GCSE
GEOGRAPHY
8035/2

Paper 2 Challenges in the Human Environment

Mark scheme

June 2020

Version: 1.0 Final Mark Scheme

206G8035/2/MS

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

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

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

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

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	**Which statement completes the following sentence?** **A megacity is a city with at least …** **Shade one circle only.** One mark for the correct answer. **D** – 10 million people. No credit if two or more statements are shaded. AO1 = 1 mark	1
01	2	**Complete Figure 1 using the following data.** One mark for each correctly drawn bar (width can be ignored). Bars must be correctly shaded or labelled. AO4 = 2 marks	2
01	3	**Calculate the mean percentage of people projected to be living in urban areas in 2050, in the countries shown. Answer to the nearest whole percentage.** One mark for the correct figure. **73%** percentage sign not required. No credit if decimal places given. AO4 = 1 mark	1
01	4	**Give two pull factors that encourage people to move to urban areas in LICs/NEEs.** One mark for each correct answer. Credit any reasonable factor which states or implies a difference in the urban area eg Better healthcare, improved education, more reliable electricity supplies, better paid jobs, wider range of jobs, moving to be near family, higher standard of living. No credit for push factors. AO1 = 2 marks	2

01	5	**Suggest why sanitation systems in cities in LICs/NEEs create challenges.** **Use Figure 2 and your own understanding.**	4

Level	Marks	Description
2 (Clear)	3–4	AO2 – Shows clear understanding of the challenges arising from sanitation systems in LIC/NEE cities. AO3 – Uses Figure 2 effectively and own understanding to offer clear interpretation of why sanitation systems in LIC/NEE cities create challenges.
1 (Basic)	1–2	AO2 – Shows limited understanding of the challenges arising from sanitation systems in LIC/NEE cities. AO3 – uses Figure 2 OR own understanding to offer a basic interpretation of why sanitation systems in LIC/NEE cities create challenges.
	0	No relevant content.

- **Level 2 responses** will show clear understanding and interpretation of the challenge by using geographical understanding in combination with the figure.
- **Level 1 responses** will show basic understanding and interpretation of the challenge by using geographical understanding and/or the figure.

Indicative content

- Answers should make use of **Figure 2** which should be clear through reference to what is visible, such as the proximity of the toilets to houses, the communal and basic nature of the facilities and the lack of hygienic conditions.
- Development need not be through named places but use of an example is likely to add clarity.
- Full marks possible for developed consideration of one challenge.

Figure 2 eg:

- The toilets are very basic and may not often be cleaned/emptied, which spreads disease.
- These are public toilets which are shared by lots of people.
- The toilet block is very close to housing and may create bad smells.
- The toilet block looks dark / there are no lights and so the toilets can be dangerous to use alone or at night.
- Litter and rubbish around the toilets may attract rats and flies.
- The toilet block may not have its own water supply, so waste builds up and people cannot wash their hands.

		Own understanding eg: • Many LIC/NEE cities are growing rapidly with high levels of natural increase and rural to urban migration, which makes it difficult for enough facilities to be provided to all the people. • The new migrants to the city may have very little money and they have to build their own houses from waste material. They cannot afford to build their own toilets. • Many people have to use the toilets, which means they soon get dirty, and disease can spread easily. • The slums/squatter settlements are unplanned and sometimes illegal and so may not have sewers or clean water pipes. • LIC/NEE governments may lack the money to build sufficient toilets or to maintain them / ensure they are safe. • There may be a charge for using public toilets, which people in poverty cannot afford – so they are forced to go in the street instead, spreading disease. • Many children die from diseases caught by living in unsanitary conditions. AO2 = 2 marks AO3 = 2 marks	

01	6	**Complete Figure 3 using the following data.** One mark for correct completion of pictogram. Five complete symbols for the mark. AO4 = 1 mark	1

01	7	**Outline one advantage of recycling waste.** One mark for a basic statement, eg • Reduces amount going to landfill (1) • Saves resources (1) • Reduction in energy consumption (1) Two marks for a developed idea, eg • Reduces amount going to landfill (1) which cuts the amount of land needed to bury waste (d) (1) • Saves resources (1) as new materials do not have to be found to replace those thrown away (d) (1) • Reduction in energy consumption (1) as recycling is a less energy intensive process (d) (1) Credit any reasonable advantage. No credit for description of a recycling process. AO1 = 2 marks	2

