

# GEOGRAPHY

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## GCE Advanced Subsidiary Level

Paper 8696/01

Written

### General comments

This examination was the second paper set on the new AS level syllabus. The examination appears to have been as accessible as that sat in June in that most candidates were able to complete all the required questions within the three hours. There were relatively few examples of candidates who failed to attempt either the compulsory questions or the two optional questions. Generally, candidates appeared to have balanced their preparation between the physical and human cores. Many candidates, however, seemed to experience greater difficulty with the compulsory data response questions in **Section A** than the more familiar discursive type of answers that were required in **Sections B** and **C**. This appeared to be because candidates sought to rely heavily upon knowledge, or even speculation, rather than employing the geographical skills required for the interpretation of the data or figures provided.

The rubric presented no difficulties to the candidates. Most appear to have apportioned their time effectively between the three sections of the paper. There were a few instances where the **Section C** question, being the last attempted, showed signs of being rushed and only partially completed.

In preparing for future examinations candidates might be encouraged to pay attention to the following:

- The nature of the data or figures provided in **Section A**. There was often a lack of observation and little use of the data to support points being made. An example of this was apparent in **Question 2 (b)**, where differences should have been expressed in terms of data derived from the diagrams rather than vague generalisations. Hence the actual heights at which condensation occurred could be given or the relative rates of temperature decline of ELR and DALR shown in the two diagrams. Similarly, in **Question 4**, comments on the relationships could have been effectively supported by reference to data pertaining to particular Indian states.
- The command word or instructions given in question. Where candidates are required to *describe* or *identify* features within the data (as in **Question 3 (a)** and **5 (a)**), little credit can be given for speculation upon the possible *causes* of variation.
- The selection and application of material to the question. Where examples or case studies are being employed (as in **Question 9 (c)**, **10 (c)**, **11 (b)** and **(c)**) it is important that the material is applied to the question and not merely expressed in terms of “all I know about “ country X or city Y.
- The requirement in some questions to produce an overall perspective on the data. Thus in **Question 3 (a)** some description of the overall shapes of the population pyramids should have been given and in **Question 5 (a)** some global perspective was required in the description.

### Comments on specific questions

#### **Section A**

#### **Question 1**

- (a) Generally this was answered in a competent manner. In this question there were often good levels of accuracy, although some ignored the instruction to *identify flows* from the diagram. Descriptions of processes were not required here.

- (b) Percolation was often confused or combined with infiltration. Attention to the diagram would have shown that the entry of water into the soil was not part of percolation.
- (c) The vast majority of answers concerned overland flow and gave reasonable explanations of the process. Some responses, however, concentrated on the description of examples of overland flow (e.g. impermeable surfaces in cities) to the exclusion of explanation of the basic processes (e.g. rainfall intensity exceeding infiltration capacity).

### Question 2

Many candidates experienced greater difficulty with this question than with **Question 1**.

- (a) Most correctly identified the lapse rates although there were instances of half remembered guesswork (e.g. "saturated lap race").
- (b) Most candidates were able to identify at least one significant difference between the diagrams. Unfortunately, this was often expressed in vague terms such as lapse rates to the right or left of each other, higher or lower condensation levels, greater or lesser lapse rates. Where axes are calibrated, as in Fig 2, it is expected that candidates display the skills of being able to read the diagram and give their answers in terms of height or temperature.
- (c) Many candidates recognised that the diagrams represented a progression from stable to unstable conditions, although they could not readily convert this into likely weather changes, beyond a basic dry/wet contrast. Few candidates made use of the diagrams noting the surface inversion, lower condensation level and surface temperature in A and its possible impact in terms of dew or mist. Most progressed straight to B in terms of convective uplift producing cumulo–nimbus clouds and thunderstorms.

### Question 3

There was a tendency for many candidates to approach this question as a learnt response to population pyramids in general, rather than a description and interpretation of the examples provided. The question clearly stated that these pyramids were examples of populations suffering the effects of HIV/AIDS, yet many candidates wrote extensively about migration, dependency ratios and bulges.

