Model answers to Section 2 end-of-chapter review questions

The review examination questions at the end of each chapter in *Geography for the IB Diploma: Patterns and Change* are based on the style of question found in Section A of Paper 1. Model answers to selected questions are given here.

The mark allocation for all the questions that follow, unless stated otherwise, is:

a 2 marks **b** 3 marks **c** 5 marks.

5 Measurements of regional and global disparities, page 91, question 1

a *Infant mortality rate* – the number of deaths of children under one year of age per 1000 live births.

b There is a significant negative correlation between the two variables, although it is far from perfect. The highest infant mortality rates are experienced by countries with the lowest electricity consumption per capita. Nigeria, Bangladesh and Pakistan are three named examples shown on Figure 12. These three countries experience infant mortality rates between 100 and 150 per 1000, which are extremely high in global terms. In contrast, the two named countries on the graph with high energy consumption per capita and relatively low infant mortality are Japan and the USA. However, there is considerable spread from a perfect or 'straight-line' correlation, particularly with a number of countries with low electricity consumption per capita also having relatively low infant mortality rates.

c A range of factors influence the infant mortality rate, which is regarded as one of the most sensitive indicators of socio-economic progress. Discussion should focus around some or all of the following factors:

- GNI per capita – wealthy countries have the greatest potential to achieve the lowest infant mortality rates.

- Access to health care – the efficiency and effectiveness of investment in health care and the prioritisation of infant health in particular.

- The health status of women of child-bearing age.

- Mother's and father's education – the level of female literacy is a particularly important factor. Developing countries with higher than expected levels of literacy have achieved very significant reductions in infant mortality.

- Fertility rates – infant mortality generally decreases with increase in birth interval.

- Female participation in the labour force – infant mortality is generally lower where female participation in the labour force is high.

Candidates who have researched this subject in detail could also refer to factors such as mother's age, birth order, preferential care and treatment of male offspring, mother's residence (e.g. rural and urban contrasts) and the incidence of breastfeeding. Able candidates may also make the point that problems of definition and measurement can hamper cross-national comparisons of health statistics.

6 Origin of disparities, page 105, question 1

a   *Gross Domestic Product (GDP)* – the total value of goods and services produced in a country in a year. This can be divided by the total population to find the GDP per capita.

b   In 1980 the Eastern and North-eastern regions recorded significantly greater shares of national GDP than population. This gave them much higher GDP per capita figures than the Central and Western regions which recorded considerably lower shares of national GDP compared with population.

Over the time period 1980–2005, the Eastern region's share of national GDP rose significantly to reach 55.6% in 2005. During this time the region's share of national population increased much more slowly to reach 35.8% in 2005. In contrast the share of national GDP of the other three regions all declined significantly. In the North-eastern region the fall was from 13.7% in 1980 to only 8.7% in 2005. In contrast, although these three regions all registered a fall in their share of the national population, this was of a much lower magnitude.

c   It is likely that discussion will concentrate on the following points:

- The Eastern region contains most of China's largest urban industrial areas and its main ports.

- This region has been the centre of China's industrial revolution and is the economic core of the country.

- By far the largest share of foreign direct investment has gone to the Eastern region.

- The North-eastern, Central and Western regions can be viewed as the economic periphery of China with much lower levels of economic growth than the Eastern region in the time period covered by the table.

- The rapid increase in employment opportunities in the Eastern region attracted large numbers of migrants from elsewhere in the country. This was the main reason for the increasing share of national population.

- In contrast, the other three regions saw their shares of the national population falling due to significant rates of out-migration to the Eastern region.

The very best candidates may make the point that rates of economic growth can change much more quickly than population, which goes a long way to explain the different rates of change (between GDP and population) shown in the table.

7 Disparities and change, page 121, question 1

a   For the period 1950–2001 the graph shows how average incomes in the South (the developing world) and its constituent parts (Latin America, Africa, Asia and China) varied in comparison with average income in the North (the developed world).

b   The average income gap between the North and the South widened gradually, with some variation, between 1950 and the late 1980s, followed by a slow narrowing of the gap to 2001. This trend masked much greater variations by geographical region within the South. The graph illustrates that the lowest average income gap is between the North and Latin America, but this gap widened during the time period under consideration. However, the average income gap between the North and Africa widened at a much greater rate, overtaking that of both Asia in general and China in particular.

   In contrast, the average income gap between the North and both Asia and China narrowed over the whole time period after an increase between 1960 and 1970. After 1970 the narrowing of the income gap was particularly significant for China.

c   Good answers will focus on the different levels of economic development in 1950 and how economic development changed in the world regions under consideration in the following decades. Discussion may begin with comment on the widening gap between North and South in spite of so much work by various international and national agencies to try to narrow the gap.

   Particular attention might be given to Africa, with the graph showing such a significant widening of the development gap. Issues that might be discussed include the impact of internal and international conflicts, the legacy of colonialism, environmental problems such as drought, primary product dependence, and poor governance.

   Candidates might also focus on the rapidly improving position of China in recent decades by explaining the industrialisation of China and its transformation from a relatively poor developing country to a newly industrialised nation. This contrasts with the relatively closed nature of the Chinese economy prior to the late 1970s. The improved position of Asia in general relates not just to high economic growth rates in China, but also in other newly industrialised countries such as South Korea, Malaysia and India. The best candidates might examine the reasons for Asia's 'success' in some detail, referring to elements such as low wage economies, rapidly improving levels of education, strong work ethic, appropriate government policies etc.

   Candidates with a good knowledge of Latin America may contrast the relative economic success of some countries such as Brazil and Mexico with the problems of weaker economies such as Bolivia.