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Geography

Higher level and standard level

Paper 1

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Core theme – patterns and change

Section A

1. **Populations in transition**

    (a)   Describe what is meant by old-age dependency ratio.   **[2]**

    It is the ratio of the number of individuals over 64 (allow 60 or 65 as well) **[1]** to the number of people of working age / the number of economically active individuals **[1]**.

    (b)   Identify which country on the graph is predicted to have the fastest growth in old-age dependency between 2010 and 2050.   **[1]**

    China

    (c)   Explain **two** reasons why the population is ageing in the five countries shown.   **[2+2]**

    Explained reasons must address why the percentage of elderly is increasing in relation to other age groups.

    Award **[1+1]** for each valid and distinct reason, provided that it is developed by means of explanation, exemplification and/or detail.

    For example: Improved medical care **[1]**, diseases linked to longevity treated, allowing increased life expectancy **[1]**.

    Possibilities include:
    *   falling fertility/decline in younger cohorts
    *   improved nutrition and diet/healthier lives.

    (d)   Suggest **two** reasons why men have a lower life expectancy than women in most countries.   **[2+2]**

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

    For example: Men tend to practise/engage in more risky occupations (civilian) **[1]** *eg* mining, construction, thereby increasing their mortality rate **[1]**.

    Other possibilities include:
    *   most armed forces mainly men/combat increases mortality
    *   high-risk behaviour / lifestyle choices (smoking, drinking, diet)
    *   biological/physiological make-up of men compared to women
    *   crime related factors.

    It is important that the two factors are distinct and NOT a similar reason developed twice.

2.   Disparities in wealth and development

(a)   Describe the relationship shown on the graph.   **[2]**

- The relationship is positive / as HDI increases the combined gross enrollment increases **[1]**.
- Use of data to provide evidence of this relationship OR use of data to identify Qatar as an anomaly **[1]**.

(b)   State the **three** components that make up the Human Development Index (HDI).   **[2]**

- Life expectancy/longevity
- School enrollment/expected years of schooling/education/literacy
- Gross National Income (GNI)/GDP/national income (*per capita* not essential)

    Do not accept income alone. Must have all three for **[2]**, two correct **[1]**. **[0]** for only one correct.

(c)   Suggest **two** reasons why composite indices (such as the HDI) are used to measure global or regional disparities.   **[2+2]**

Award **[1+1]** for each valid and distinct reason, provided that it is developed by means of explanation, exemplification and/or detail. Credit responses based on other valid composite indices.

For example: HDI is better than a single indicator like GDP *per capita* **[1]**; gives a broader measure of social development **[1]**.

Possibilities include:
- allows for comparison between and/or within nations
- indicates where aid could be directed
- allows measurement of progress/lack of progress over time.

(d)   Explain **one** advantage **and one** disadvantage of using debt relief to reduce global disparities.   **[2+2]**

Award **[1+1]** for each distinct valid reason, provided that it is developed by means of explanation, exemplification and/or detail.

For example: Reduces the amount of funds leaving a nation as debt repayments **[1]**; allows nations to redirect funds toward development projects **[1]**.

Possibilities include:

Advantages
- encourages more investment from overseas countries
- infrastructural projects can now be prioritized
- could stem migration out of the country.

Disadvantages
- the same conditions attached to debt relief as attached to loans
- corruption so benefits are not felt by all
- might not be sufficient to make a difference to the total debt
- any reference to dependency must be strongly related to debt relief and not aid.

3.   **Patterns in environmental quality and sustainability**

   (a)   Describe the trend of CO_2 emissions in Asia between 1990 and 2010.   **[3]**

   Any two valid <u>descriptive</u> points for **[2]** plus **[1]** for accurate quantification/use of
   data from the vertical axis (actual figures or proportions).
   - The emissions have increased.
   - Sharp rise in emissions after 2002.
   - Emissions relatively stable in the 90s.

   (b)   Suggest **two** reasons why CO_2 emissions in Europe have decreased since 1990.   **[2+2]**

   Award **[1+1]** for each valid and distinct reason, provided that it is developed by
   means of detail and/or exemplification.

   For example: Development of renewable/alternative sources of energy **[1]**
   replacing fossil fuels **[1]**.

   Possibilities include:
   - policies to reduce use of fossil fuels (including Kyoto protocol)
   - political will (including growth of green parties)
   - more efficient vehicle/appliances
   - improved public transport systems
   - education/increased awareness lowering consumption
   - industries relocating outside of the region

   Credit should also be given to attempts to explain the decrease by referring to
   periods of economic recession.

