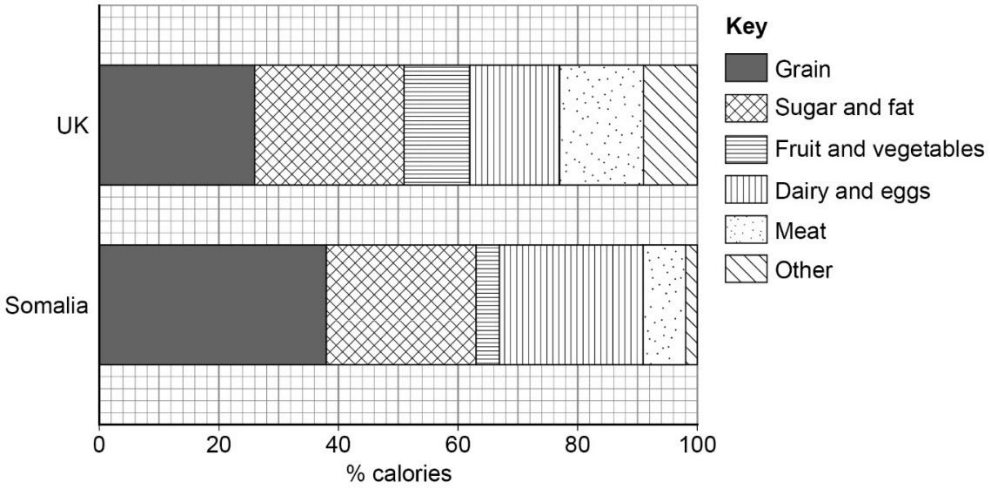
Qu	Pt	Marking Guidance	Total marks
03	2	**Name one area in the UK that experiences water deficit.** Credit any reasonable expression of location that is in the south and east of the UK, eg: South East, London, Thames / Anglian Water, Lincolnshire AO1 – 1 mark	1

03	3	**There is a need to transfer water in the UK to maintain supplies. Explain how changing demand for water increases this need.** Credit some basic recognition of the issue for an initial mark. For fuller marks the candidates need to connect the rising demand as being concentrated in areas of deficit, therefore increasing the need eg: The UK's population is growing which means more water is needed (1) much of this growth is in the south east (1) which means that there will be more unmet demand unless supplies are moved (1). Many people now have appliances which use water eg dishwashers (1) and these are more likely in the richer south east (1) so the demand in this area goes up when they have little water (1). Lots of new homes are being built in the south east (1) and London is expected to be more than 10 million by 2035 (1) so there will be more demand where there is already a deficit (1). No credit for contradictory arguments. AO2 – 3 marks	3

03	4	**'Growing concern in the UK about the carbon footprint of food creates both opportunities and challenges.'** **Use evidence from Figure 10a and Figure 10b to explain this statement.**	6

Level	Marks	Description
3 (Detailed)	5–6	AO2 – Shows detailed understanding of the opportunities and challenges brought by increasing concern over the carbon footprint of food in the UK. AO4 – Demonstrates high level of skill by investigating the information provided thoroughly and using it to support understanding.
2 (Clear)	3–4	AO2 – Shows some understanding of the opportunities and / or challenges brought by increasing concern over the carbon footprint of food in the UK. AO4 – Demonstrates moderate level of skill by investigating the information provided partially and using it to support understanding.
1 (Basic)	1–2	AO2 – Shows limited understanding of the opportunities and / or challenges brought by increasing concern over the carbon footprint of food in the UK. AO4 – Demonstrates limited level of skill by investigating the information provided superficially and using it simplistically.
	0	No relevant content.

