

Markscheme

May 2024

Geography

Higher and standard level

Paper 2

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Paper 2 Section C markbands

Marks	Level descriptor		
	AO1: Knowledge and understanding of specified content AO2: Application and analysis of knowledge and understanding	AO3: Synthesis and evaluation	AO4: Selection, use and application of a variety of appropriate skills and techniques
0	The work does not reach a standard described by the descriptors below.		
1–2	The response is too brief, lists unconnected information, is not focused on the question and lacks structure.		
	<ul style="list-style-type: none"> • The response is very brief or descriptive, listing a series of unconnected comments or largely irrelevant information. The knowledge and understanding presented is very general with large gaps or errors in interpretation. Examples or case studies are not included or only listed. • There is no evidence of analysis. • Terminology is missing, not defined, irrelevant or used incorrectly. 	<ul style="list-style-type: none"> • No evidence of evaluation or conclusion is expected at this level. 	<ul style="list-style-type: none"> • Information presented is not grouped logically (in paragraphs or sections). • Maps, graphs or diagrams are not included, are irrelevant or difficult to decipher (only if appropriate to the question).
3–4	The response is too general, lacks detail, is not focused on the question and is largely unstructured.		
	<ul style="list-style-type: none"> • The response is very general. The knowledge and understanding presented outlines examples, statistics, and facts that are both relevant and irrelevant. Links to the question are listed. • The argument or analysis presented is not relevant to the question. • Basic terminology is defined and used but with errors in understanding or used inconsistently. 	<ul style="list-style-type: none"> • If appropriate to the question, the conclusion is irrelevant. • There is no evidence of critical evaluation of evidence (examples, statistics and case studies). 	<ul style="list-style-type: none"> • Most of the information is not grouped logically (in paragraphs or sections). • Maps, graphs or diagrams included lack detail, are incorrectly or only partially interpreted without explicit connections to the question (only if appropriate to the question).
5–6	The response partially addresses the question, but with a narrow argument, an unsubstantiated conclusion, and limited evaluation.		
	<ul style="list-style-type: none"> • The response describes relevant supporting evidence (information, examples, case studies et cetera), outlining appropriate link(s) to the question. • The argument or analysis partially addresses the question or elaborates one point repeatedly. • Relevant terminology is defined and used with only minor errors in understanding or is used inconsistently. 	<ul style="list-style-type: none"> • If appropriate to the question, the conclusions are general, not aligned with the evidence presented and/or based on an incorrect interpretation of the evidence. • Other perspectives on evidence (examples, statistics and case studies) and/or strengths and weaknesses of evidence are listed. 	<ul style="list-style-type: none"> • Logically related information is grouped together (in sections or paragraphs) but not consistently. • Maps, graphs or diagrams included do not follow conventions, and include relevant and irrelevant interpretations in the text (only if appropriate to the question).

<p>7–8</p>	<p>The response addresses the whole question, the analysis is evaluated and the conclusion is relevant but lacks balance.</p> <ul style="list-style-type: none"> • The response describes relevant supporting evidence correctly (information, examples and case studies) that covers all the main points of the question, describing appropriate links to the question. • The argument or analysis is clear and relevant to the question but one-sided or unbalanced. • Complex terminology is defined and used correctly but not consistently.
<p>9–10</p>	<p>The response is in-depth and question-specific (topic and command term); analysis and conclusion are justified through well-developed evaluation of evidence and perspectives.</p> <ul style="list-style-type: none"> • The response explains correct and relevant examples, statistics and details that are integrated in the response, explaining the appropriate link to the question. • The argument or analysis is balanced, presenting evidence that is discussed, explaining complexity, exceptions and comparisons. • Complex and relevant terminology is used correctly throughout the response.

Section A

Changing population

1. (a) (i) Estimate the percentage of governments globally that have raised pension age. [1]
30 (allow 29–31)
- (ii) State the policy that has the smallest range of values for the regions. [1]
Prevent abuse

- (b) Suggest **two** reasons why countries have different policies to manage the challenges of an ageing society. [2+2]

Allow [1] for each valid reason why there are different policies and [1] for development or exemplification.

For example: A more economically developed country would have more money to spend [1] on providing pensions to support the elderly population/policies to increase birth rate/reduce burden on working age group [1].

