



MARKSCHEME

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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 the pattern of internal migration shown on the map. [3 marks]**

Any of the following statements for [1 mark] each:

- the majority of migrants move to South/South-East
- little/limited movement to West
- majority of movement is to the coast
- movement is from provinces with low HDI to high HDI.

One of the statements must refer to data values in the key for [1 mark].

Credit other valid descriptions that refer **only** to information found on the map (*i.e.* “rural to urban” is not valid).

- (b) Briefly explain three positive socio-economic impacts that this migration could have for the provinces of destination. [2+2+2 marks]**

Impacts must be of a socio-economic nature and **must** be framed as positive.

- Increased labour force – surplus of cheap labour for industry
- Increased consumer market – stimulates economy of area
- More investment by government – improved infrastructure and services
- Arrival of “others” – stimulates rich cultural diversity
- Female migrants – increased incidence of marriage (Chinese context)

Award [1 mark] for each stated impact and [1 mark] for explanation.

- (c) Explain why an imbalance in the birth ratio exists in some societies. [4 marks]**

Answers should show an understanding of birth ratio – stated or implied [1 mark] and then identify a relevant example of where the birth ratio is unbalanced for example, China, Taiwan, India, South Korea [1 mark].

The following [1+1 marks] is for any **two** valid explanations:

- sex-selective abortions can result in a much more extreme birth ratio
- ultrasound technology has made sex selection possible
- boys favoured to carry on the family name, avoid paying a dowry *etc.*
- unreported births / female infanticide could skew official data.

2. Disparities in wealth and development

(a) (i) State which region has met its target. [1 mark]

East Asia and Pacific.

(ii) Identify the year when this region first met its target. [1 mark]

Accept any year in the range 1998–2000.

(b) Suggest *two* reasons why some regions may not meet their 2015 target. [2+2 marks]

- Population growth outstripping resources/progress
- Corruption / misappropriation of taxes/loans
- Global recession may mean less aid/funds available in some regions
- External debt, diverts money which could be used for development
- War/conflict (internal/civil or external) can reverse progress made
- Natural disasters for example, earthquake in Haiti.

There are other possibilities. Do not credit gross generalizations such as people being uneducated. Reference would need to be made to lack of formal educational opportunities and how this impacts upon targets.

Two distinct reasons **that are linked to the target of reducing the number living on less than a dollar a day** need to be stated and developed.

(c) Explain how increased trade and market access can sometimes help reduce disparities between countries. [5 marks]

Responses should demonstrate knowledge and understanding of what increased trade and market access means for **[1 mark]**. Possible explanations could focus on removal of tariff barriers, free ports, fair trade, reduced protectionism and/or trading blocs **[1 mark]**.

The rest of the response should look at how this increased access helps to reduce disparities **[3 marks]**.

Award **[1 mark]** for each basic explanation, with additional marks for extension and exemplification.

For example: China joining the WTO and opening up its economy has allowed it to become “the workshop of the world” and increase its prosperity.

Candidates may note the “sometimes” and should be credited for explanations that show how increased trade and market access can increase disparities.

3. Patterns in environmental quality and sustainability

- (a) Identify the *two* most cost-effective options shown on the graph. [2 marks]**

Award [1 mark] for stratospheric sunshade and [1 mark] for afforestation.

- (b) Explain how deforestation may contribute to global warming. [3 marks]**

Deforestation – burning of forests releasing CO₂ / removes a valuable carbon sink [1 mark]

Increases CO₂ in the atmosphere [1 mark]

CO₂ is a greenhouse gas linked to global warming, through its role in helping raise the quantity of heat energy retained by the atmosphere [1 mark].

Credit should be given in a similar fashion to answers that refer to deforestation resulting in changed albedo.

The answer needs to focus on the loss of the trees – not on what replaces the trees for example, cattle ranching and methane.

- (c) Explain *two* possible environmental consequences of global climate change. [3+3 marks]**

The consequences may be at any scale and there are many possible answers.

Possible consequences include:

- rising sea levels [1 mark] due to thermal expansion [1 mark] floods lowlands [1 mark]
- melting ice / Earth's albedo reduced/increased intake of solar radiation / warms climate further
- increased temperature of oceans / greater incidence of tropical storms / devastation caused by hurricane Sandy in Haiti, Cuba
- melting ice releasing freshwater into N Atlantic / shuts down ocean / may lead to falling temperatures in Europe.

Other possibilities: extinctions, moving biomes, bleaching of coral reefs, desertification, etc.

In each case, award [1 mark] for identifying a valid consequence with a further [2 marks] for two distinct points in the explanation, one of which could be exemplification.

4. Patterns in resource consumption

- (a) Define *ecological footprint*.** **[2 marks]**

An ecological footprint is the theoretical measurement of the amount of land and water a population requires to produce the resources it consumes **[1 mark]** and to absorb its waste under prevailing technology **[1 mark]**.