		• **Level 3 responses** will provide a considered understanding of both opportunities and challenges, supported with thorough use of the information. • **Level 2 responses** will give a clear understanding of opportunities and / or challenges, supported with either thorough or generically clear use of the information. • **Level 1 responses** will show basic understanding and use of the information. <u>Indicative content</u> • Figure 10a shows the carbon emissions from the production of different foods, with beef and lamb creating the highest amount of CO^2 emissions. • Figure 10b shows a screenshot of a website of a not-for-profit organisation which sells and delivers a variety of foods from local producers. • Candidates should show awareness of how increasing greenhouse gas emissions from production and transport of food, over increasing distances, is causing challenges. • Credit any reasonable challenges. Challenges are likely to include: • The use of figure 10a to show the high levels of carbon emissions from meat production (particularly beef and lamb). • Food miles and the impact of transportation by plane or lorries. • Emissions created by methane from animals or the destruction of forests for grazing land. • Candidates should show awareness of opportunities such as growing interest in buying more locally produced food with less environmental impact. • Credit any reasonable opportunities, which may include: • The opportunity for alternative sources of food such as local suppliers/farmers markets, rather than supermarkets, to reduce emissions from transport. • The opportunity for producers to find ways of reducing the impact of food production – such as moving towards farming food types which cause lower carbon emissions. • They may use figure 10b to suggest being able to have a variety of foods from different producers delivered in one order also helps to reduce transport emissions. • Figure 10a/b should be used by reference to figures given or description that is accurate enough to infer use of the resource rather than learned knowledge. • Credit challenges and opportunities that arise elsewhere in the world from the growing concern in the UK. AO2 – 3 marks AO4 – 3 marks	

Qu	Pt	Marking Guidance	Total marks
04	1	**Complete Figure 11 using the following data for Somalia.** 1+1 First mark for correct plotting of line, second for correct labelling / identification or suitable key. Max one mark if the sections are plotted in the wrong order.  AO4 – 2 marks	2
04	2	**State two differences between the typical daily diet in the UK and Somalia shown in Figure 11**. Clear explicit differences from the graph are required. Must be differences not similarities. Credit use of contrasting figures as an implicit difference. Contrasts include • The UK diet includes more meat (1) • Somalia consumes 9% more dairy and eggs than the UK (1) • The Somalian diet includes 38% grain. Whereas in contrast the UK diet has less with only 26% (1). No double credit for opposite statements. AO4 – 2 marks	2

04	3	**Outline one reason for differences in food supply between countries**. One mark for a basic statement, eg: • Meat is an expensive food (1) • The climate of a country affects the food that will grow there (1) • Some countries import a lot of their food (1) Two marks for a developed idea eg: • Meat is an expensive food (1) which fewer people in LICs can afford (d) (1) • The climate of a country affects the food that will grow there (1). For example the monsoon climate in India is good for growing rice (d) (1) • Some countries import a lot of their food (1) which mean they can eat a more varied diet / food they can't grow themselves (d) (1) Reasons given may consider quantity of food (calories consumed), quality or food types. The specification states food supply may be affected by economic development, rising population, climate, technology, pests and disease, water stress, conflict and poverty. Credit any reasonable answer. No credit for a description of the difference. Answer does not need to make use of Figure 11 although it is possible students may use this as a stimulus. AO2 – 2 marks	2

04	4	**What is meant by food insecurity?** One mark for correct answer, eg Lack of food (1) Not being able to access safe and nutritious food (1) AO1 – 1 mark	1

04	5	**Suggest how food insecurity can have both economic and social impacts.** **Use Figure 12a and Figure 12b and your own understanding.**	6