   (c)   Distinguish between global climate change and the enhanced greenhouse effect.   **[4]**

   Award **[1]** for a valid description of global climate change and **[1]** for a valid
   description of the enhanced greenhouse effect. The final **[1+1]** are reserved for
   any two valid distinguishing characteristics between the two.

   Descriptions:
   Global climate change is the *change in the global pattern of climate* precipitation,
   temperature, winds, pressure systems). The enhanced greenhouse effect is the
   *increasing amount of greenhouse gases in the atmosphere as a result of human
   activities.*

   Distinguishing characteristics could be:
   - GCC can relate to any aspect of climate whereas the EGE specifically impacts
     upon temperature
   - GCC can have natural causes whereas the EGE is anthropogenic
   - GCC can involve cooling/glacial periods whereas EGE is associated with
     global warming
   - EGE is a major cause of GCC.

4.   Patterns in resource consumption

(a)   State which **two** regions had the most sustainable ecological footprint in 1975.   **[2]**

Africa **[1]** and Asia Pacific **[1]**.

(b)   Explain the pattern of regional ecological footprints in 2010.   **[4]**

Award **[1]** for stating a pattern of some kind. For example: "Economically developed regions (*eg* Oceania, North America, Western Europe) have higher footprints".

Award **[1]** for each valid point made that explains why footprints may be high or low in different regions. Ideally responses should refer to both resource consumption and waste generation but this is not essential for full marks.

For example: High Income nations that have **high standards of living [1]** tend to **consume** vast quantities of **non-renewable energy [1]** and generate lots of **greenhouse gases [1]** hence the high ecological footprint.

Possibilities include:
- quality of life/affluence
- sources of energy
- levels of energy consumption
- dominant economic activities/degree of industrialization
- levels of development
- diet, for example of ecological footprint of meat
- levels of recycling/re-use

Accept alternative valid explanations.

Responses referring to population size should not be credited.

(c)   Explain the anti-Malthusian view of the relationship between population and resources.   **[5]**

Responses should describe the anti-Malthusian view (it could be implied within the explanation) **[1]**.

For example: Resources will keep pace with population growth.
Carrying capacity will increase as human population increases.

Responses should explain TWO arguments used by anti-Malthusians **[2+2]**.

Award **[1]** for each basic explanation, with an additional **[1]** for extension or exemplification.

Possibilities include:
- the use of technological fixes, *eg* in agriculture to achieve higher yields
- resource substitution overcomes resource depletion
- recycling allows conservation of existing resources.

Section B

Level descriptor	AO1 Knowledge/ understanding	AO2 Application/ analysis	AO3 Synthesis/ evaluation	AO4 Skills	Paper 1 Section B Marks 0–15
A	No relevant knowledge; no examples or case studies	No evidence of application; the question has been completely misinterpreted or omitted	No evaluation	None appropriate	0
B	Little knowledge and/or understanding, which is largely superficial or of marginal relevance; no or irrelevant examples and case	Very little application; important aspects of the question are ignored	No evaluation	Very low level; little attempt at organization of material; no relevant terminology	1–3
C	Some relevant knowledge and understanding, but with some omissions; examples and case studies are included, but limited	Little attempt at application; answer partially addresses question	No evaluation	Few or no maps or diagrams, little evidence of skills or organization of material; poor terminology	4–6
D	Relevant knowledge and understanding, but with some omissions; examples and case studies are included, occasionally generalized	Some attempt at application; competent answer although not fully developed, and tends to be descriptive	No evaluation or unsubstantiated evaluation	Basic maps or diagrams, but evidence of some skills; some indication of structure and organization of material; acceptable terminology	7–9
E	Generally accurate knowledge and understanding, but with some minor omissions; examples and case studies are well chosen, occasionally generalized	Appropriate application; developed answer that covers most aspects of the question	Beginning to show some attempt at evaluation of the issue, which may be unbalanced	Acceptable maps and diagrams; appropriate structure and organization of material; generally appropriate terminology	10–12
F	Accurate, specific, well-detailed knowledge and understanding; examples and case studies are well chosen and developed	Detailed application; well-developed answer that covers most or all aspects of the question	Good and well-balanced attempt at evaluation	Appropriate and sound maps and diagrams; well structured and organized responses; terminology sound	13–15

5. Examine the reasons for **and** against preserving the biodiversity of tropical rainforests. **[15]**

Responses should demonstrate some understanding of biodiversity and acknowledge that tropical rainforests have immense biodiversity.