01	8	**Assess the importance of managing transport as part of urban sustainability.** **Level** / **Marks** / **Description** 3 (Detailed) / 5–6 / AO2 – Shows detailed understanding of the relationship between managing transport and urban sustainability. AO3 – Demonstrates thorough application of knowledge and understanding to offer well developed assessment of the importance of managing transport as an urban sustainability strategy. 2 (Clear) / 3–4 / AO2 – Shows clear understanding of the relationship between managing transport and urban sustainability. AO3 – Demonstrates some application of knowledge and understanding to offer clear assessment of the importance of managing transport as an urban sustainability strategy. 1 (Basic) / 1–2 / AO2 – Shows limited understanding of the relationship between managing transport and urban sustainability. AO3 – Demonstrates limited application of knowledge and understanding through basic assessment of the importance of managing transport as an urban sustainability strategy. 0 / No relevant content • **Level 3 responses** will provide a well-developed assessment of the contribution transport management makes to urban sustainability. • **Level 2 responses** will show clarity in offering partial overall assessment or a stronger assessment of one aspect of transport management's link to urban sustainability.	6

		• **Level 1 responses** will show simple assessment of the link between managing transport and urban sustainability, or merely assert its value. <u>Indicative content</u> • Full marks possible for well-developed consideration of one transport strategy. • The question does not specify HIC or LIC, so both are equally valid. • Whilst the specification refers to traffic management in the context of reducing congestion answers may address this aspect but also others, developing the answer through some assessment of the value of management with regard to sustainability. • 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 environmental, economic and social sustainability, the latter two may well be more implicit. • A wide range of schemes might be mentioned, eg congestion charging, road pricing, low emission zones, car sharing, parking restrictions, park and ride schemes, quota schemes for car ownership, petrol pricing, promoting and improving public transport. Credit any that are reasonable. • Promoting public transport will reduce congestion which will result in lower emissions and improved air quality, especially NO_x, with resulting benefits for health and therefore making cities more 'liveable'. When people want to live in cities the population can be sustained without outflow to the suburbs, particularly of families with children. • Integrated Transport Systems, such as the one in Bristol, make living car free possible which will reduce carbon consumption and emissions and therefore help to combat climate change. • Reduction in traffic, eg 45% less traffic and 25% fewer accidents in Singapore as a result of their policies will reduce frustration for drivers and make cities safer, thus reducing stress for people travelling. • Similar points could be developed for other initiatives such as protected bicycle lanes and the ease associated with the Oyster card system. • Reducing congestion will improve travel times meaning that people are less likely to be late for work and products delivered on time so businesses are able to maintain their income. AO2 = 3 marks AO3 = 3 marks	

01	9	**What is the 6 figure grid reference for the point marked X? Shade one circle only.** One mark for the correct answer **B** 098282 AO4 = 1 mark	1

01	10	**What is the straight line distance, to the nearest 100 m, from point X to the centre of the rail and bus station at 092288? Shade one circle only.** One mark for the correct answer **C** 900 m AO4 = 1 mark	1

01	11	**Suggest how a regeneration project can solve urban problems.** **Use Figure 5a and Figure 5b and a UK example you have studied.**	9

Level	Marks	Description
3 (Detailed)	7–9	AO1 – Demonstrates detailed and precise knowledge of places and processes in urban environments. AO2 – Shows a thorough understanding of how urban regeneration in the UK solves urban problems. AO3 – Demonstrates thorough application of knowledge and understanding to make thorough analysis of how urban regeneration helps to solve urban problems.
2 (Clear)	4–6	AO1 – Demonstrates reasonable knowledge of places and processes in urban environments. AO2 – Shows clear understanding of how urban regeneration in the UK solves urban problems. AO3 – Demonstrates reasonable application of knowledge and understanding to make partial analysis of how urban regeneration helps to solve urban problems.
1 (Basic)	1–3	AO1 – Demonstrates limited knowledge of places and processes in urban environments. AO2 – Shows limited understanding of how urban regeneration in the UK solves urban problems. AO3 – Demonstrates limited application of knowledge and understanding to make limited analysis of how urban regeneration helps to solve urban problems.
	0	No relevant content

- **Level 3 responses** will provide a considered analysis with conclusion about how a regeneration project(s) can solve urban problems, supported with precise knowledge and accurate inference from the figures.
- **Level 2 responses** will give reasoned analysis supported with either precise or generically accurate knowledge and / or inference from the figures.