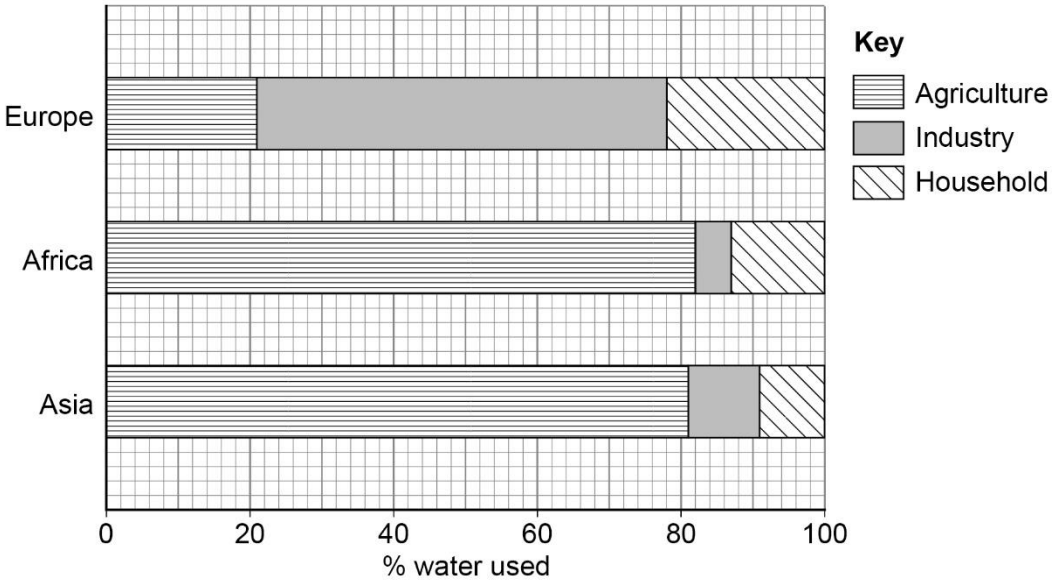
Level	Marks	Description
3 (Detailed)	5–6	AO2 – Shows detailed understanding of the relationship between food insecurity and both economic and social impacts. AO3 – Demonstrates detailed application of knowledge and understanding by interpreting the resources thoroughly and effectively and linking to the impacts arising.
2 (Clear)	3–4	AO2 – Shows clear understanding of the relationship between food insecurity and economic and / or social impacts. AO3 – Demonstrates some application of knowledge and understanding by interpreting the resources with some effectiveness and / or linking to the impacts arising.
1 (Basic)	1–2	AO2 – Shows limited understanding of the relationship between food insecurity and economic and / or social impacts. AO3 – Demonstrates limited application of knowledge and understanding through basic interpretation of the resources provided and / or linking to the impacts arising.
	0	No relevant content.

- **Level 3 responses** will cover the figure and either a named example or well developed geographical understanding and provide a considered interpretation of the link.
- **Level 2 responses** will show reasonable understanding of the link using the figure and an example / clear geographical understanding or more considered interpretation for just the figure or example used.
- **Level 1 responses** will show simple understanding of the link using the figure and / or a named example / simple geographical knowledge. May be limited to generic statements. May be limited to a single issue.
- **Max top L2** if Fig 12a/12b or own understanding only.
- **Max top L2** if economic or social impacts only.

<u>Indicative content</u>

- The specification requires food security and its impacts to be studied and makes reference to the economic and social impacts of famine, undernutrition, rising prices and social unrest.
- The question does not specify so accept any economic or social impacts.
- There is no requirement to use a specific case study example or named place although candidates may well use examples to demonstrate their

		understanding. • Answers should make use of figure 12a and/or 12b and appropriate geography, balance is not required. • Reference to figures 12a/12b may be inferred even if not explicitly stated through such comments as: people are unhappy about rising food prices and gather to protest. • The command 'suggest' requires a link to be established between food insecurity and economic and social impacts. • No credit for environmental impacts unless developed and linked to economic or social impacts. • Impacts may be positive as well as negative. • Impacts are varied and any reasonable ones should be credited, likely impacts are: **Social** × Famine which may cause death through starvation as well as malnutrition. × Illness and death caused by undernutrition (poor diet with vitamin and mineral deficiency). × There may be social unrest if some groups of people have more access to food than others. × Protests and rioting in anger against the government. × Standard of living may decline if more money is spent on food – at the expense of housing, healthcare and education. **Economic** × Rising food prices make it harder to afford, especially hitting the poorest hard. × People suffering from malnutrition or undernutrition may lack the energy to work and therefore cannot earn money or farm for themselves. ✓ Farmers or people with access to food may benefit from being able to charge higher prices. AO2 – 3 marks AO3 – 3 marks	

