

Markscheme

May 2016

Geography

Higher level and standard level

Paper 1

11 pages

This markscheme is **confidential** and for the exclusive use of examiners in this examination session.

It is the property of the International Baccalaureate and must **not** be reproduced or distributed to any other person without the authorization of the IB Assessment Centre.

Core theme – patterns and change

Section A

1. Populations in transition

- (a) Outline what total fertility rate measures. [2]

The only acceptable response is:

The average number of children **[1]** a woman has during her child-bearing years/in her lifetime **[1]**.

- (b) Describe the trends shown on the graph. [4]

Award [1] for stating that all areas experience a decline in fertility rate.

Award a further [1] each for any two valid and distinct statements, with quantification necessary for the final [1].

Possibilities could include:

- Africa, Asia and Latin America have had the largest decline, example of quantification a drop of between 2 and 3.2 children on average
- North America, Europe and Oceania have had the smallest decline
- regions that had an already small total fertility rate have experienced the smallest decline / or vice versa
- two regions have declined below replacement level fertility.

- (c) Suggest **two** reasons for the change to the total fertility rate in Asia. [2+2]

This region has experienced the largest drop in total fertility rate from 5.4 to 2.2: a drop of 3.2.

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

For example: Improved health care means infant mortality rates/child mortality rates have fallen in these regions **[1]** therefore fewer replacement children needed **[1]**.

Other possibilities could include:

- anti-natal policies within the region
- increases in the standard of living
- urbanization – city dwellers tend to choose smaller family size
- women entering the workplace
- increased access to family planning
- later marriages
- education of women.

- (d) Explain the difference between a population projection and population momentum. [2]

Population projection is an estimate/prediction of a **future** population **[1]**.

Population momentum refers to population growth/decline which continues despite fertility rates falling/increasing **[1]**.

2. Disparities in wealth and development

- (a) Identify the **two** goals towards which India had made more progress than South Asia in 2012. [2]

Goal 8/partnership [1] and Goal 6/diseases [1]

- (b) Suggest **two** reasons why some countries, such as India, still have high rates of child mortality. [2+2]

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

For reasons to be acceptable they have to be valid reasons in explaining high mortality for children under 5 years of age.

For example: Poor access to safe drinking water/sanitation [1] leads to many children in some regions dying from preventable diseases such as diarrhea [1].

Possibilities could include:

- limited access to health services
- malnourishment
- bias towards male babies – high infanticide rates
- poverty, large percentage still impoverished
- caste system (eg India)
- major conflicts
- maternal health
- outbreaks of deadly diseases
- high incidence of child labour.

- (c) Explain **one** strength and **two** weaknesses of the Human Development Index as a way of measuring global disparities. [2+2+2]

Award [1+1] for a valid strength, provided that it is developed by means of explanation and/or detail.

For example: It is a composite/combined/multiple (accept alternative wording) index [1]; this gives a broader picture of a country's level of development than a single indicator [1].

Other possibilities could include:

- allows for temporal comparison as has been around for a long time.

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

For example: It is an average [1] and does not reflect disparities within a country [1].

Other possibilities could include:

- data may be unreliable
- the components have changed over time
- some essential components are missing, for example gender/human rights/happiness/environment (*two missing components may be used and can be credited if they are used to demonstrate two different weaknesses*).

3. Patterns in environmental quality and sustainability

- (a) Describe the distribution of areas of very high soil degradation.

[3]

Award [1] for a geographical overview, eg there are small areas in almost every continent.

Award [1] each for two further valid points.

Possibilities include:

- the largest single area is in China/Southeast Asia
- another large area exists in Southern Africa/Madagascar
- Sub-Saharan Africa and Asia have largest areas of very severe soil degradation
- there is high soil degradation in the Middle East
- limited areas in Central and South America
- there is no area of very high soil degradation in Australia/New Zealand
- most areas of high soil degradation are in low income regions.

Responses that just list areas should be awarded a maximum of [1].

- (b) Suggest **two** reasons why areas of high soil degradation occur in Europe and/or North America.

[2+2]

Award [1] for each distinct reason and a further [1] for development/exemplification.

For example: Commercial monoculture [1] may deplete the soil of certain vital minerals making it more vulnerable to erosion [1].