		• **Level 1 responses** will show simple analysis of urban regeneration supported with simple knowledge or direct comment on the figures. • **Max Level 2** if no named example or named example not in the UK**.** <u>Indicative content</u> • The answer requires some judgement of the degree to which the scheme shown and one other scheme have addressed the reasons why the area needed regeneration. • Reference to the figures indicating need for regeneration may come from eg run down appearance, the lack of any industrial / commercial activity taking place, what appear to be abandoned warehouse units, closed industry, lack of street lighting, looks unsafe. • Reference to the figures indicating achievement(s) of regeneration may come from eg area has clearly had visual improvements such as re-painting and murals, the abandoned warehouses are now in use for other things: food and drink and a gallery can be seen, far more street lighting, now busy with many people, range of ages suggests community engagement. • Some students may have studied this regeneration therefore credit knowledge that cannot be gained from the figures as evidence of the UK example required eg this is the Fruit Market area of Hull, an £80 m scheme, the street is Humber Street, the second photo shows the 'Humber Street Sesh' an annual urban festival aimed at families, names of businesses in the area such as 'Thieving Harry's' which is the venue in the right foreground, that the development features mixed use including housing and is a partnership scheme (Wykeland / Beal / Hull City Council). • Other likely examples are: Temple Quarter, Bristol; New Islington, Manchester, East Village / Olympic Park, London; Any other reasonable example should be credited. • Precise content will clearly therefore depend upon the example chosen but is likely to cover such issues as: • Improved sustainable transport locally such as walking and cycling routes; better access to surrounding areas / city centre from areas that were 'cut off' by existing infrastructure such as canals and urban dual carriageways; mixed use developments to bring business back and families in; an emphasis on affordable / social housing; transport upgrades such as railways and trams to improve commuting and connections to other cities; development of entertainment and events to foster sense of community; derelict old industries replaced with high-tech and creative industries; creation of green space / environmental improvements to make areas healthier and more appealing. 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. • 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.	**3** **2** **1** **0**

Section B

Qu	Pt	Marking Guidance	Total marks
02	1	**Using Figure 6, what is Mexico's share of world trade?** 1.43% AO4 = 1 mark	1
02	2	**Using Figure 6, what is the difference between China and the USA's share of world trade?** 8.03% No credit if rounded. AO4 = 1 mark	1
02	3	**Outline the limitations of economic measures of development.** 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. They should show an awareness of how economic measures, especially simplistic measures such as GNI, can be misleading eg Economic measures do not take any account of people's quality of life (1) which is important in social terms (1) as development involves aspects other than simply economic (1) Economic measures tend to be per person (1) so do not allow for extremes of wealth and poverty (1) eg Saudi Arabia has vast oil wealth and high GNI which is not shared (1) Many economic measures are in US$ so do not allow for the relative spending power of different currencies (1) Economic measures have limited value in the poorest countries (1) because many people are subsistence farmers / work in the informal sector (1) so are economically active but will not feature in such measures (1). Max 2 for 2 separate points 1x3, or (1+1)+1 No credit for general answers regarding the unreliability of single measures other than economic. No credit for outlining the advantages of non-economic measures. AO1 = 3 marks	3

02	4	**Explain how physical and economic factors have caused uneven development.** **Level 2 (Clear) 3–4 marks** AO1 – Clear knowledge of physical and economic factors affecting development. AO2 – Shows clear understanding of physical and economic factors on development. **Level 1 (Basic) 1–2 marks** AO1 – Limited knowledge of physical and / or economic factors affecting development. AO2 – Shows limited understanding of physical and / or economic factors on development. **0 marks** No relevant content • **Level 2 answers** will apply geographical knowledge and understanding to present a reasoned explanation. • **Level 1 answers** will be simplistic, perhaps simply descriptive of varying development with limited reasoning. • **Max L1** for only one of physical or economic factors. <u>Indicative content</u> • 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 development. • It is likely that answers will focus on the negative but it would be legitimate to offer and answer focussed on positive aspects of development factors and / or and answer of contrasting fortunes. • Physical factors: o Landlocked countries will struggle to trade goods easily without ports, many of the world's landlocked countries are LIC/NEEs. o Natural Hazards may limit economic growth as infrastructure will be damaged, limiting industrial output and trade and funds will be needed for repairing damage rather than new development which would allow progress. o Climate related diseases and pests will limit the ability of a population to work and irregular / limited rainfall will limit water supply, essential for settled farming. This is the least secure physical and developmental link. • Economic factors: o HICs and TNCs pay as little as possible for their commodities and raw materials and LICs are further vulnerable to world market fluctuations. o Many LICs are trapped in primary product dependency and rely for a large % of their income on a single primary product eg Zambia 60% GDP from copper. o Processing of raw materials takes place in HICs so LIC/NEEs are unable to add value to their products eg Cocoa Ivory Coast vs HIC chocolatiers.	4

