Diploma Programme
Programme du diplôme
Programa del Diploma

Markscheme

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Geography

Higher level and standard level

Paper 1

International Baccalaureate
Baccalauréat International
Bachillerato Internacional

Core Theme – patterns and change

Section A

1. **Populations in transition**

    (a)   State what the child mortality rate measures.   **[2]**

          The number of children who die before the age of 5 **[1]** per 1000 live births **[1]**.

    (b)   Describe the trend in child mortality shown on the graph for Europe and Central Asia.   **[2]**

          Award [1] for any of the following.

          •   slight change from 1990 to 1996 – remains around 50 **[1]**
          •   declines more rapidly after 1996 **[1]**
          •   decreases over time **[1]**.
          Must have some quantification (other than a date) for the award of full marks.

    (c)   Suggest **two** reasons for the trend in child mortality since 1990 in Sub-Saharan Africa.   **[2+2]**

          (The trend is one of rapid decline from above 175 to about 100.)

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

          For example: Increased urbanization **[1]** increases access to healthcare for children **[1]**.

          Other possibilities include:
          •   MDGs and/or aid
          •   vaccination programmes *eg* UNICEF/WHO
          •   improved water and sanitation
          •   debt relief allowing more money to be targeted on healthcare and education.

    (d)   Suggest **two** positive socio-economic impacts of an ageing population.   **[2+2]**

          Award [1] for each valid impact (both can be social or economic), and [1] for development and/or exemplification.

          For example: A large grey economy **[1]** creating new jobs and markets **[1]**.

          Other possibilities (these may be explicit or implied benefits) include:
          •   increase in leisure activities geared towards the elderly
          •   government can shift spending from sectors such as schooling
          •   potential childcare by grandparents
          •   growth of retirement homes industry
          •   very experienced work force
          •   lower crime rates.

2.   Disparities in wealth and development

(a)   Describe the pattern of poverty shown on the map.   **[3]**

*Award [1] each for any 3 valid and distinct descriptions. **Only award full marks
if at least one of the statements makes correct use of data from the map.***

Possibilities include:
• Multidimensional Poverty Index (MPI) increases as one moves north
• MPI seems to increase with distance from the coast
• MPI is lowest along the coast
• southern extension of worst poverty in the east
• MPI is lineated east to west
• Finger of low poverty around Abuja
• MPI seems to increase with distance from major cities
• Kano is an anomaly as it is an urban area surrounded by high MPI.

(b)   Suggest **two** reasons why differences in poverty occur within countries.   **[2+2]**

*Award [1] for any valid suggested reason and [1] for further development/exemplification that
clearly links it to poverty within countries.*

For example: Resource-rich areas may have less poverty **[1]** because there are
opportunities to work and raise incomes **[1]**.

Possibilities include:
• environmental reasons
• rural/urban divide
• government policies
• ethnicity
• major economic activities
• historical legacy
• corruption
• infrastructure
• access to education.

(c)   Explain **two** positive outcomes of a strategy designed to reduce economic disparities
        within **one named** country.   **[2+2]**

*Award [1] for one valid and located strategy, [1+1] for 2 valid positive outcomes
of **this** strategy and [1] for further development/explanation of one of the
outcomes in terms of how it reduces disparities.*

Possible strategies could include: infrastructure projects; economic zoning; any
form of targeted empowerment; development of new growth points; debt relief;
increased investment; tax incentives.

For example:
In the 1980s in Nigeria a new capital city was created – Abuja *[1]*. This
stimulated economic activity *[1]* which increased employment opportunities *[1]*
and increased regional wealth away from the coast/Lagos *[1]*.

For example:
Azad is a non-governmental organization (NGO) in India that aims to help women
find employment as drivers *[1]*; this empowers women *[1]* thus increasing their
social status *[1]* and reduces unemployment of women *[1]*.

3.   Patterns in environmental quality and sustainability

(a)   Describe what is meant by the term "environmental sustainability".   **[2]**

Environmental sustainability means **development or utilizing resources** in such
a way as **to meet the <u>needs of the present</u> [1] without compromising the
ability of future generations** to meet their own needs **[1]**.

(b)   State the aspect of environmental sustainability that should replace "A" on the graph.   **[1]**

water / water use / water pollution **[1]**.

(c)   Describe the progress made by this corporation since 2010 towards meeting its 2020
targets for environmental sustainability.   **[4]**

- identifies that three targets are have already been met – GHG emissions; particulates;
  toxic air emissions **[1]**
- target A is on track to being met **[1]**
- two targets show no progress at all – reduced energy consumption and reduced landfill
  waste **[1]**
- use of the data to support statements **[1]**.

(d)   Suggest **two** environmental disadvantages of sending waste to landfill.   **[2+2]**

*Award [1] for each environmental disadvantage that is suggested, and [1] for
further development/exemplification.*

For example: Waste can emit GHGs that contribute to global warming **[1]**, for
instance methane from rotting organic waste **[1]**.