- (a) In this part, few answers gave any overall impression of the pyramid shape (e.g. S quite triangular, stepped or intermediate in shape whilst T is uneven and irregular). Some candidates gave a bar by bar description, which failed to identify any main features.
- (b) In this part, most candidates successfully identified T and managed to produce some supporting evidence. This evidence, of course, should have been drawn from the data provided and not from speculation concerning the moral and economic fabric of society.

### Question 4

Some candidates found difficulty in dealing with the multiple resource nature of this question. Either they concentrated exclusively on the minutiae of the data or attempted comparisons that were neither required nor valid. It was surprising to note that a few candidates were unable to distinguish north from south or east from west.

- (a) Most candidates recognised the inverse relationships but were often unable to support this with individual Indian state data. A few candidates even cited examples, which actually contradicted the general statistical trend they were advancing. Relatively few seemed to demonstrate the vocabulary needed to express with precision the relative strength of statistical relationships.
- (b) More candidates were successful in expressing the extent to which a north – south pattern existed and were able to cite some supporting and contradictory evidence. Little credit could be afforded to those answers that concentrated entirely upon speculation as to why such fertility rates exist.

### Question 5

Answers to this question were moderately successful. The main limitations were a lack of global overview, a preoccupation with one continental area and band by band listing of guessed or assumed country names.

Many candidates wasted time by trying to work out the identification of individual countries. Had such identification been deemed of necessity to the answer, they would have been given in a key to figure 5.

- (a) Most candidates correctly interpreted the statistic for average annual growth of urban population. Unfortunately many were then diverted from the task of describing the spatial distribution in favour of lengthy and often spurious speculation upon the reasons for such variation.
- (b) This was more successfully answered in that most candidates recognised that the population in MEDCs were already extensively urban and that counter urbanisation can be a strong force. Arguments concerning the slow overall growth of population in these areas sometimes became diverted by general discussions of gender role. Some answers incorrectly attempted physical explanations in terms of winter freezing in the north or the existence of Australian deserts.

## **Section B**

### *The Physical Core*

#### **Question 6**

The most popular question in this section. Generally, the question was answered with some degree of success, although explanation of braiding proved to be a limiting factor for many.

- (a) Most answers gave effective definitions of corrasion and hydraulic action. Solution was less successfully described and candidates citing attrition had difficulty in demonstrating its impact upon erosion of the channel. The general effects of erosion were only required to be given in terms of the widening, deepening or lengthening of channels through lateral, vertical and headward erosion. Some candidates gave accounts of meandering, whilst others concentrated only on waterfalls.
- (b) Many were able to draw a simple sketch of a braided channel showing a broad channel with islands of sediment. Fewer answers, however, indicated sediment material or the vegetated nature of more permanent eyots. A significant number of candidates incorrectly drew either meandering channels or deltas. The development of braiding was often poorly explained with surprisingly few answers associating braiding with variations in discharge.
- (c) A wide variation in answers. Good answers described the direct effects on channel flow of damming, channel straightening, abstraction and the indirect effects of land use changes in catchments. Poor answers went little further than outlining the dumping of litter and waste into river channels.

#### **Question 7**

The least popular and the least well answered of the questions in **Section B**.

- (a) Very few accounts were able to distinguish between rain, sleet, hail and snow. Most were only able to identify rain. All answers chose rain but few referred to the adiabatic cooling of air that produces condensation or the existence of hygroscopic nuclei.
- (b) All that was required was a simple diagram showing incoming short wave solar radiation, reflection (clouds, etc), atmospheric absorption, albedo, and outgoing long wave radiation. Many diagrams were confused and partial in their coverage. The role of ocean currents in the transfer of energy - warm (polewards) and cold (towards the equator) - was described by very few candidates.
- (c) Many answers displayed an understanding of the role of greenhouse gases in global warming and the consequences in terms of rising sea levels, agricultural shifts and climatic disruptions. Few were able to assess the extent to which this should be of concern. Poor answers displayed confusion with holes in the ozone layer and the general effects of atmospheric pollution (e.g. acid rain).