Other causes may include:

- overuse (possibly historical) of land/overgrazing
- climate change may be causing an increase in aridity/desertification
- rising sea levels/over-irrigation could be increasing salinization
- industrial uses including large-scale open-cast mining in which native vegetation is removed
- removal of wind barriers of vegetation to create large fields where wind erosion is likely to be increased
- Impacts of past and/or present acid rain
- urban construction.

- (c) Explain **two** ways, **other than** food production, in which soil provides valuable environmental benefits for people.

[2+2]

In each case, award [1] for identifying a valid way, and [1] for offering some expansion, detail or exemplification.

For example: Soil can be used for production of biofuel crops [1]. The use of biofuel reduces dependence on fossil fuels [1].

Other possibilities include:

- soil as a store for carbon, there degradation releases vast amounts of carbon into the atmosphere
- soil supports vegetation (eg rainforest), a needed carbon store to reduce the enhanced greenhouse effect carbon
- soil regulates water resources through reduced flooding, improving quality
- soil as a basis for biodiversity – species preservation.

4. Patterns in resource consumption

- (a) State the year in which total oil stocks were at their peak. [1]

1998

- (b) Referring to the graph, describe the trend in total oil stocks since the year 2000. [3]

Generally upwards [1] though with numerous peaks and troughs [1], with [1] for some attempt at quantification of the overall trend or of the fluctuation from the y axis.

- (c) Suggest **three** reasons why total oil stocks may change from one year to the next. [2+2+2]

Oil stocks (barrels of oil that have already been extracted and stored for future use) change due to changes in production and/or changes in demand/usage. Either approach, or both, is acceptable.

In each case, award [1] for a valid reason, and [1] for offering some expansion, detail or exemplification that is related to changing stocks (not reserves).

Possibilities include:

- geopolitical reasons eg Saudi Arabia over-extraction to flood the market and lower the price
- economic recession or boom could affect consumption of oil stocks
- stocks could increase due to new oil fields coming into production / decrease due to decline of existing fields
- increased demand because of extreme weather conditions (exceptionally cold or exceptionally hot year)
- economic growth in major economies leading to increase in demand
- substitution of oil by renewable resources
- stockpiling in case of conflict.

Section B

| | AO1 | AO2 | AO3 | AO4 | Paper 1 Section B |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| Level descriptor | Knowledge/ understanding | Application/ analysis | Synthesis/ evaluation | Skills | 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. “Trade is always more effective than aid in reducing global disparities.” Referring to examples, discuss this statement.

[15]

It would be expected that responses show an understanding of both “trade” and “aid”. The focus should be on how effective they are as tools to help reduce disparities between countries and regions. The focus of the essay should be assessing which is/has been more effective in this role and why, with the use of examples. Candidates can agree or disagree with the statement but need to be able to support their position. It is also possible that responses may agree that both are equally effective, or may argue that both are equally ineffective. “Disparities” is also open to interpretation as the question does not specify economic disparities and so responses may argue that human rights or gender issues are or are not effectively addressed by either aid or trade. There are varied ways of tackling this question and each needs to be marked on its merit.

Responses may develop aspects of trade such as: tariffs, subsidies, dumping, foreign direct investment, export-driven growth of the “Asian Tigers”. Responses may argue that trade is mainly seen as a method of breaching the economic development gap. The focus over the last decades has been neo-liberalism with the belief that as trade increases and GNI increases for low-income countries the “trickle down” effect will eventually help increase the standards of living. Responses may cite the Asian Tigers and more recently China as examples of success. Alternatively responses may argue that trade has failed to successfully lift many nations out of poverty and that the main benefactors have been Western nations with protectionist policies and subsidized production.

Responses may look at different types of aid (food, emergency, financial, bilateral, multi-lateral) and address aspects such as: dependency, corruption, debt, conditionality such as with structural adjustment schemes, bilateral aid agreements, the MDGs, emergency aid, micro credit schemes, NGOs, FBOs, charities. If looking at economic disparities responses may argue that since the post-Second World War Marshall Plan aid has been ineffective. Many OECD countries do not give 0.7 % of their GDP and the conditionalities attached to loans from the IMF and WB have done more harm than good to many low-income economies. When looking at other social or health disparities responses may argue that aid has been more effective. For example Ethiopia met its MDG target on reducing child mortality two years ahead of 2015.

Responses should make use of examples but responses that focus on describing trade and aid and not focusing on their effectiveness as a tool to reduce disparities will be self-limiting.