		No credit for factors other than physical and economic. AO1 = 2 marks AO2 = 2 marks	

02	5	**Describe the trend shown in Figure 7a.** A simple statement is all that is required for 1 mark. The number of tourists has increased (1) overall increase (1) generally increased with a dip in 2015 / some years where the numbers are level (1). AO4 = 1 mark	1

02	6	**Using Figure 7b, state one benefit of tourism to South Africa's economy.** The two relevant statements are: Tourism brings in much needed Foreign Currency (1) and Tourism helps develop infrastructure in the country (1). These may be merely lifted or paraphrased eg foreign currency has more value (1) tourism brings roads which improve transport (1). No credit for vague statements about 'money' or 'jobs'. AO4 = 1 mark	1

02	7	**Tourism is an effective way of reducing the development gap.** **Do you agree?** **Use Figure 7a and Figure 7b and an example you have studied to explain your answer.**	6

Level	Marks	Description
3 (Detailed)	5–6	AO2 – Shows thorough understanding of how tourism can reduce the development gap. AO3 – Demonstrates thorough application of knowledge and understanding to judge the efficacy of tourism in reducing the development gap.
2 (Clear)	3–4	AO2 – Shows clear understanding of how tourism can reduce the development gap. AO3 – Demonstrates reasonable application of knowledge and understanding to judge the efficacy of tourism in reducing the development gap.
1 (Basic)	1–2	AO2 – Shows limited understanding of how tourism can reduce the development gap. AO3 – Demonstrates limited application of knowledge and understanding to make limited judgement of the efficacy of tourism in reducing the development gap.
	0	No relevant content

- **Level 3 responses** will provide reasoned judgement of the efficacy of tourism as a means to aid development supported by evidence from the figure and an example.
- **Level 2 responses** will either provide reasoned judgement of the efficacy of tourism using an example with implicit use of the evidence or generic assessment of tourism's value with precise use of the evidence.
- **Level 1 responses** will give basic link(s) between tourism and development or merely assert the value or lack of it.
- **Max Level 2** if no named example.

<u>Indicative content</u>

- Answers should make use of **Figures 7a** and **7b** which need only be inferred through the mention of aspects visible in the graph or speech bubbles.
- Credit should be given to any reasoned points regarding tourism and any view on whether or not it is an effective strategy. Some suggested comments are:

✓ Generates increased income eg 12% of Kenya's GNP comes from tourism

		✓ Provides direct and indirect employment eg 600 000 in Kenya ✓ Provides employment when few other options are available in LIC/NEEs ✓ Infrastructure improvements such as upgraded roads and airports for tourists will assist wider development ✓ Income is in foreign currency such as dollars which has a greater buying power than that of the host country × Much of the money is never seen by the host country as it goes to the travel company and is therefore lost in leakage × Many tourist resorts are 'all inclusive' so the tourists do not spend money in the wider economy outside the resort × Much of the employment available is low skilled and low paid. × The demands of tourists can influence existing industries negatively, eg crop damage from animals kept for safaris No credit for discussion of strategies other than tourism. AO2 = 3 marks AO3 = 3 marks	

02	8	**Calculate the median life expectancy shown in Figure 8.** One mark for working, one mark for correct answer. Two marks if answer correct with no apparent working. 81.1 AO4 = 2 marks	2

02	9	**How might the data in Figure 8 suggest a north-south divide in the UK?** 1+1 or 1x2 Comments should show use of the figure at least implicitly. The highest life expectancy is in London, in the south (1) and as you go further north life expectancy declines. (d)(1) The three most northern places all have below average life expectancy (1) and the majority of those further south are higher. (d)(1) The figure doesn't show a clear N/S divide (1) for example Northallerton is the third highest and yet clearly in the north. (d)(1) There is a general trend of declining life expectancy as you go further north (1) which supports the idea that the north is worse off (d)(1). Credit comments which suggest the data has limited value for the UK N/S divide as it only shows data for England. No credit for stating figures or description of north-south divide in isolation. AO3 = 2 marks	2

02	10	**Evaluate the success or likely success of one or more strategies to resolve regional differences in the UK.**	9

Level	Marks	Description
3 (Detailed)	7–9	AO1 – Demonstrates detailed knowledge of regional differences in the UK and strategy(ies) to resolve them. AO2 – Shows a thorough understanding of how strategy(ies) to resolve regional differences work. AO3 – Demonstrates thorough application of knowledge and understanding in evaluating the success of strategy(ies).
2 (Clear)	4–6	AO1 – Demonstrates clear knowledge of regional differences in the UK and strategy(ies) to resolve them. AO2 – Shows a reasonable understanding of how strategy(ies) to resolve regional differences work. AO3 – Demonstrates reasonable application of knowledge and understanding in evaluating the success of strategy(ies).
1 (Basic)	1–3	AO1 – Demonstrates basic knowledge of regional differences in the UK and strategy(ies) to resolve them. AO2 – Shows a limited understanding of how strategy(ies) to resolve regional differences work. AO3 – Demonstrates limited application of knowledge and understanding in evaluating the success of strategy(ies).
	0	No relevant content.