Possible disadvantages include:
- need for land/space
- soil degradation (leaching)
- groundwater contamination and so drinking water scarcity
- harm to local ecosystems/biodiversity
- attracts vermin
- unpleasant smells
- environmental costs of transporting waste
- burning of waste in landfills.

4. **Patterns in resource consumption**

(a) Referring to the graph, describe the trend in global biomass extraction between 1980 and 2010. **[3]**

Rises initially (1980–1995) from 12 to 16 **[1]** but then plateaus (1995–2010) at 16 **[1]** use of data **[1]**.

(b) Suggest **two** reasons why the total resource consumption per person decreased between 1980 and 1995, even though global resource extraction was increasing. **[2+2]**

Possible reasons include: the implementation of sustainable policies; economic downturn in resource-consuming countries; changing lifestyles reducing consumption; long-term resource storage.

For each suggestion, award [1] for identifying a valid reason, and [1] for linking it clearly to a fall in total resource consumption per person even though global extraction is still increasing.

For example: An economic downturn could result in less consumption **[1]** even though companies are still extracting more resources **[1]**.

For example: A large rise in population *[1]* occurring without with a similar rise in resource extraction *[1]* so per capita usage falls.

(c) Suggest **two** disadvantages of recycling materials as a strategy to reduce resource consumption. **[2+2]**

Award [1] for identifying a valid disadvantage, and [1] for further development/ exemplification.

Examples:
- Recycling can be expensive **[1]**; some nations/cities may not be able to afford the technology **[1]**
- Recycling involves transporting waste to processing centres **[1]**; transport and processing requires expenditure of energy such as fossil fuels, which leads to more emissions **[1]**.

Other possibilities include:
- durability of recycled products
- hygiene in recycling sites
- gives a false sense of security – consumption levels remain high.

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 studies	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 in detail	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. "The fact that the world's population is now growing less rapidly means that there will be less pressure on the environment." Discuss this statement. **[15]**

Many responses are likely to agree with this statement saying that indeed slower growth in the world's population will lead to less pressure on resources. They may give examples as to how and why the global natural increase rate has fallen in recent decades. They may identify certain environmental benefits that could result from this, such as less demand on resources and less environmental pressure, with some stated examples. However, to reach the higher markbands there should be an acknowledgement that the statement is over-simplistic as population growth as a rate is a percentage of an increasingly large number of people, so although the rate may be falling, the actual increased numbers of people on our planet every year are still very high.

More significantly, most environmental issues are a consequence of increased standards of living and not of population growth. If one compares the ecological footprint of individuals in different nations it is often very low in the most populous nations, as it is linked more to one's level of consumption. Also, many previously less developed nations are developing and industrializing at an enormous rate, which is accompanied by increased use of fossil fuels and demands on other resources such as water, soil and forest products, all with associated environmental impacts. This said, development often correlates with increased rates of urbanization and reduced fertility; natural increase rates decline but the associated impact on the environment does not.

Answers that are simplistic and/or generalized with few or no relevant facts and figures are unlikely to progress beyond band C.

At band D, expect a balanced view supported by evidence linking demography and development with environmental degradation.

At band E, expect either a detailed explanation of how demography and development link to environmental degradation or discussion of a possible counter-view that pressure on the environment will continue or even increase due to changes in consumption.

At band F, expect both and an overall assessment of the statement.

Marks should be allocated according to the markbands.

6. Examine the geopolitical and environmental impacts of the production and/or consumption of fossil fuels such as oil.   **[15]**

Geopolitical impacts may include the importance of Russia, the Middle East and/or OPEC members, political and economic alliances and energy-related trade agreements, wars over energy reserves, and policies to develop alternative energy resources.

Environmental impacts may include oil spills, air pollution, increased carbon emissions, water pollution, and may make it impossible to achieve environmental sustainability.

Credit should not be given for other impacts (social, demographic, economic) except where the response justifies why the impact can be considered to be either geopolitical or environmental.

Responses that consider only oil (and no other fossil fuels) may be awarded full marks.

Responses discussing both production and consumption need not consider both aspects in equal depth for the award of full marks.

At band D, expect responses to describe a range of both geopolitical and environmental impacts.

At band E, expect responses either to explain a wide range of positive and negative impacts, or to examine the variations in impacts on space/time.

At band F, expect both.

Marks should be allocated according to the markbands.

7. Examine the relationship between environmental change and human migrations.   **[15]**

Environmental changes (may be either positive or negative) include changes related to:
- soil quality
- water quality and availability
- biodiversity
- climate
- hazard events.

Population migrations include:
- forced/voluntary migrations
- rural–urban migration / international migration
- places of origin and places of destination.

Environmental changes (and their impacts) may lead to population migrations, *eg* soil degradation leading to out-migration.

Population migrations may lead to environmental changes, *eg* habitat destruction in and around refugee camps.

Answers that do not address environmental change at all and instead write about political, social and economic causes and consequences of migration should to be limited to band C and below.

At band D expect descriptions of environmental change and population migration, with few links.

At band E expect either a more detailed explanation of environmental changes and population migrations (with one-directional connections), or may examine how many connections are two-way or complex.

At band F expect both.

Marks should be allocated according to the markbands.