Other possibilities include:

- The culture of the country values old people – reduces the burden on governments.
- Type of government: free market versus state control – some countries have focus on private pensions which takes burden off the state.
- Political pressures from different age groups – ageing population may have voting power.
- Different size of ageing population/stages of demographic transition - an ageing population is not as much of a challenge in some countries as in others.
- Speed of ageing may differ/starting population age may be lower – where ageing is more rapid policies may be more severe/face greater resource constraints.
- Tax structures may be different – broader tax base may spread the cost.
- Different retirement ages – where retirement age is higher there may be less pressure.
- Past policy decisions – past systems e.g. pension schemes may shape direction of present/future policies.
- Migration – some countries can increase work force by allowing migration/some countries attract ageing population e.g. Spain.

- (c) Explain **one** environmental factor **and one** political factor that cause internal displacement of people. [2+2]

Award [1] for an environmental factor and [1] for further development/exemplification.

Environmental factor

For example: Drought in subsistence farming areas [1] families move to the urban areas.

Other possibilities could include:

- Natural disasters/hazards (floods, earthquakes, etc.) – causing damage to homes
- Deforestation – increasing the risk of flooding and landslides affecting homes
- Land degradation – reduction in soil fertility due to increased temperature or lack of rainfall
- Water pollution – contamination of water supplies affecting a person's health

- Air pollution – high levels of pollutants affecting a person’s health
- Sea-level rise – inundation of coastal areas affecting homes

Political factor

For example: The persecution of minorities [1] means that sub-national groups are afraid and flee to safer areas [1].

Other possibilities could include:

- Government policies – forced evictions for people living in illegal settlements
- Terrorism – kidnapping, violence causing people to move to safer areas
- War– conflict involving internal or external groups causing people to move to safer areas
- Political instability – breakdown in public services resulting from a failed state
- Corruption – land grabbing causes people to lose their farmland and to move elsewhere

Global climate – vulnerability and resilience

2. (a) Describe the changing distribution of oak–hickory forest. [2]

Award [1] for each valid statement, up to a maximum of [2].

Possibilities include:

- Moves north/less in south
- Increases in the northeast
- Decreases in west/central USA/increases in the east
- Covers a larger area
- Becoming more coastal
- Greater amount on the border with Canada
- Less fragmented

- (b) Explain **two** different reasons for an increase in methane gas emissions. [2+2]

In each case, award [1] for a valid reason for increase and [1] for development/exemplification that explains the increase in release of methane.

For example: increased burning of fossil fuels releases methane [1] and this is due to population growth/industrialization/increased wealth [1].

Other possibilities include:

- Increased temperatures [1] lead to melting of Arctic permafrost where methane is stored [1].
- Increased landfill – anaerobic decomposition of organic waste releases methane
- More land used for rice farming – methane produced by microbes in the soil.
- Higher numbers of livestock farms – methane produced by ruminants as part of digestive processes.
- Leakage from fossil fuel industry – fracking releases methane into atmosphere/mining releases methane from coal measures and surrounding rocks
- Deforestation – release of methane by microbes in exposed soils
- Natural sources – volcanoes/deep sea mud volcanoes/ meltwater from glaciers
- Increase traffic e.g. cars/planes/shipping – fuel used releases methane.
- Growth of GMC – the changing diets increase consumption of meat which releases methane in production/increase in use of gadgets uses electricity that produces methane in production/use of cars.

- (c) Explain **two** different ways in which technology is used to reduce the effects of climate change. [2+2]

Technological strategies can address the reduction of emissions in terms of mitigation or adaptation.

In each case, award for [1] a valid method involving technology that is used and [1] for development/exemplification that reduces the effects of climate change.

For example: Pumping stations have been built throughout Miami [1] to deal with the flooding caused by sea level rise [1].