- **Level 3 responses** will provide specific detail of the regional differences and strategy(ies) to resolve them with well-judged evaluation of their success.
- **Level 2 responses** will either provide specific detail of regional differences and strategy(ies) to resolve them with implicit links to evaluating the impact of change(s) or well judged evaluation of (a) generic strategy(ies).
- **Level 1 responses** will give basic link(s) between regional differences and the strategy(ies) to resolve them or merely assert an opinion.
- **Max L2** for generic answer without explicitly named strategy.
- **Max L1** if the answer does not relate to the UK.

		Indicative content • Clearly specific content will vary according to the strategy(ies) chosen, with credit given for use of road and rail infrastructure improvements and port and airport capacity if linked to regional differences. • Credit should be given for any reasonable evaluation of the success and an entirely positive evaluation is acceptable if supported by evidence. • Full marks may be obtained for a full evaluation of one strategy(ies). • Likely strategy(ies) are: • HS2 High speed rail connecting London to Birmingham and eventually Leeds, Sheffield and Manchester – reducing travel time and thereby improving business links, reducing the need for businesses to be based in London, and bringing economic benefits to the north that has suffered the most from de-industrialisation. • Local Enterprise Partnerships intended to identify business needs and encourage and promote investment to boost the local economy and create jobs eg the Humber LEP which by 2019 had secured £532m of investment, created nearly 6000 jobs, supported over 13 000 businesses and invested in infrastructure improvements and flood alleviation schemes to ensure businesses stay in the future in an economically deprived area. • Liverpool 2 a new port to double the port's capacity which will create thousands of jobs in the north west, boost the regional economy with direct and indirect jobs and thus support business in an area that has experienced severe job losses. • The Northern Powerhouse has devolved powers to northern mayors who now have direct control of money for their cities such as the Transforming Cities Fund and there are promised improvements for rail infrastructure in particular which should promote business growth and thereby create and sustain employment. • The command is 'evaluate' so answers that query the success of these schemes eg the value of the Northern Powerhouse when council spending in Liverpool has fallen by £816 per person since 2010, the fact that HS2 is significantly over-budget, possibly to be cancelled and many question the benefits it will bring to the north. AO1 = 3 marks AO2 = 3 marks AO3 = 3 marks	

Section C

Qu	Pt	Marking Guidance	Total marks
03	1	**Using Figure 9, suggest how the percentage of income spent on food may influence well-being.** 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 identifying the difference between the HICs/LICs income spend. One mark for a basic statement, which might only explain one level of well-being, eg • People in the UK will have higher well-being as they spend less of their income on food. (1) • LICs spend more of their income on food so their well-being is lower. (1) • Well-being is low in some countries, as they spend more than a third of their income on food. (1) Two marks for a development or alternative idea which focusses on the difference. • People in the UK will have higher well-being as they spend less of their income on food. (1) They will live in better conditions as they have more money to spend on housing. (1) (d) • LICs spend more of their income on food so their well-being is lower (1) and they can't afford to eat much. (1) (d) • Well-being is low in some countries, as they spend more than a third of their income on food. (1) This leaves less money to spend on healthcare. (1) (d) AO3 = 2 marks	2
03	2	**What is organic farming?** Credit any reasonable description eg • Growing food / producing meat or diary / Farming without the use of chemicals. • Farming that doesn't use artificial fertilisers or pesticides. • Only natural techniques used for the growing of food. AO1 = 1 mark	1

03	3	**Explain why there is a growing demand in the UK for food from LICs.** Credit any reasonable factor or development of point eg Rising demand for fresh/seasonal produce all year round (1) such as strawberries from Mexico (1). There is an increased demand for exotic fruit and vegetables (1) as people's incomes have increased (1). The UK does not have the climate to grow certain crops (1) such as rice which is imported from India (1). Supermarkets import food from LICs as it is cheaper (1). The UK is only 58% self-sufficient in fruit and vegetables (1). 1x3, 3x1, or (1+1)+1 Accept examples from NEEs. No credit for examples explicitly naming HICs. AO2 = 3 marks	3

