MARKSCHEME

May 2000

GEOGRAPHY

Higher and Standard Level

Paper 1

Markers please note:

Paper 1 is concerned essentially with terminology, skills, and techniques. Increased space has been provided for candidates' answers. The paper does not seek to test mathematical skills but seeks some interpretation of numbers as applied to geographical concepts.

Paper 1 consists of 5 questions, each worth *[8 marks]*, and the maximum mark for the paper is *[40 marks]*. Candidates and markers alike will benefit from the increased marks, for these will allow markers to award a mark for each part of a response in most cases. The paper will still be scaled to 30% of total assessment (SL) and 20% (HL).

Notes on individual questions

Question 1:

The question deals with the theme of Population Dynamics and requires candidates to interpret a compound graph. Their accuracy in doing so is the basis for the award of marks.

(a)   One mark *[1 mark]* should be awarded for an answer of 7400 million in the year 2015.   *[1 mark]*

(b)   One mark *[1 mark]* may be awarded for answers indicating a percentage of either 45 or 46 in 2015.   *[1 mark]*

(c)   The assumptions are (i) that birth rates will decline in those nations where they are high today and that life expectancy will rise where they are lower, and (ii) that demographic trends will duplicate the demographic transition experienced by countries of the North (*i.e.* the more developed countries). However, one mark *[1 mark]* each may be awarded for any two of the following: (i) birth rates will decline where they are now high, (ii) life expectancy will rise where they are lower, and (iii) the demographic transition of EMDCs will be duplicated in ELDCs.   *[2 marks]*

(d)   Answers to this question will vary but, to receive an initial mark *[1 mark]*, candidates must show **at least** that the urban agglomeration involves the extension of urban development until the boundary is coterminous with that of a neighbouring community. Markers have discretion to determine whether this basic condition has been met. Some answers may reveal an understanding of the morphology of a modern urban agglomeration. For the award of a second mark *[1 mark]*, candidates must have named a specific place and that place must be a realistic example of an urban agglomeration.   *[2 marks]*

(e)   Candidates should receive one mark each for indicating that the largest **actual** increase is projected to occur in agglomerations of less than one million *[1 mark]* and that the largest *relative* increase is projected to occur in those of more than one million *[1 mark]*.   *[2 marks]*

Question 2:

The question bridges the themes of Economic Growth and Development, and Environment Hazard. It also tests candidates' ability to transform data from tabular to graphical form.

(a)   Markers should note that candidates may choose a number of ways for organising their responses: two of these involve grouping by region and grouping by topic. They may also use one of a variety of graphical forms. Whichever the approach, a total of *[5 marks]* may be awarded for Question 2(a), one mark each *[1 mark]* for the following: labelling of both axes, provision of a key and title, accuracy of plotting, and overall neatness/ effectiveness of symbols/visual effect (a mark *[1 mark]* may be withheld for untidiness)   *[5 marks]*

(b)   Using the second table, candidates are expected to show an understanding of the link between poor housing conditions and (human-induced) environmental problems. Answers will vary and markers should exercise their discretion in awarding a maximum of three marks *[3 marks]*. Problems associated with household water supply (cholera), sanitation (rodents, plague), and space (communicable diseases such as TB and vulnerability to fire) may be commonly mentioned by candidates.   *[3 marks]*

Question 3:

This question bridges the themes of Human Response to Natural Hazards and Economic Growth and Development. It tests candidates' understanding that links between hazards and human systems are more complex than often believed and that response reflects the economic development of the locality affected.

(a)   Candidates merit one mark *[1 mark]* for mentioning in some way two facets of a natural hazard: it is a naturally occurring process or event, and it interacts with human systems or infrastructure. Stronger answers may mention that it has the **potential** to cause loss of life or property.   *[1 mark]*

(b)   Candidates are expected to show they understand that the term 'disaster' is linked to the degree of impact and that the nature and degree of impact are associated with levels of economic development and/or cultural values.   *[1 mark]*

(c)   Answers to this question will vary but, to gain one mark *[1 mark]*, candidates must name an event (as well as the specific place of its occurrence) and show how the event was able to prove beneficial in some way. Candidates will probably emphasise the passage of time - the weathering of volcanic material into fertile soil, or refertilisation from river silt - but markers should recognise less obvious or shorter-term benefits, even if they might seem unusual; for example, new building codes in the wake of a disaster, and even short-term 'tourism' fuelled by sightseers drawn by media reports to view a locality affected by a disaster. Markers are free to award a maximum of *[2 marks]* for answers that exceed minimum expectations in some plausible way.   *[2 marks]*

(d)   Answers to this question may vary but will usually encompass more familiar cases: urban settlement on a floodplain, in a fault zone, or near an active volcano. As no time constraints apply to the question (unlike question (e) which follows), markers should expect answers that range from Pompeii to Pinatubo. Others might refer to mudslides near volcanoes (or road construction), winter avalanches, or seasonal flooding in Bangladesh aggravated by deforestation upstream, as well as desertification (especially in relation to overpopulation and fallow periods), farming in marginal areas (a risk familiar even to the more economically developed countries), or the burning of forests in Indonesia and Brazil during El Niño. These are but some of the possible answers and markers should be flexible in awarding a mark for a plausible response. For the maximum award of two marks *[2 marks]* candidates must also name and correctly associate the specific event with the place of its occurrence.   *[2 marks]*