- (b) Describe how the pattern of ecological footprints shown by the graph reflects economic development.** **[2 marks]**

The relationship is that countries with higher economic development have larger footprints **[1 mark]**. Award a further **[1 mark]** for quantification.

- (c) (i) Outline a strategy at a local or national scale which is designed to reduce the consumption of *one* named resource.** **[2 marks]**

The strategy may involve resource substitution, conservation, recycling or waste reduction. Award **[1 mark]** for a valid, located strategy. Award a further **[1 mark]** for explaining how this reduces consumption. If no resource is named, no credit can be given.

- (ii) Explain *two* reasons why the strategy described in (c)(i) *either* has or has not been a success.** **[2+2 marks]**

There are many possible reasons. Award **[1 mark]** for identifying each valid reason, with a further **[1 mark]** for explanation. Award a maximum of **[2 marks]** in the event that the strategy is not clearly linked to the response given in (c)(i).

SECTION B

5. **“Environmental sustainability will never be achieved without population control.” Discuss this statement.**

[15 marks]

There are many possible approaches to this question.

“Environmental sustainability” is treating the environment in such a way that it meets the needs of the present generation without limiting the ability of future generations to meet their own needs. It includes not only a concern for resource use (for example, preferring renewable resources to non-renewable resources) but also a determination to avoid contamination (soil, water, air) and to prevent adverse human-induced impacts on the environment.

Population control is not limited to policies designed to limit birth rates, but may also be interpreted to include policies of migration, and even policies designed to influence where people are permitted to live (zoning, national parks) and, increasingly, how they live / how much they consume.

In general, the successful implementation of population control is likely to reduce demand for resources, and decrease the likelihood of adverse human-induced environmental impacts. Successful population control is therefore normally associated with an improvement in the degree of sustainability.

However, population control alone is insufficient to ensure environmental sustainability, so a number of other factors such as political will, society’s sense of its relationship with the natural environment, public awareness, and desire to see progress only in terms of economic growth, will also be important. Equally, continued population growth may not be an obstacle to long-term sustainability if new technologies are developed and recycling, substitution, and conservation are embraced.

Stronger responses are likely to consider more than one scale (local, national, regional, global), but this is not a requirement for full marks. It is possible to gain full marks if the response focuses on only one or two points, such as over-consumption in some societies, so long as it is done in a well-argued and well-supported way.

Answers that do not show an understanding of environmental sustainability should not move beyond band D.

Responses based on appropriate, well-supported ideas and examples, and which arrive at some conclusion about the statement are likely to be credited at bands E/F.

Marks should be allocated according to the markbands.

6. Examine the changing importance of energy sources other than oil.

[15 marks]

Answers should focus on the changing importance (production/consumption) of other major energy sources. Responses could look at other non-renewable fossil fuels such as coal and natural gas and renewable energy sources such as solar, wind, bio-fuel, geothermal, tidal, hydroelectric power and of course nuclear power – although it is not essential to cover all.

Answers should recognize that the global demand for energy is increasing as populations grow and countries develop economically. Most, if not all, of the energy sources above are becoming increasingly important in terms of production and consumption. Some quantitative or qualitative detail would be expected in terms of explaining and comparing the changed importance.

Stronger responses may consider at least one fossil fuel, renewables and nuclear energy. Answers may also refer to any scale (local, national, regional, global), but this is not a requirement for the award of full marks. A discussion of national energy sources might link with the concept of energy security – this approach should be highly credited if done well.

Answers that do not describe a range of energy sources and do not examine their changing importance should not progress beyond band D.

Responses based on appropriate, well-supported ideas and examples and which arrive at some conclusion about the changing importance of these sources of energy are likely to be credited at bands E/F.

Marks should be allocated according to the markbands.

7. **“Development does not always reduce social and economic disparities.”
Discuss this statement, referring to examples.**

[15 marks]

A variety of responses would be acceptable. A candidate could agree with the statement using examples. A candidate could disagree with the statement using appropriate examples. The best responses will use examples that do both.

It is likely that development is explained and candidates may explore social development as well as economic development and the importance of education, *etc.* for reducing economic (income/GDP/PPP/labour) disparities over time. Other themes that may be explored could include formal/informal labour markets, migration, patterns of land ownership/tenure.

Some answers will focus on the persistence of inequality in developed and emerging economies (for example, USA, India) and may use a range of evidence to support this. Others may take a temporal approach, looking at how development has at first increased economic disparities but which have subsequently lessened. A core-periphery analysis using spread/trickle-down ideas would be another valid approach.

Approaches that do not involve a discussion of the statement but rather describe methods of reducing disparities should not progress beyond band D.

Responses based on appropriate, well-supported examples, which formulate an opinion towards the statement are likely to be credited at bands E/F.

Marks should be allocated according to the markbands.