#### **Question 8**

Quite popular with some good answers. Many answers were limited by a lack of understanding of the properties of either granite or limestone in (c).

- (a) Insolation weathering and dilatation were generally well understood. The impact of vegetation and relief upon weathering was little appreciated. Few answers developed beyond the impact of roots in cracks and joints and the existence of freezing at height.
- (b) Generally both diagrams and explanation of sea floor spreading were successfully accomplished, although, somewhat inexplicably, some candidates failed to record mid – ocean ridges. The role of convection currents in crustal divergence was also sometimes overlooked.
- (c) The properties of granite were often more successfully described than in the cases of those selecting limestone. Even where the rock properties were well described, candidates often had difficulty in associating it with appropriate processes of weathering and erosion.

### **Section C**

#### *The Human Core*

#### **Question 9**

The most popular question in this section of the paper.

- (a) Answers to this part of the question were very disappointing, given the basic nature of the concept of natural increase. The most common misconceptions were that migration gains and losses were included and that birth rate is taken *from* death rate in the calculation.
- (b) Many candidates correctly cited stages 1 and 4 in the demographic transition model as representing circumstances in which natural increase is likely to be low. Whilst the illustration of stage 4 by MEDCs with low or even zero growth was generally well done, the assigning of many LEDCs to stage 1 of this model was not acceptable. Poorer responses often concentrated on birth rates with little detail involving the factors affecting death rates.
- (c) The responses were disappointing in a number of respects. Some candidates could not interpret cultural factors in an appropriate manner (e.g. were confused by the Chinese Cultural Revolution). Many lacked any knowledge of a particular country and just wrote 'India' and failed to include any information specific to that country. Even those candidates who did have specific material often did not direct it to the question. They produced an 'all –I –can –remember' account with little attention paid to the key words of *assess*, *cultural factors* and *birth rate*. A common misconception was that cultural factors lead to an increase in birth rates rather than maintaining existing high rates. Even so, there were some powerful pieces, especially on the significance of gender and better answers successfully identified rural /urban contrasts and the role of agents of change such as education.

#### **Question 10**

- (a) The term *primate city* was not well defined. Many were able to describe it as a capital or dominant city, but very few were able to define it in terms of the rank size rule. Diagrams, therefore, tended to be vague and lacking substance. *Sphere of influence* was more effectively defined with more appropriate diagrams, although there was some confusion with range (i.e. expressed as a maximum distance of a good or service).
- (b) Here there was little technical knowledge of many of the classic cases of the dominance of one or two cities. Better candidates did recognise the legacy of colonialism and instances of countries that had small areas. Most candidates produced accounts that identified an early historic foundation and subsequent cumulation of population and function. This type of answer, however, only addressed part of the wider question.
- (c) Here the main failing was the focus placed upon the city and its functions and problems rather than addressing the impact upon the rest of the country. Better answers were those that recognised both positive and negative outcomes and developed good local detail.

#### **Question 11**

- (a) Most answers gave a satisfactory explanation in terms of limited land availability, land desirability and pressures from potential users. Fewer were able to express this in terms of bid rent theory.

**(b)(c)** An understanding of the term *infrastructure* was essential and few candidates had a robust one to use. The term is specifically used in the syllabus and can be taken to mean the 'skeleton' of amenities provided, mainly by public funds, for the functioning of the community and business. Specifically this usually encompasses road and rail links, water, sewage and waste disposal systems, communications and basic utilities such as power supplies. Many answers concentrated on shanty towns and the provision of housing which provided only limited relevance. For those candidates who could utilise studies of a single city, it was possible to readily accumulate marks. Generally, candidates found part **(c)** more demanding in that the problems were often better known than any attempted improvements.