

Markscheme

Specimen

Geography

Higher and standard level

Paper 2

10 pages

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.		
3–4	The response is too general, lacks detail, is not focused on the question and is largely unstructured.		
5–6	The response partially addresses the question, but with a narrow argument, an unsubstantiated conclusion, and limited evaluation.		

<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. 	<ul style="list-style-type: none"> • If appropriate to the question, the conclusion is relevant to the question, aligned with the evidence but unbalanced. • Other perspectives on evidence (examples, statistics and case studies) and/or strengths and weaknesses of evidence are described. 	<ul style="list-style-type: none"> • Logically related information is grouped together (in sections) consistently. • Maps, graphs or diagrams included contribute to/support the argument or analysis (only if appropriate to the question).
<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. 	<ul style="list-style-type: none"> • If appropriate to the question, the conclusion is relevant to the question, balanced and aligned with the evidence. • Evaluation includes a systematic and detailed presentation of ideas, cause and effect relations, other perspectives; strengths and weaknesses of evidence are discussed; (if appropriate) includes justification of the argument and conclusion. 	<ul style="list-style-type: none"> • Response is logically structured with discussion (and if appropriate to the question, a conclusion) focusing on the argument or points made, making it easy to follow. • Maps, graphs or diagrams are annotated following conventions and their relevance is explained and support the argument or analysis (only if appropriate to the question).

Section A

1. Changing population

- (a) (i) Identify the minimum population size needed for an urban area to be classified as a megacity. [1]

10 million inhabitants.

- (ii) Identify the **two** nations that are predicted to have the greatest number of megacities in 2030. [1]

India and China (both needed).

- (b) Suggest **two** possible reasons for the projected population change in Tokyo. [2]

Award [1] per valid distinct statement.

Possible statements include:

- falling birth rates
- reduced levels of immigration
- counter-urbanisation.

- (c) Explain **two** possible negative consequences for the cities projected to experience very rapid growth. [2 + 2]

Award [1] for each valid negative consequence be it social, economic or environmental and another [1] for development or exemplification.

eg A strain on the existing infrastructure [1] resulting in increased traffic congestion [1] or vice versa.

Other possibilities could include:

- Lack of employment opportunities
- Housing shortages and the growth of informal settlements
- Crime from growing inequality
- Increased air pollution.

- (d) Explain **one** reason why a country could experience a demographic dividend. **[2]**

Award [1] for each valid distinct reason and another [1] for development/ or exemplification.

The DD is accelerated economic growth that may result from a decline in a country's birth and death rates and the subsequent change in the age structure of the population – Population Reference Bureau.

eg an increase in the proportion of the working age population [1] as a result of falling fertility/birth rates [1].

Other possibilities include:

- reduced mortality rates increasing the proportion in the working age group
- correctly describing the appropriate change in the structure of the population age structure of the population
- change in dependency ratio/ working age increases relative to the youthful population.

2. Global climate – vulnerability and resilience

- (a) State **two** naturally occurring greenhouse gases **other than** carbon dioxide. [1]

Must have two of the following for [1]:

- Methane
- Nitrous oxide
- Water vapour
- Tropospheric/ground level ozone.

- (b) Explain **two** positive feedback loops that contribute to climate change. [3 + 3]

Award [1] for a factor, [1] for consequences and [1] for an explanation of the feedback loop.

Possibilities include:

eg Arctic ice melts reducing albedo [1] less incoming solar radiation is reflected [1] and this increases further melting of Arctic ice [1].

eg Increased temperatures result in greater evaporation [1] more water vapour in the atmosphere acting as a greenhouse gas [1] leads to increased temperature [1].

eg Melting tundra releases methane [1] methane is a GHG [1] and so temperature rises [1] and more tundra melts.

- (c) State **and** explain **one** geopolitical attempt to reduce the challenges posed by global climate change. [1 + 2]

A valid geopolitical strategy should be identified [1]

The remaining [2] should be reserved for an explanation of the strategy.

For example: international agreements on emissions *eg* Kyoto 1997 [1]. This means that the signing nation states have agreed to cut GHG emissions [1] this will reduce the enhanced GHE [1] reducing global warming.

Other possibilities include:

- sharing technology
- development of alternative energies
- actions of MGOs *eg* feed-in tariffs on renewable energy
- international aid.

3. Global resource consumption and security

- (a) Describe the pattern of the ecological footprint shown on the map. **[2]**

Any two valid statements for [1]; effective use of data [1].

Possible statements include:

- highest in Australia – over 6 gha
- lowest in south Asia/south-east Asia/Oceania – below 1.19 gha
- Russia/northern Asia has a middle range value – 2 to 5.9 gha.

- (b) Suggest **two** reasons for the changing importance of nuclear power. **[2 + 2]**

Award **[1]** for a valid suggestion and **[1]** for development/exemplification

For example: Safety concerns regarding potential accidents **[1]** eg the Fukushima incident in Japan **[1]**.

Concerns about future energy security **[1]** many believe nuclear energy is the only valid alternative future energy that will meet the growing demand **[1]**.

Other possibilities:

- technology has made this a much safer option
- contributes less to GHG
- issues with storage of waste as radioactive for a long time
- expensive alternative compared to other forms of energy.

- (c) Explain **two** characteristics of the circular economy. **[2 + 2]**

Award [1] for each valid characteristic and [1] for development/exemplification.