For band D expect some understanding of how trade and aid can help/not help reduce disparities. This need not be balanced.

For band E expect some understanding of how trade and aid can help/not help reduce disparities with reference to their effectiveness using examples. This need not be balanced.

For band F expect some understanding of how trade and aid can help/not help reduce disparities with reference to their effectiveness using examples. This need not be balanced. There should be some attempt at an evaluation of the statement.

Marks should be allocated according to the markbands.

6. “Forced international migrations bring more positive than negative impacts to recipient countries”. Referring to examples, discuss this statement.

[15]

Credit should not be given for material relating to internal migrations, countries of origin, or for material relating to voluntary migrations. However, in some cases, the distinction between voluntary and forced may be somewhat blurred, so credit should be given if the candidate offers some justification for treating a particular example as a case of forced, rather than voluntary, migration.

In general, it is likely that the negative impacts of forced migration on recipient countries are likely to outweigh any positive impacts. This is really determined by the circumstances of the host nation itself and the number of forced migrants that are moving. For example, most Syrian refugees are in Lebanon, a country that is already struggling with many other issues.

Possible positive impacts include:

- increase in size of workforce
- introduction of new skills, including language skills
- an influx of migrants may help to create a more culturally-diverse community or country.
- moral obligation – improves international opinion of the country eg Germany, Canada
- migrants can help reurbanize/repopulate areas of decline, especially in countries experiencing ageing population or population decline
- new potential market – boosts economy.

On the other hand, possible negative impacts include:

- increased pressures on supplies of food, water, and shelter
- the need to incorporate incomers into the existing workforce; may require retraining programs
- care systems designed to help the very young and the elderly may be overburdened
- rise of right-wing xenophobic movements/political parties
- increased congestion and pressures on infrastructure
- introduction of diseases
- environmental impacts such as deforestation (eg refugees needing wood for fuel and shelter), overgrazing (cattle, sheep and goats brought by the refugees)
- deterioration in water quality if no proper sanitation system is available.

The discussion of positive and negative impacts need not be in equal depth for the award of full marks.

Responses that only describe either positive or negative impacts (ie not both) should not be credited beyond band C.

At band D, responses are likely to describe a range of both positive and negative impacts, with most of the discussion relating to recipient countries.

At band E, responses are likely to be more focused and include a good range of valid positive and negative impacts. In addition, they are likely to either offer appropriate examples of forced migration, with some supporting detail, or provide some discussion of the concept of forced migration, possibly considering its associated “grey areas”.

At band F, responses are likely to do both.

7. “Ensuring adequate water supplies is a greater environmental challenge for the world than adapting to climate change.” Referring to examples, discuss this statement. [15]

Coping with climate change may involve both taking measures to limit climate change as well as adopting strategies or policies designed to limit, adapt to, or ameliorate its impacts. These impacts affect almost all human activities from energy generation and usage to agriculture, industry, population migration, and the locations of settlement and transportation routes.

Climate change also directly affects future water supplies, but other reasons, such as over-abstraction of groundwater, and pollution of streams and groundwater, are also responsible for making the provision of adequate water a serious challenge for the future.

The phrase “adequate water supplies” can be seen as including both quantity and quality of water. The discussion could therefore extend to the concepts of water scarcity (physical and economic) and the factors affecting access to safe drinking water. Discussions of water supplies that focus unduly on the human/political dimensions of water provision are likely to be self-limiting since they are likely to stray away from the term “environmental challenge”.

Responses may also choose to focus more closely on the phrase “most significant environmental impact” and introduce some discussion of the significance of environmental challenges other than climate change and water supply, such as deforestation, soil degradation, desertification and environmental restoration. This is also an acceptable approach.

Discussion of non-environmental challenges (eg population growth) should not be credited except in cases where the response provides some justification suggesting how or why the challenge can be considered to relate to the environment.

At band D, responses are likely to describe a number of points about climate change and water supplies.

It is not necessary for the discussion of climate change and water supplies to be of equal depth for the award of full marks.

At band E, responses are likely to provide sufficient supporting details during the discussion to arrive at an evidence-based conclusion and to recognize either that some aspects of water provision are a subset of climate change or that we also face other significant environmental challenges besides water and climate change.

At band F, responses are likely to provide sufficient supporting details during the discussion to arrive at an evidence-based conclusion while recognizing, and attempting to analyse, the connections between water provision and climate change.