Possible strategies include:

- Renewable energy sources – reduces greenhouse gas emissions during energy production

- Ocean fertilisation – encourage the growth of phytoplankton to absorb carbon dioxide
- Electric vehicles – reduces greenhouse gas emissions due to a lack of combustion
- Carbon capture and storage – removes carbon emissions from the atmosphere
- Sea wall construction – prevents inundation of coastal areas
- Spraying to prevent mosquitos – protects people from the risk of malaria
- Green / cool roofs – reduces the temperatures in settlements
- Cloud seeding – increases the possibility of rainfall
- Early warning systems for natural hazards – people can be evacuated during the onset of an extreme weather event
- Improved farming practices – drip irrigation, soil conservation, HYVs
- Communication via the internet/social media – educate people on reducing their carbon footprint/coping with the impact from climate change
- Investment in public transport technologies – reduces the amount of vehicles emitted greenhouse gases

Global resource consumption and security

3. (a) Describe what is meant by resource stewardship. [2]

The responsible/sustainable use of resources/so that they may be available for all [1] / continue to be used into the future [1].

Accept other valid definitions/wording about sustainable use/management of resources.

- (b) Suggest **two** ways in which economic development may lead to an increase in the availability of energy. [2+2]

In each case, award [1] for how economic development increases energy availability and [1] for explanation/exemplification.

For example: There is more money for hi-tech equipment [1] therefore more exploration / exploitation [1].

Other possibilities include:

- Investment in alternative sources to provide additional ways of generating energy
- The lower cost solar power
- Increased demand for energy so TNCs search for new sources of supply.
- Increased funding to construct infrastructure in order to distribute to more areas
- More funding available to develop smart infrastructure/energy efficient technology that consumes less energy
- More funding available to import energy from another country

- (c) For **one named** country, explain **two** factors that negatively affect water security. [2+2]

In each case, award [1] for the factor that affects water security and [1] for explanation/exemplification that is relevant to the named country.

For example: (named country Jordan) Growing population increasing the demand for water [1] due to influx of hundreds of thousands of refugees [1].

If no identified place or the place does not suffer from water insecurity or the factors are valid but not applicable to the country award [1] for each valid factor plus development up to a maximum of [2]. Max [2] if 2 different countries are stated and factors are valid.

Other possible factors include:

- Poverty – impoverished households have a limited ability to afford water
- Increasing temperatures causing higher rates of evaporation of surface water
- Lower rainfall impacting the supply of water to reservoirs
- Lack of governance coordination/policy - untreated domestic sewage present in potable water
- Lack of government investment – inadequate infrastructure to supply water to citizens/priority given to some areas of a country but not to other areas in the supply of water
- Flooding – pollutants in floodwater contaminate available freshwater sources
- Saltwater intrusion - decreasing the quality of water due to salinization
- Water-intensive commercial agriculture - depletes available freshwater sources
- Privatisation of water supply - increasing the cost of water provision for households
- Damming of rivers upstream – a reduction in the supply of water downstream

- Conflict – different groups can contest access to water resulting in one group having decreased water security

Section B

4. (a) Describe the changes in sustainable clothing sales revenue in the United Kingdom (UK) from 2014 to 2020. [2]

- Decrease (of approx. 3 million) 2014-15 [1]
- Increase (approx. 28 million) from 2015 to 2020 [1]
- 2018-20 slower rate of increase [1]
- Overall increase [1]

Some quantification of either/both points needed for full marks.

- (b) Suggest **one** way in which the survey of city populations that supported sustainable fashion could be biased. [2]

Award [1] for a valid suggestion and [1] for further development.

Possibilities include:

- Only selects a small number of cities
- Cities do not represent all geographical areas
- Cities not taken from LICs
- Cities not representative of all types of city – they are tourist cities that may not have a typical demographic

Answers should be related to resource showing the 5 major global cities.

For example: The cities do not have any examples from South America or Africa [1] which means that the views of people on these continents are not represented. [1]

- (c) To what extent does the evidence in the infographic support the view that the impacts of sustainable fashion are all positive? [6]

Award [1] for each valid point supported by evidence taken from the infographic, up to a maximum of [5].

Award a maximum of [4] if only one side of the argument is given. Valid point must be an interpretation of information and not just a straight lift from the resource.

Award the final [1] for an overall appraisal, which weighs up the infographic as a whole.

Support

- *Ethical clothing sales are on the increase/revenue from sustainable clothing sales.*
- *Has positive impact on the environment*
- *More sustainable use of resources*
- *Reduce amount sent for incineration and landfill*
- *Support from large cities for sustainable fashion*
- *Growth in purchases from all age groups*

Non-support:

- *Lots of jobs in fast fashion*
- *Gender – taking away jobs of women*
- *Support for families at home*
- *Cheap fashion important for GDP*
- *Support varies with ages*
- *Some countries do not produce much waste*

- *Not all places have same level of support – low in western cities*

Do not credit simple quoting of data from. the resource – it needs to be given a context.