For example: consumers rent products from companies instead of buying them **[1]** which means responsibility for recycling when the product eventually breaks lies with the company **[1]**.

Other possibilities include:

- researchers are developing new “cradle to cradle” design ideas
- materials designed to be used again and again
- materials are kept circulating (in flows) and do not enter landfill
- people become product users rather than consumers.

Section B

4. (a) State the number of locations that:
- (i) have future plans for nuclear power; [1]
Eight.
 - (ii) already have hydroelectric power. [1]
Twenty nine.
- (b) Suggest **one** way in which the bar graph depicting electricity generation and population by region could be improved. [2]

Award [1] for each valid point and [1] for development.

Possibilities include:

- would be better if like was compared with like [1] and Africa is a continent not a country – others are all countries [1]
- the title should indicate the type of energy sources used in generating electricity [1], *ie* renewable electricity generation or all electricity generation [1]
- The graph would be more effective if it showed electricity generation per capita rather than kilowatts [1] because larger countries may have more electricity generation/needs [1].

- (c) Evaluate **two** ways in which Africa is portrayed negatively in this infographic, **other than** in the bar graph. [3 + 3]

Award [1] for each negative portrayal identified, and up to [2] for each effective evaluation of why this is a negative portrayal.

For example:

Use of images – the two “no entry/prohibition” signs [1] seem to portray no lighting/lightbulbs/ electricity in Africa [1], and this is incorrect/misleading [1].

Tone of language in box in top left corner, *eg* “unable to scrounge up the money, resources, and general know-how to bring energy to their people” [1] – this is very patronizing, over-simplistic and insulting use of language about Africa [1] which is made up of over 50 diverse countries [1].

Possible areas for evaluation include:

- tone of language
- use of terminology
- use of labels and headings
- sources used
- generalizations
- use of images
- use of colour
- use of data
- intended audience
- scales and proportions or projection of the map
- effectiveness of the key.

Section C

5. “Climate change will eventually become the main reason for human migration.” To what extent do you agree with this statement?

[10]

Marks should be allocated according to the markbands on pages 2–3.

Responses may tackle the question on a regional or global scale. They should have a clear understanding of the terms “climate change” and “migration” and comment on the direct links or lack of links between the two using a well-developed case study/studies or a developed example(s).

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

- Climate change can be explained as a possible cause of migration (push/pull) at local, national or regional scales, for example: drought, increased meteorological hazards and/or rising sea levels.
- The findings of climate change predictions and projections (IPCC reports) can be explained, along with the eventual implications for population migration.
- Responses may also describe migrations which have limited links to climate change *eg* with economic or political push/pull factors as opposed to environmental.
- Responses may make describe the unprecedented number of refugees and economic migrants who are now living in countries where they were not born.

Good answers may be **well-structured** (AO4) and may additionally offer a **critical evaluation** (AO3) which evaluates the relative importance of climate change or other economic/political factors in causing migration. Another approach might be to focus on possible interactions between different factors (conflicts causing mass movement of people may have climate change as one of their long term causes). Another approach might be to examine the different time scales over which impacts are experienced or could comment that climate change is often difficult to identify as a push factor as many migrations happen for a package of reasons, which are all, interlinked.

For 5–6 marks

Expect weakly-evidenced outlining of climate change and/or migration themes.

For 7–8 marks

Expect a well-structured account which includes:

- **EITHER** a well evidenced synthesis which links together several well-evidenced climate change and migration themes from the Guide
- **OR** a critical conclusion (or on-going evaluation) informed by geographical concepts and/or perspectives.

For 9–10 marks

Expect both traits.

6. “Energy security is the most important aspect of resource security for nations.” To what extent do you agree with this statement?

[10]

Marks should be allocated according to the markbands on pages 2–3.

Responses may tackle the question on a national, regional or global scale. They should have a clear understanding of the terms “energy security” and “resource security” and comment on the links between the two using well-developed case studies or developed examples.

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

- Responses may explain that the “importance” of energy security depends on the nation in question due to differing levels of for example: development, access to, production and consumption levels and climate. These are some factors that may determine which resource (water, food or energy) is the most important for security. For example for some Middle Eastern nations with vast oil supplies, water and food security may be more of a priority than energy.
- Responses may explain how recent trends in production, consumption, pricing and technology may be impacting upon the importance of energy security in relation to water and food security. Stronger responses may explain how over time climate change is having more of an impact for some regions in terms of their water and food security. Responses could explain the differing arguments that relate to population and resource consumption using the neo Malthus and anti-Malthus debate.

Good answers may be **well-structured** (AO4) and may additionally offer a **critical evaluation** (AO3) which focuses on the recent past and explicitly addresses the issue of “most important” using national examples. Responses could evaluate the relative importance of energy security in relation to resource security and the possible interactions between the two. Another approach might be to evaluate the different time scales over which the importance of water, food and energy may vary in importance.

For 5–6 marks

Expect weakly-evidenced outlining of energy and/or resource security themes.

For 7–8 marks

Expect a well-structured account which includes:

- **EITHER** a well evidenced synthesis which links together several well-evidenced resource security themes from the Guide
- **OR** a critical conclusion (or on-going evaluation) informed by geographical concepts and/or perspectives.

For 9–10 marks

Expect both traits.