Qu	Pt	Marking Guidance	Total marks
05	1	**Complete Figure 13 using the following data for Asia.** 1+1 First mark for correct plotting of line, second for correct labelling / identification or suitable key. Max one mark if the sections are plotted in the wrong order.  AO4 – 2 marks	2
05	2	**State two differences between the water use in Europe and Africa shown in Figure 13**. Clear explicit differences from the graph are required. Must be differences not similarities. Credit use of contrasting figures as an implicit difference. Contrasts include: • Africa uses more water in agriculture (1) • In Europe industry consumes the most water, whereas in Africa agriculture is the largest section (1) • Europe uses 22% of its water in households which is 9% greater than Africa (1). No double credit for opposite statements. AO4 – 2 marks	2

05	3	**Outline one reason for differences in water use between countries**. One mark for a basic statement, eg: • Countries may have a large population (1) • Many African countries have high temperatures (1) • People in HICs can afford more appliances like washing machines (1) Two marks for a developed idea eg: • Countries may have a large population (1) who will use more water for drinking and washing (d) (1) • Many African countries have high temperatures (1) so they need to use more water to help crops grow (d) (1) • People in HICs can afford more appliances like washing machines (1) which need water to work (d) (1) Reasons given may consider quantity of water consumed, quality or how the water is used. The specification states water supply may be affected by economic development, rising population, climate, geology, pollution of supply, over-abstraction, limited infrastructure and poverty. Credit any reasonable answer. No credit for a description of the difference. Answer does not need to make use of figure 13 although it is possible students may use this as a stimulus. AO2 – 2 marks	2

05	4	**What is meant by water insecurity?** One mark for correct answer, eg Lack of water (1) Not being able to access clean and safe water (1). AO1 – 1 mark	1

05	5	**Suggest how water insecurity can have both economic and social impacts.** **Use Figure 14a and Figure 14b and your own understanding.**	6

Level	Marks	Description
3 (Detailed)	5–6	AO2 – Shows detailed understanding of the relationship between water insecurity and both economic and social impacts. AO3 – Demonstrates detailed application of knowledge and understanding by interpreting the resources thoroughly and effectively and linking to the impacts arising.
2 (Clear)	3–4	AO2 – Shows clear understanding of the relationship between water insecurity and economic and / or social impacts. AO3 – Demonstrates some application of knowledge and understanding by interpreting the resources with some effectiveness and / or linking to the impacts arising.
1 (Basic)	1–2	AO2 – Shows limited understanding of the relationship between water insecurity and economic and / or social impacts. AO3 – Demonstrates limited application of knowledge and understanding through basic interpretation of the resources provided and / or linking to the impacts arising.
	0	No relevant content.

- **Level 3 responses** will cover the figure and either a named example or well developed geographical understanding and provide a considered interpretation of the link.
- **Level 2 responses** will show reasonable understanding of the link using the figure and an example / clear geographical understanding or more considered interpretation for just the figure or example used.
- **Level 1 responses** will show simple understanding of the link using the figure and / or a named example / simple geographical knowledge. May be limited to generic statements. May be limited to a single issue.
- **Max top L2** if Fig 14a/14b or own understanding only.
- **Max top L2** if economic or social impacts only.

<u>Indicative content</u>

- The specification requires water security and its impacts to be studied and makes reference to the economic and social issues of waterborne disease, food production, industrial output, and potential for conflict.
- The question does not specify so accept any economic or social impacts.
- There is no requirement to use a specific case study example or named place although candidates may well use examples to demonstrate their

understanding.

- Answers should make use of figure 14a and/or 14b and appropriate geography, balance is not required.
- Reference to figures 14a/14b may be inferred even if not explicitly stated through such comments as: people may have to spend their time trying to find supplies of water.
- The command 'suggest' requires a link to be established between water insecurity and economic and social impacts.
- No credit for environmental impacts unless developed and linked to economic or social impacts.
- Impacts may be positive as well as negative.
- Impacts are varied and any reasonable ones should be credited, likely impacts are:

