



Mark scheme: Paper One - The Core

1 Population in transition

- a** Referring to the graph, describe the relationship between GDP per capita and the Gender Gap Index. [2 marks]

There is a positive relationship between GDP and the Gender Gap Index [1]. Provide further detail such as country names /values/ elaboration for [1].

- b** Briefly explain the relationships shown on this graph [4 marks]

Increasing affluence is linked to increasing equality and the rising status of women. India / Bangladesh and the USA are extremes [2]. Gender equality suggests that a country has sufficient funds to educate females [1], allowing them to enter the workforce and encouraging greater national productivity [1] or AOVp.

- c** Explain why and how a national government might adopt a pro-natalist population policy. [5 marks]

[1] for an accurate definition of a pro-natalist policy (one that favours a high birth rate).

Why – an unproductive ageing population, [1] national pride / cultural tradition [1].

How – financial incentives, [1] such as maternity benefit, subsidised nurseries [1].

[5] where both “why” and “how” are addressed and exemplified.

2 Disparities in wealth and development.

- a** Identify two countries shown on the map where access to improved sanitation will show the greatest rate of change between 2006 and 2015. [2 marks]

Any two countries in the category of >2 million people per year are acceptable.

- b** Briefly explain the pattern shown on this map. [4 marks]

The best improvement is in LEDCs [1], especially in rapidly advancing economies such as Brazil, China and India [1]. Further elaboration on the overall pattern or detail within it [2].

Improvements in east Africa are indicative of a low rate in 2006. Absolute rather than % rates of improvement are influenced by the size of a country's population leading to difficulties in making international comparisons. Insufficient or unavailable data is another limitation.

- c** Explain three difficulties in achieving one of the Millennium Development Goals. [6 marks]

End poverty and hunger
Universal education

Gender equality
 Child health
 Maternal health
 Combat AIDS / HIV
 Environmental sustainability
 Global partnership

The MDG chosen should be clearly defined and the target stated. There are difficulties common to all these MDGs and poverty is a universal obstacle to progress. Give [2] to a brief explanation of each difficulty.

3 Patterns of environmental quality and sustainability

a Define biodiversity [2 marks]

Biodiversity involves plants, animals and microorganisms. It refers to species diversity, genetic diversity and the interdependence of species within the ecosystem. Accept two valid points.

b Referring to the photo, explain two physical effects of tropical rainforest clearance [4 marks]

Soil exposure, loss of moisture, reduced CO₂ absorption and O₂ emission, loss of habitats.

Give [2] for each explanation. There should be reference to the photo for a maximum [4].

c Suggest one social and one economic reason for conserving tropical rainforest. [4 marks]

Social – the preservation of indigenous forest inhabitants.

Economic – conservation of gene pools for economic use as food and medication and sustained yield of forest commodities such as timber, rubber and fruit.

4 Patterns of resource consumption

a Define the term renewable resource. [2 marks]

A resource is a natural material that is of use to humans [1]. Renewable resources range from perpetual (solar energy) to critical and easily degraded (soil) OAVP[1].

b Suggest two advantages of nuclear power as an energy source. [4 marks]

Relatively low cost of electricity, no greenhouse gases or acidifying emissions or dust. It can generate large quantities of electric power and the raw material is plentiful. [2] for each reason.

c Explain how recycling is an example of sustainable resource management [6 marks]

Recycling prevents over-consumption of raw materials and energy in secondary processing. In this way both energy and raw materials are conserved and waste and pollution are minimised. [2] for each developed point which links recycling to sustainability.

Section B**[Total 45 marks]****5 Increasing food production inevitably leads to environmental degradation. [15 marks]**

The pessimistic view will state the environmentally damaging aspects of industrial agriculture. These are:

- Large energy subsidies such as artificial fertilisers and pesticides leading to eutrophication and bioaccumulation.
- Genetic modification of plants and animals
- Selective breeding, growth promoting hormones, anti-biotic resistance
- Field enlargement, ditch and hedgerow removal leading to loss of species and soil erosion.
- Loss of biodiversity, shortening of food chains to achieve maximum yield.

Answers should address the issue of inevitability. There are alternative approaches which adopt traditional farming techniques involved in the recycling of organic matter and conserving soil moisture and structure.

6 Examine the benefits of international migration. [15 marks]

Source – relief of unemployment, receipt of remittances.

Destination – new skills, increased fertility, taxes to support old dependants.

Migrant – employment, new skills, better living conditions and job prospects.

The best answers will consider benefits to source and destination, but not necessarily the migrant. Examples are important.

7 Shortage of freshwater is far more likely to generate international conflict than oil in the future. Discuss this view. [15 marks]

Agreement – Growing population and increasing affluence on all scales will inevitably lead to increasing demand for water. In addition, drought resulting from climate change will intensify the problems of shortage and competition for water. Water demand is likely to increase through improved provision of basic sanitation at one end of the development spectrum, and swimming pools and golf courses at the other end. Demands from all economic sectors especially agriculture will increase. Conflict is most likely to occur where the water resources are in short supply and population and affluence are growing. The Middle East and the catchment of the river Nile have already demonstrated this.

Disagreement – answers may disagree with the title but must address both sides of the argument. Those failing to do so will not be credited above band D.