03	4	**'There are economic and environmental issues associated with the exploitation of energy sources.'** **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 economic and environmental issues around exploiting energy sources 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 economic and / or environmental issues around exploiting energy sources 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 economic and / or environmental issues around exploiting energy sources 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 economic and environmental issues, supported with thorough use of the information. • **Level 2 responses** will give a clear understanding of economic and / or environmental issues supported with either thorough or generically clear use of the information. • **Level 1 responses** will show basic understanding and use of the information. • **Max Level 1** if no reference to energy sources shown in the figures. <u>Indicative content</u> • **Figure 10a** shows the relative costs of different energy sources with onshore wind the cheapest by some margin. • **Figure 10b** shows the landscape impact on and offshore and an opinion on wind turbines. • Candidates should be showing awareness of how these relative costs and impacts will present issues for the UK. • **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. • Candidates might realise that there is a dilemma between the cheapest source provoking some strong feelings by those who feel it has a negative impact on landscape quality and the more acceptable version being little cheaper than fossil fuels. • They may show some understanding of the environmental costs of using coal and gas to produce electricity caused by emitting greenhouse gases and contributing to climate change. • They may make comments on coal and gas now having greater economic costs, as well as environmental costs. • Comparisons might be made with the damage to the landscape done by coal and gas fired power stations and the wind turbine shown. • They may recognise that fossil fuels cost little more than offshore wind but have a finite lifespan and will probably only get more expensive as supplies dwindle. • Wind power on the other hand is likely to become cheaper over time and will have a relative advantage as fossil fuel costs go up. AO2 = 3 marks AO4 = 3 marks	

Qu	Pt	Marking Guidance	Total marks
04	1	**Complete Figure 11 using the following data.** One mark for each correct choropleth completion, including correct use of key. AO4 = 2 marks	2
04	2	**Describe the distribution of the countries which had 5–14.9% of their population undernourished between 2016 and 2018 as shown in Figure 11.** Answers should make use of **Figure 11** through naming countries and locations in order to describe the distribution. One mark for a basic statement, eg • The majority are in west Africa. (1) • There are two clusters in west Africa. (1) • Only two (credit reference to one) are found in southern Africa. (1) Second mark may be a second separate point or developed point for further clarity eg • The majority are in west Africa (1) with just South Africa and Lesotho in the south. (d) (1) • There are two clusters in west Africa (1) with one other separate area in the south. (d) (1) • Only two (credit reference to one) are found in southern Africa (1) with the majority being west African coastal countries. (d) (1) No credit for explanation. AO4 = 2 marks	2

04	3	**Suggest one reason for differences in undernourishment between countries.** There is no requirement to use Figure **11** though candidates may use it to inform their answer. One mark for a basic statement, eg • Some countries are landlocked. (1) • Some countries are poorer than others. (1) • Climate may make growing crops more difficult in some countries. (1) Second mark must be a developed point for further clarity eg • Some countries are landlocked eg Chad (1) which will make importing sufficient food more difficult. (d) (1) • Some countries are poorer than others (1) so they will be less able to buy enough food. (d) (1) • Climate may make growing crops more difficult in some countries (1) such as Sahelian countries where irregular rains limit crop production. (d) (1) No credit for description of differences on the map. AO2 = 2 marks	2

04	4	**What is meant by famine?** A lack of food for a significant number of people / Widespread shortage of food. One mark for a correct statement with words to the effect above ie idea of shortage and spatial or numeric extent being large. AO1 = 1 mark	1

04	5	**Suggest how food supplies can be made more sustainable.** **Use Figures 12a and 12b and your own understanding.**	6

Level	Marks	Description
3 (Detailed)	5–6	AO2 – Shows thorough geographical understanding of how different actions contribute to sustainability in food supplies. AO3 – Demonstrates thorough application of knowledge and understanding to interpret the sustainability in the figures.
2 (Clear)	3–4	AO2 – Shows reasonable geographical understanding of how different actions contribute to sustainability in food supplies. AO3 – Demonstrates clear application of knowledge and understanding to interpret the sustainability in the figures.
1 (Basic)	1–2	AO2 – Shows limited geographical understanding of how different actions contribute to sustainability in food supplies. AO3 – Demonstrates basic application of knowledge and understanding to simply interpret the sustainability in the figures.
	0	No relevant content.

- **Level 3 responses** will cover sustainable farming and food supply practices in detail and link these to the examples provided by the figures through interpretation.
- **Level 2 responses** will cover sustainable farming and food supply practices clearly with at least an implicit link to the nature of the schemes shown in the figures.
- **Level 1 responses** will cover sustainable farming and food supply practices in a basic manner or merely assert the sustainability with little or no reference to the figures.