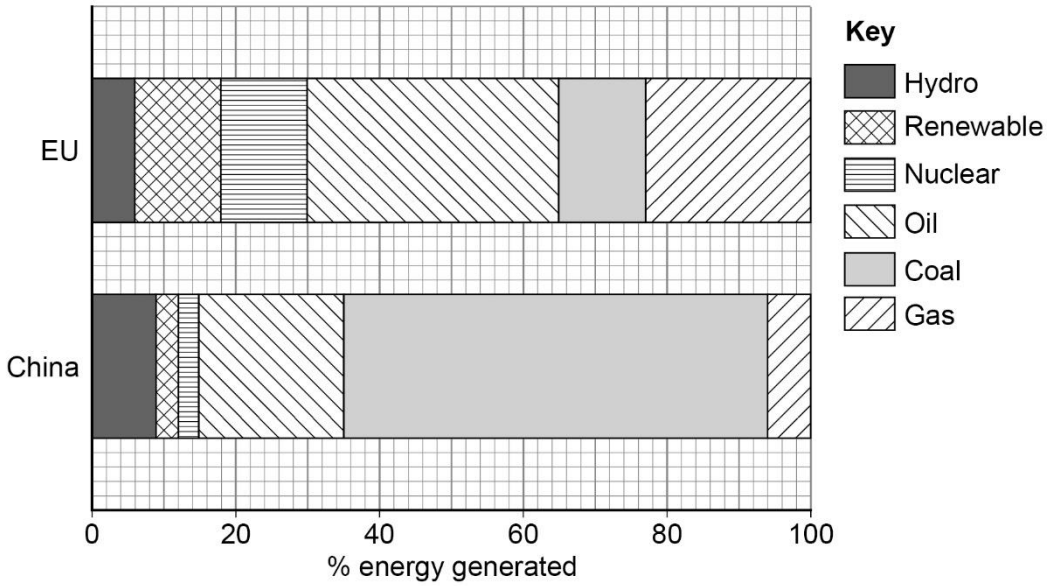
Social

× Where there are shortages of water people may be forced to drink polluted or untreated water.
× Waterborne disease which may lead to serious illness and death.
× Dehydration.
× Shortage of food, if no water for irrigation, may also lead to illness and death.
× There may be social unrest if some groups of people have more access to water than others.
× Disagreements may occur between countries if they share a water supply and one country extracts unfair amounts or reduces the supply, such as by building a dam.
× Higher food prices hit poor people disproportionately harder than others.

Economic

× Time spent queuing for or travelling to collect water may reduce the time available to carry out paid work.
× Unreliable or low supplies of water mean farmers struggle to grow crops, leading to lower income.
× Less crops may lead to higher prices.
× Water shortages lead to lower industrial production, which may lead to lower wages, job losses and slow economic development.
× Illness may prevent people working and deaths of family members to waterborne disease may reduce the earning power of the family.
✓ Investment in infrastructure to ensure reliable supplies may create jobs.

AO2 – 3 marks
AO3 – 3 marks

Qu	Pt	Marking Guidance	Total marks
06	1	**Complete Figure 15 using the following data for China.** 1+1 First mark for correct plotting of line, second for correct labelling / identification or suitable key. Max one mark if the sections are plotted in the wrong order.  AO4 – 2 marks	2
06	2	**State two differences between the energy mix in the EU and China shown in Figure 15**. Clear explicit differences from the graph are required. Must be differences not similarities. Credit use of contrasting figures as an implicit difference. Contrasts include: • The EU uses more nuclear power (1) • China uses nearly double the % amount of Hydro power than the EU. (1) • China's largest segment is coal, whereas the EU's most popular energy source is oil. (1) No double credit for opposite statements. AO4 – 2 marks	2

06	3	**Outline one reason for differences in energy use between countries**. One mark for a basic statement, eg: • Some countries like China have large supplies of coal (1) • HICs and NEEs have more factories (1) • Some governments invest more money in renewable energy (1) Two marks for a developed idea eg: • Some countries like China have large supplies of coal (1) so it is cheaper to use that rather than oil (d) (1) • HICs and NEEs have more factories (1) which use energy in the production process (d) (1) • Some governments invest more money in renewable energy (1) making it more likely they will get their energy from solar or wind power (d) (1) Reasons given may consider quantity of energy consumed, the energy sources used or how the energy is used. The specification states energy supply may be affected by economic development, rising population, technology, physical factors, cost of exploitation, and production and political factors. Credit any reasonable answer. No credit for a description of the difference. Answer does not need to make use of figure 15 although it is possible students may use this as a stimulus. AO2 – 2 marks	2