Reasons for preserving biodiversity could include:
- ecological/climate value (some plants store more carbon dioxide and emit more oxygen than others)
- role as a carbon reserve and possible contribution to climate change mitigation attempts
- value in terms of gene pool (flora/fauna)
- actual and potential future value for industry/medicine/food
- economic value for ecotourism, and other sustainable uses
- habitat for endangered peoples (and endangered animals/plants).

Reasons against might override the need to preserve biodiversity and could include:
- clearance for timber or other resources
- clearance of land for agriculture (livestock/soya beans), transport, settlement
- most tropical rainforest is in developing countries that need the resources for development
- elimination/reduction of tropical pests and diseases
- the need to defoliate areas during warfare
- the high cost of preserving forests in areas where population is growing and needs resources
- forest area may be reduced or lost in the future anyway due to climate change.

Answers that address only the importance of preserving the rainforest and not the importance of preserving the biodiversity of the rainforest should not progress beyond band C.

At band D, responses should show some understanding of biodiversity and are likely to examine a limited number of reasons, almost entirely for preservation, with limited development.

At band E, responses will be underpinned by an understanding of biodiversity, will examine several reasons and include some consideration of the reasons against preserving biodiversity, possibly with some simplistic evaluation.

At band F expect a more balanced approach using specific detailed knowledge, prior to drawing some evaluative conclusion.

Marks should be allocated according to the markbands.

6. The third Millennium Development Goal is to "promote gender equality and empower women". To what extent might international migration play a role in helping this goal to be achieved? **[15]**

There are many possible approaches to this question.

It would be expected that responses show a clear understanding of this particular MDG and some understanding of outcomes for gender empowerment and/or equality. This can be stated or implied. It would also be expected that most responses make use of valid recent example(s) of international migrations that could impact upon the migrants themselves or on women either in the source country or the destination, *ie* the impact may not be isolated to just the migrants (for example the migration of Indonesian and Filipino women to Hong Kong as domestic workers has had numerous positive and negative outcomes for gender empowerment within the host society). Voluntary or forced migrations may be discussed in the response but the examples referenced must involve movement across an international border.

The focus of the argument will depend on the examples chosen. Candidates may look at the large-scale movement of women from countries such as the Philippines or Indonesia to other regions to do domestic work. Alternatively the essay may focus on the movement of economic migrants of both genders from, for example, Mexico to the USA, and how this migration and the flow of remittances and ideas impacts upon gender roles/empowerment for both the migrants and those still in the country of origin.

There are some obvious positive and negative outcomes for gender as a result of migration:

Example: Domestic workers from Indonesia to Hong Kong:
For the female migrants:
+ independence, travel, financial security;
– abuse, trauma of being away from families, low wages, live-in policy, right of abode
For the destination:
+ Most households have two working adults, with women having successful careers;
– Domestic and childcare work is still seen as "women's work" and grossly underpaid.

These gender-related outcomes would be determined by the movement(s) being utilized in the response.

At band D, expect an example/examples of international migrations and a description of impacts of this movement on gender empowerment.

At band E, expect an example/examples of international migrations and some explanation of both positive and negative impacts of this/ these movements on gender empowerment.

At band F, expect an example/examples of international migrations and some explanation of both positive and negative impacts of this/these movements on gender empowerment and there should be some attempt at an evaluation of the "to what extent" part of the statement.

Marks should be allocated according to the markbands.

7. Discuss the extent to which **two or more named** countries or regions have met their Millennium Development Goals (MDGs). **[15]**

Responses should show a clear understanding of what the MDGs set out to achieve.

All goals need not be covered in the response. Strong responses are likely to identify that some countries/regions have been more successful than others in meeting their targets. For example, answers may focus on populations in Southeast Asia and South Asia where considerable progress has been made compared with Sub-Saharan Africa where many nations are behind on some targets.

Alternatively answers may focus on the fact that poverty, hunger, education and reduced child mortality targets have been very successful but targets linked to gender empowerment are still far off-target in many places.

Stronger candidates may recognize that some of the MDG targets are different for different regions/countries and that they are tied to percentages; thus, it has been easier for some countries to meet their targets than others and therefore, even when targets are met, large numbers of people may still be experiencing a low quality of life.

At band D, responses are likely to describe some of the MDGs with limited reference to actual progress within a country or region.

At band E, responses are likely to have generally accurate knowledge of MDGs and make some reference to progress in two or more countries/regions, possibly with some simplistic evaluation.

At band F, a range of MDG targets will be discussed, with accurate knowledge of the level (or lack) of progress being made in two or more countries/regions, leading to some conclusion/evaluation of the extent to which the goals have been met.

Marks should be allocated according to the markbands.