<u>Indicative content</u>

- Exact content will vary according to the farming methods chosen but is likely to include:
- From the figures: urban farming schemes and sustainable fishing.
- Urban farming on rooftops, balconies, allotments and otherwise unused plots makes food locally available and with a lower carbon footprint. It can also be fresher and more nutritious and improve food security for poorer residents.
- Fish from sustainable sources will help combat over-fishing so that stocks can replenish and therefore be available into the future.
- Grass fed beef is much more sustainable than that which is farmed indoors, fed on grain or on cleared forest, due to replenishing the soil with manure and being much less carbon-intensive.

		• Seasonal food consumption reduces the need for imports which can have a higher carbon footprint. Accept the assertion that imported food has a higher footprint though this is not always the case. • Reduced waste and losses will make food more sustainable by making existing supplies last longer and reducing amounts into landfill which produces methane. • Credit reference to small scale schemes in LIC/NEEs such as rice-fish in Bangladesh and agroforestry in Mali. AO2 = 3 marks AO3 = 3 marks	

Qu	Pt	Marking Guidance	Total marks
05	1	**Complete Figure 13 using the following data.** One mark for each correct choropleth completion, including correct use of key. AO4 = 2 marks	2
05	2	**Describe the distribution of the countries which had a water footprint of 550–1000 m^3 per person per year as shown in Figure 13.** Answers should make use of **Figure 13** through naming countries and locations in order to describe the distribution. One mark for a basic statement, eg • The main area is in central Africa (accept central southern). (1) • There is one isolated country in west Africa. (1) • All but one are found in roughly the centre of the continent. (1) Second mark may be a second separate point or developed point for further clarity eg • The main area is in central Africa (accept central southern) (1) with just one other in the west. (d) (1) • There is one isolated country in west Africa (1) with one other separate area in the centre of Africa. (d) (1) • All but one are found in roughly the centre of the continent (1) and are in one contiguous area. (d) (1) No credit for explanation. AO4 = 2 marks	2

05	3	**Outline one way in which economic development leads to increased water consumption.** There is no requirement to use Figure **13** though candidates may use it to inform their answer. One mark for a basic statement, eg • Countries use more water as they industrialise. (1) • The more energy consumed the more water used. (1) • Increased living standards increase water use. (1) Second mark must be a developed point for further clarity eg • Countries use more water as they industrialise (1) because manufacturing industry uses more water. (d) (1) • The more energy consumed the more water used (1) because it will be used in electricity plants for cooling. (d) (1) • Increased living standards increase water use (1) because people can afford goods which use more water such as dishwashers. (d) (1) No credit for description of differences on the map. AO2 = 2 marks	2

05	4	**What is meant by water deficit?** When water demand exceeds supply / Not enough water to meet people's needs. One mark for a correct statement with words to the effect above ie idea of shortage and needs not met. AO1 = 1 mark	1

05	5	**Suggest how water supplies can be made more sustainable.** **Use Figures 14a and 14b and your own understanding.**	6

Level	Marks	Description
3 (Detailed)	5–6	AO2 – Shows thorough geographical understanding of how different actions contribute to sustainability in water supplies. AO3 – Demonstrates thorough application of knowledge and understanding to interpret the sustainability in the figures.
2 (Clear)	3–4	AO2 – Shows reasonable geographical understanding of how different actions contribute to sustainability in water supplies. AO3 – Demonstrates clear application of knowledge and understanding to interpret the sustainability in the figures.
1 (Basic)	1–2	AO2 – Shows limited geographical understanding of how different actions contribute to sustainability in water supplies. AO3 – Demonstrates basic application of knowledge and understanding to simply interpret the sustainability in the figures.
	0	No relevant content.

- **Level 3 responses** will cover sustainable water supply practices in detail and link these to the examples provided by the figures through interpretation.
- **Level 2 responses** will cover sustainable water supply practices clearly with at least an implicit link to the nature of the methods shown in the figures.
- **Level 1 responses** will cover sustainable water supply practices in a basic manner or merely assert the sustainability with little or no reference to the figures.

<u>Indicative content</u>

- Exact content will vary according to the water supply methods chosen but is likely to include:
- From the figures: grey water schemes and water harvesting.
- Grey water schemes use water again without treatment, this will reduce the need to abstract water and is also more sustainable by reducing the need to use energy in treatment.
- Water butts harvest rainwater that would otherwise simply be runoff / go into drains, thus reducing the need to use treated water from taps.
- Recycling water allows for 'dirty' water to be re-used after treatment which is more sustainable because less water needs to be extracted and less energy is used as it is usually used for irrigation and industrial uses which need lower levels of treatment and thus less energy consumption.