06	4	**What is meant by energy insecurity?** One mark for correct answer, eg Lack of energy (1) Not being able to access affordable and reliable energy supplies (1) AO1 – 1 mark	1

06	5	**Suggest how energy insecurity can have both economic and environmental impacts.** **Use Figure 16a and Figure 16b and your own understanding.**	6

Level	Marks	Description
3 (Detailed)	5–6	AO2 – Shows detailed understanding of the relationship between energy insecurity and both economic and environmental impacts. AO3 – Demonstrates detailed application of knowledge and understanding by interpreting the resources thoroughly and effectively and linking to the impacts arising.
2	3–4	AO2 – Shows clear understanding of the relationship

			(Clear)		between energy insecurity and economic and / or environmental impacts. AO3 – Demonstrates some application of knowledge and understanding by interpreting the resources with some effectiveness and / or linking to the impacts arising.
			1 (Basic)	1–2	AO2 – Shows limited understanding of the relationship between energy insecurity and economic and / or environmental impacts. AO3 – Demonstrates limited application of knowledge and understanding through basic interpretation of the resources provided and / or linking to the impacts arising.
				0	No relevant content.

- **Level 3 responses** will cover the figure and either a named example or well developed geographical understanding and provide a considered interpretation of the link.
- **Level 2 responses** will show reasonable understanding of the link using the figure and an example / clear geographical understanding or more considered interpretation for just the figure or example used.
- **Level 1 responses** will show simple understanding of the link using the figure and / or a named example / simple geographical knowledge. May be limited to generic statements. May be limited to a single issue.
- **Max top L2** if Fig 16/16b or own understanding only.
- **Max top L2** if economic or environmental issues only.

<u>Indicative content</u>

- The specification requires energy security and its impacts to be studied and makes reference to the economic and environmental impacts of exploration of difficult and environmentally sensitive areas, economic and environmental costs, food production and industrial output.
- The question does not specify so accept any economic or environmental impacts.
- There is no requirement to use a specific case study example or named place although candidates may well use examples to demonstrate their understanding.
- Answers should make use of figure 16a and/or 16b and appropriate geography, balance is not required.
- Reference to figures 16a and 16b may be inferred even if not explicitly stated through such comments as: oil can wash up on beaches damaging habitats.
- The command ‘suggest’ requires a link to be established between energy insecurity and economic and environmental impacts.
- No credit for social impacts unless developed and linked to economic or environmental impacts.
- Impacts may be positive as well as negative.
- Impacts are varied and any reasonable ones should be credited, likely impacts are:

		Economic × The price of energy may rise. × Countries that must rely on importing fuel are reliant and more vulnerable to price increases. × Extracting energy sources from more remote areas is more expensive and requires more expensive equipment. × People may have to spend time walking a large distance to collect firewood as their main energy source rather than using that time to grow food or for paid work. × Energy shortages and higher economic costs lead to lower industrial production, which may lead to lower wages, job losses and slow economic development. × Companies may leave and go to a country with more reliable and cheaper energy supplies, leading to job losses. × Growing biofuels rather than agricultural produce increases the price of food and can reduce the income made exporting food. ✓ Some farmers may earn more money growing biofuels. ✓ New jobs may be created in energy companies as countries invest in renewable energy. ✓ Jobs may be created in areas with limited opportunities. **Environmental** × Countries may need to explore and use environmentally sensitive areas to access energy supplies. × Fragile environments are put at risk and can be damaged, such as the Arctic and the Amazon Rainforest. × The transportation of energy resources, such as oil, can lead to spillages on land and sea, causing catastrophic damage to wildlife. × Air pollution from fossil fuel power stations. ✓ People may use energy more wisely as prices increase, which reduces emissions. AO2 – 3 marks AO3 – 3 marks	