

Model answers to Section 4 end-of-chapter review questions

The review examination questions at the end of each chapter in *Geography for the IB Diploma: Global Interactions* are based on the style of question found in Paper 3. Model answers to selected questions are given here.

Questions in Paper 3 are in two parts: part **a** carries 10 marks and part **b** carries 15 marks. The markbands for Paper 3 are found on pages 58 and 59 of the IB Geography Guide. For part **a** the level descriptors range from A (0 marks) to E (9–10 marks). For part **b** the level descriptors range from A (0 marks) to E (13–15 marks).

8 Degradation through raw material production, page 106, question 1

- a** Agro-industrialisation (or industrial agriculture) is the form of modern farming that refers to the industrialised production of crops and livestock.

Discussion of the reasons for the growth of this type of farming should focus on:

- the globalisation of agriculture
- the profit ambitions of large agribusiness companies – global food production has become increasingly dominated by large biotechnology companies, food brokers and huge industrial farms
- the drive for cheaper food production
- the development of vertical integration with increasing linkages between the different stages of food production
- people's expectations in terms of the variety and quality of food, which have never been higher
- the falling real cost of transport facilitating the movement of food products around the world.

Better candidates will supply a reasonable degree of exemplification.

- b** The example presented here is soybeans.

It would be useful to begin with a brief description of the growing market for soybeans. Soybeans are a major source of cattle feed and are also used for cooking oil and directly as human food (tofu, meat substitute, soy sauce). Global production rose from 17 million tonnes in 1950 to 250 million tonnes in 2009.

The main discussion points will focus on:

- There has been a very large increase in land area devoted to soybeans – reference should be made to the main producing areas.
- Soybeans have had a particularly serious environmental impact because agricultural scientists have not had the same success in increasing yields for soybeans as they have for grain crops. This means that more and more land has been required for soybean production to keep up with demand.
- There has been a resulting loss of biodiversity due to deforestation in areas such as the Amazon. The consequences of reduced biodiversity and increasing deforestation are serious.



- The conversion of pasture land to soybean production in areas such as the Pampas in Argentina has increased chemical input onto the land, with a significant impact on the ecosystem.

Other relevant points should be credited. Candidates may take a global approach or home-in on one country or region.

9 The effects of transnational manufacturing and services, page 119, question 2

- a** It would be useful to begin with a definition such as: ‘E-waste is waste material generated from using or discarding electronic devices such as computers, televisions and mobile phones.’

Most e-waste is produced by developed countries, but the amount produced by developing countries has increased rapidly in recent years. This has been particularly so in those countries that have developed into newly industrialised countries, such as China, India and Brazil. For such countries a higher level of development has resulted in:

- much higher commercial use of e-products as the number and range of industries/businesses expands
- rapidly increasing domestic use of e-products with rising average incomes, so more people are able to purchase an increasing range of products
- aggressive marketing which has turned ‘wants’ into ‘needs’
- a wealthier economy in general and increasing average incomes resulting in regular replacement of e-products by both commercial and domestic users – the average ‘replacement time’ has been decreasing: the lifespan of computing equipment fell from 4–6 years in 1997 to 2–4 years in 2005
- the increasing outsourcing of ICT from developed to developing countries.

b Causes

Discussion is likely to focus on the following points:

- The amount of e-waste generated by developed countries is very substantial indeed due to the factors listed above.
- The legislation regarding the disposal of e-waste has become more strict in most countries and as a result the costs of disposal have increased.
- It is often less costly to ship e-waste to developing countries for disposal where either (a) waste regulations are less stringent or (b) regulations can be by-passed in various ways. This has included incorrect labelling of waste to make it appear to be much less harmful.
- Illegal importation of e-waste has become a major problem in some developing countries.

Consequences

Discussion is likely to examine issues such as:

- Hazardous e-waste is often dumped in inappropriate locations. For example, toxic chemicals may leak into the local water table.
- Such waste is often laden with toxic chemicals such as lead and mercury.
- The number of e-waste sites has increased considerably in some countries.



- Many workers at such sites, including significant numbers of children, wear little or no protective clothing or equipment. Toxic chemicals can affect brain development and the nervous system.
- Local and central government is often unaware of the 'chemical mix' at e-waste sites and therefore unable to assess the risk to human health.
- Sites may be in or close to large urban areas, putting a greater number of people at risk.