		• Groundwater management involves careful monitoring so that it is not extracted faster than it can be replenished. Pollution is also controlled so that the clean supply lasts longer. No credit for reduction of demand unless it is clearly linked to making supplies more sustainable: AO2 = 3 marks AO3 = 3 marks	

Qu	Pt	Marking Guidance	Total marks
06	1	**Complete Figure 15 using the following data.** One mark for each correct choropleth completion, including correct use of key. AO4 = 2 marks	2
06	2	**Describe the distribution of the countries which had 75–100% access to electricity as shown in Figure 15.** One mark for a basic statement, eg • The main area is in North Africa / bordering the Mediterranean. (1) • There are two isolated central African countries. (1) • South Africa is an isolated example in the south. (1) Second mark may be a second separate point or developed point for further clarity eg • The main area is in North Africa / bordering the Mediterranean (1) with three further countries in the centre / south. (d) (1) • There are two isolated central African countries (1) with only South Africa further to the south. (d) (1) • South Africa is an isolated example in the south (1) with an area of three contiguous countries in the north west. (d) (1) No credit for explanation. AO4 = 2 marks	2

06	3	**Outline one way in which economic development leads to increased energy consumption.** There is no requirement to use **Figure 15** though candidates may use it to inform their answer. One mark for a basic statement, eg • Countries use more energy as they industrialise. (1) • The more goods consumed the more energy used. (1) • Increased living standards increase energy use. (1) Second mark must be a developed point for further clarity eg • Countries use more energy as they industrialise (1) because manufacturing industry uses more energy. (d) (1) • The more goods consumed the more energy used (1) because it will be used in manufacturing plants to produce the goods. (d) (1) • Increased living standards increase energy use (1) because people can afford devices which use more energy such as computers. (d) (1) No credit for description of differences on the map. AO2 = 2 marks	2

06	4	**What is meant by energy deficit?** When energy demand exceeds supply / Not enough energy to meet people's needs. One mark for a correct statement with words to the effect above ie idea of shortage and needs not met. AO1 = 1 mark	1

06	5	**Suggest how energy use can be made more sustainable.** **Use Figures 16a and 16b and your own understanding.**	6

Level	Marks	Description
3 (Detailed)	5–6	AO2 – Shows thorough geographical understanding of how different actions contribute to sustainability in energy use. AO3 – Demonstrates thorough application of knowledge and understanding to interpret the sustainability in the figures.
2 (Clear)	3–4	AO2 – Shows reasonable geographical understanding of how different actions contribute to sustainability in energy use. AO3 – Demonstrates clear application of knowledge and understanding to interpret the sustainability in the figures.

1 (Basic)	1–2	AO2 – Shows limited geographical understanding of how different actions contribute to sustainability in energy use. AO3 – Demonstrates basic application of knowledge and understanding to simply interpret the sustainability in the figures.
	0	No relevant content.

- **Level 3 responses** will cover sustainable energy use practices in detail and link these to the examples provided by the figures through interpretation.
- **Level 2 responses** will cover sustainable energy use practices clearly with at least an implicit link to the nature of the methods shown in the figures.
- **Level 1 responses** will cover sustainable energy use practices in a basic manner or merely assert the sustainability with little or no reference to the figures.

<u>Indicative content</u>

- Exact content will vary according to the methods chosen but is likely to include and must focus on demand reduction:
- From the figures: designing homes for sustainability and energy conservation and designing transport for sustainability.
- Insulating homes mean that less energy will be required for heating which is currently c.15% of the average UK person's carbon footprint.
- Replacing boilers for more efficient ones / switching to heat source pumps / low energy appliances will reduce home energy demand
- Workplaces and transport can be designed for sustainability such as the workplace charging point in the figure which encourages people to change to more sustainable transport methods.
- Transport can be more sustainable if it is more efficient such as lower fuel consumption, changing diesel trains for electric, using biofuel for buses.
- Individual energy use and carbon footprints can be more sustainable if people are educated about the impact their choices have and they switch to actions that reduce their energy use. Credit any reasonable discussion of changes individuals could make that will lead to demand reduction.
- Accept comments re legislation, eg the intention to ban all diesel and petrol cars in the UK by 2040.

No credit for description or discussion of sustainable energy generation.

AO2 = 3 marks
AO3 = 3 marks