For example: The information in the infographic supports the view that the impacts of sustainable fashion are positive as it shows the revenue from sales in the UK have increased. **[1]** They have risen from 32 million GBP in 2014 to 58 million in 2020. **[1]** All age groups have increased their purchases of second-hand clothing. **[1]** However the impacts have not been positive for the economy of Cambodia **[1]** as disposable fashion is 16% of their GDP and employs a large number of women in the industry **[1]**. Overall, however sustainable fashion has a positive impact **[1]**.

Section C

5. “The consequences of megacity growth are mainly felt by individuals.” To what extent do you agree with this statement? [10]

Marks should be allocated according to the markbands on pages 3 to 4.

Possible **applied themes** (AO2) **demonstrating knowledge and understanding** (AO1):

- Responses should show knowledge and understanding of the challenges that are the result of megacity growth. These can be seen as: social – poor quality housing, health, wealth gap, poverty, crime and public safety; economic – unemployment, underemployment, economic development, rising costs of living; environmental – air pollution, general pollution, water pollution; infrastructural – transport provision, congestion, water supply, electricity
- Responses should show knowledge and understanding of the above consequences on individuals and societies e.g. the impacts of megacity growth may provide job opportunities for individuals whilst providing economic growth for societies, poor individuals have to live in slums whilst society has to deal with consequences of poor housing such as water pollution or increased crime.
- Responses should show knowledge and understanding of the positive and negative consequences of megacity growth
- Responses should show knowledge and understanding of the consequences for both urban and rural areas – rural depopulation, brain drain, demographic changes

Good answers may be well-structured (AO4) and may additionally offer a critical evaluation (AO3) which focuses on the relative impacts of megacity growth on individuals. Responses may focus on a comparison between individuals and society, impacts on individuals with different wealth profiles and impacts on individuals in different places [urban/rural]. Some answers may compare different types of impact – e.g. social v environmental. Some answers may compare the impacts in place with different levels of development or rates of development. Some answers may comment on temporal variations of impacts as rates of megacity growth vary.

For 5–6 marks, expect a weakly-evidenced outlining of some of the impacts.

For 7–8 marks, expect a well-structured account, which includes:

- Either a well-evidenced synthesis which links together several themes from the guide and acknowledges more than one side of the argument
- Or a critical conclusion (or ongoing evaluation) informed by geographical concepts and/or perspectives.

For 9–10 marks, expect both traits.

6. “Global climate change has a greater impact on environmental systems than on human societies.” To what extent do you agree with this statement? **[10]**

Marks should be allocated according to the markbands on pages 3 to 4.

Possible **applied themes** (AO2) **demonstrating knowledge and understanding** (AO1):

- Responses should show knowledge and understanding of the characteristics of climate change – hotter temperatures, extreme weather events, increased drought
- Responses should show knowledge and understanding of the impacts on environmental systems – glacier melt, sea level rise, ocean acidification, saltwater incursions, shifting biomes, changing migration patterns, wildfires, expansion of deserts, floods
- Responses should show knowledge and understanding of the impacts of climate change on individuals, communities and societies – health, food security, water security, migration, mortality, ocean transport, economic development
- Responses should show knowledge and understanding of how environmental and human systems are integrated and impacts on the environment leads to impact on humans

Good answers may be well-structured (AO4) and may additionally offer a critical evaluation (AO3) which focuses on the relative impact of climate change on environmental and human systems. Other critical evaluation may refer to spatial variations in impacts such as a comparison of nations/regions. Some answers may comment on temporal variations of success.

For 5–6 marks, expect a weakly-evidenced outlining of some of the impacts of climate change on environmental or human systems.

For 7–8 marks, expect a well-structured account, which includes:

- Either a well-evidenced synthesis which links together several themes from the guide and acknowledges both sides of the argument
- Or a critical conclusion (or ongoing evaluation) informed by geographical concepts and/or perspectives.

For 9–10 marks, expect both traits.