(e)   Candidates are expected to show an understanding that the **impact** of an event is not simply the result of a geophysical process but also reflects the ability of the locality to prepare for it (when possible), to survive it, and to cope with its aftermath; hence the fact that a community's response will be greatly affected by its level of economic development. Candidates making this point in some way merit the award of one mark *[1 mark]*. It is important to note that the question does not ask simply what the inhabitants did following the disaster: it requires them to place the response in the context of economic development. A maximum of two marks *[2 marks]* may be awarded for more detailed responses provided that a specific place has been named by candidates and the disaster they have selected occurred sometime during the 1980s or 1990s.   *[2 marks]*
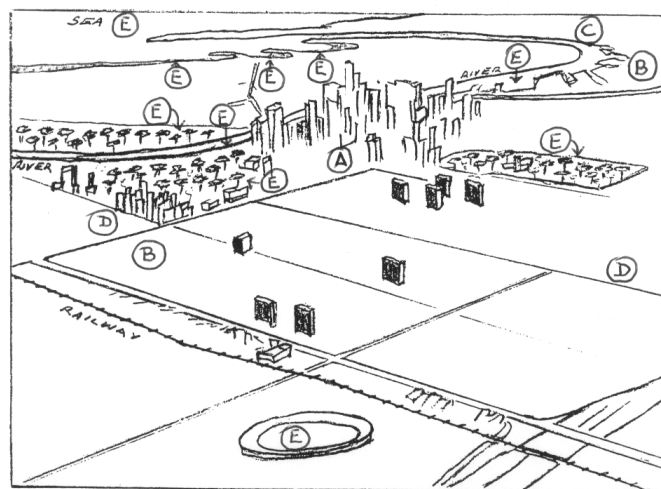
Question 4:

This question addresses problems of food supply from the aspect of *output* and *distribution*.

(a)		Candidates should receive three marks *[3 marks]* for the correct location of the following: Thailand (East Asia), Paraguay (Latin America), Mozambique (sub-Saharan Africa), Afghanistan (South Asia), and Tunisia (North Africa). One mark *[1 mark]* should be withheld for each error in the listing.			*[3 marks]*

(b)		Sub-Saharan Africa is the region facing a growing problem of chronic undernourishment. One mark *[1 mark]* should be awarded for this answer. Population pressure resulting from a high rate of natural increase, is placing food resources under stress. Candidates making this point should receive one mark *[1 mark]*. A third mark *[1 mark]* may be awarded for more detailed responses, such as mention of the severity of the problem in Saharan West Africa, the effect of overcultivation, overgrazing, and the gathering of fuelwood, and the way these may be linked to desertification in the region. Other well-reasoned and plausible answers should be awarded the third mark.			*[3 marks]*

(c)		Rapid urbanisation in developing countries, the growth of shanty towns, traffic congestion, inadequate transportation, and antiquated marketing infrastructure pose problems for the distribution of food. A maximum of two marks *[2 marks]* may be awarded for answers that show how or why these problems are linked to undernourishment. Answers that simply list the problems should not receive more than one mark *[1 mark]*.			*[2 marks]*

Question 5:

The photograph features the Australian city of Melbourne. The question requires candidates to relate their understanding of urban morphology to features visible in the photograph and to identify those features on an aerial sketch of the same scene. The question also employs a basic skill of aerial photo interpretation by testing candidates' ability to orient the photographed scene in terms of compass direction.

The following aerial sketch has been labelled to show candidates' most likely responses; but markers may exercise their discretion in awarding credit for other possibilities that candidates either identify or infer from the photograph. One mark *[1 mark]* is to be awarded for each correct or plausible response.

(a)　(i)　A　Highest land values are in the CBD.

　　(ii)　B　The most obvious inner industrial zone is to the left of the photograph. Another is at the top right near the port.

　　(iii)　C　Bulk fuel storage and port facilities are at the top right of the photograph.

　　(iv)　D　The most obvious PLVI is in the left-hand centre of the photo. Other possibilities are also labelled 'D'.

　　(v)　E　Five recreational land uses are identified on the map: sports stadium in the foreground, parkland adjoining the CBD, the river, bayside beaches, and the open sea. The sports stadium will probably be most obvious to candidates, hence **two** recreational land uses are required for the award of one mark *[1 mark]*.

[5 marks]

(b)　Candidates should be awarded one mark *[1 mark]* for indicating that (i) the photo was taken from the northeast (or east or east northeast); and (ii) a maximum of two marks *[2 marks]* for justifying their answer by explaining (i). The photograph was taken in the southern hemisphere during the afternoon. The sunny sides of the high-rise buildings are facing the equator; the shaded sides must therefore be on the east. The CBD actually points in the direction of SW.

[3 marks]