

# UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

## MARK SCHEME for the November 2005 question paper

### 0460 GEOGRAPHY

0460/01

Paper 1 maximum raw mark 75

This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which Examiners were initially instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began. Any substantial changes to the mark scheme that arose from these discussions will be recorded in the published *Report on the Examination*.

All Examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes must be read in conjunction with the question papers and the *Report on the Examination*.

The minimum marks in these components needed for various grades were previously published with these mark schemes, but are now instead included in the Report on the Examination for this session.

- CIE will not enter into discussion or correspondence in connection with these mark schemes.

CIE is publishing the mark schemes for the November 2005 question papers for most IGCSE and GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.

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### Question 1

- (a)(i) Swaziland/Botswana/Zimbabwe  
1 mark (1)
- (ii) A. 20 B. Zambia  
2 @ 1 mark (2)
- (iii) Candidates should be able to compare the two countries here though we should link together two discrete accounts. Ideas such as:  
rates of infection higher in Botswana/lower in Tanzania;  
percentage of orphans higher in Botswana/lower in Tanzania;  
percentage of orphans increasing more rapidly in Botswana;  
HIV/AIDS is a serious issue in both countries etc  
(N.B. Allow figures which could be used as alternatives to statements or as development marks)  
3 @ 1 mark (3)
- (iv) Credit references **only** for impact on **economy** such as:  
economy will fall/decline/be damaged  
reduces productive capacity of individuals/people cannot work  
reduces levels of food produced;  
requires much investment in health care;  
which prevents investment in other aspects of development;  
discourages development of (tourism, industry etc)  
discourages foreign investment etc  
4 @ 1 mark or development (4)
- (b) Credit references **only** for impact on **population size and structure**.  
Credit development for interpretation of statistics. Ideas such as:  
reduction in total size of population; almost halved (dev);  
large reduction in 40-60 year old age group; reduced to about  
10% of what it would have been without AIDS (dev);  
large reduction of 0 to 10 age group; approx halved (dev);  
slightly greater impact on female population etc  
dependency rate increased etc  
3 @ 1 mark or development (3)
- (c) Candidates should describe the ways in which the dependent population is supported in both developed and developing countries. Credit up to 3 MAXIMUM for developed/developing countries.  
Expect methods used in developed countries such as:  
By taxation/state;  
Pensions;  
Family benefits;  
Health care;  
Welfare services;  
Sheltered housing/old peoples homes;  
State education/free education etc

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Expect methods used in developing countries such as:

(extended) family;  
 self help groups;  
 begging;  
 informal economy;  
 voluntary organisations/charities

5 @ 1 mark or development (5)

- (d) Accept a wide variety of strategies. Candidates could refer to examples they have studied, if so these can be credited as development marks (MAX 2) if linked with appropriate points [e.g. reduce opportunities for migrant workers; to prevent males in Botswana picking up disease from unprotected sex in other countries of Southern Africa (dev)] but do not credit examples in isolation.

Accept general ideas such as:

innoculation;  
 use of drugs/antibiotics;  
 better hospitals/clinics/health care/more doctors  
 sex education within schools;  
 clean water;  
 improved sanitation;

Or ideas specific to disease such as AIDS/HIV such as:

theatre groups/road shows to educate re dangers of unprotected sex;  
 poster campaigns/TV adverts;  
 issuing of free condoms;  
 legislation against prostitution;  
 policing in order to implement legislation;  
 free syringe exchange for drug addicts;  
 careful screening of blood transfusions;  
 reduce need for migrant workers/legislation;  
 better health treatment to reduce early deaths from diseases to which AIDS victims are less resistant;  
 cut price of drugs being developed to slow the growth of the AIDS virus etc

7 @ 1 mark or development (7)

**TOTAL 25 marks**

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## Question 2

- (a)(i)** Town/city/built up area
- 1 mark **(1)**
- (ii)** A. Brazil/Argentina/Chile/Australia/New Zealand/UK/  
Germany/Sweden etc
- B. Africa
- 2 @ 1 mark **(2)**
- (iii)** Candidates should compare here though we should link together two discrete accounts. Credit development for interpretation of statistics Ideas such as:
- Urban population increasing in both types of country;  
Greater proportion living in urban areas in developed countries;  
Faster rate of growth in developing countries; tripled in 60 years (dev); etc
- 3 @ 1 mark or development **(3)**
- (iv)** Candidates should suggest reasons for the differences in growth rates.
- Ideas such as:
- process started much earlier in developed countries;  
increases in developing countries as industry/commerce develops in towns;  
amounts of migration decline in developed countries as rural areas are fully developed;  
or overcrowding in urban areas puts off potential migrants;  
some people looking for attributes of rural lifestyle in developed countries;  
predominance of counter urbanisation etc
- 4 @ 1 mark or development **(4)**
- (b)(i)** Evidence such as:
- many unmade roads;  
many temporary/self-built houses/few concrete houses;  
use of standpipes for water/no running water;  
open drains/no proper sanitation;  
built on undesirable land/close to marshes/factories etc
- 3 @ 1 mark **(3)**

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- (ii) Candidates can suggest reasons for migration by using any combination of pull and push factors but avoid double credit for opposite statements. Expect to see discussion of issues such as:

availability of work;  
 higher wages;  
 availability of food supplies;  
 education;  
 health care;  
 natural events 0 must state type;  
 bright lights syndrome;  
 political/religious persecution;  
 wars and conflicts;  
 better standard of living;  
 better sanitation;  
 better water supplies;  
 mechanisation of farms;  
 land fragmentation;  
 joining family members etc

5 @ 1 mark or development

(5)

- (c) Candidates could refer to improvements instigated by local authorities, national government, charities or local groups in any combination. They could refer to examples they have studied, if so these can be credited as development marks (MAX 2) if linked with appropriate points [e.g. self help schemes; as in the Rocinho area of Rio de Janeiro (dev)] but do not credit examples in isolation.

Expect ideas such as:

installation of mains water;  
 laying of sewage pipes/building of sewage works;  
 infrastructural development;  
 increase of local authority housing stock;  
 improvement of communications;  
 regular disposal of refuse;  
 self help schemes;  
 site and services schemes;  
 education in building skills;  
 provision of low cost building materials;  
 building of schools;  
 building of clinics/hospitals;  
 charitable initiatives working with street children etc

7 @ 1 mark or development

(7)

**TOTAL 25 marks**

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### Question 3

- (a)(i) a volcano which is likely to erupt/has recently erupted  
1 mark (1)
- (ii) A. lava (flow)  
B. ash (fall)  
2 @ 1 mark (2)
- (iii) Candidates should identify impacts on people such as:  
specific health issues;  
deaths/injury;  
loss of possessions/homes/cars;  
homelessness;  
need to evacuate area;  
damage to workplaces/unable to earn a living;  
loss of agricultural produce/damage to farmland;  
economic implications of rebuilding etc  
3 @ 1 mark (3)
- (iv) Ideas such as:  
monitoring/warning population;  
evacuation;  
redirecting lava flow /by digging diversion canals;  
halting advance by dropping concrete slabs into flow;  
spraying water onto flow  
education re procedures/drills etc  
4 @ 1 mark (4)
- (b)(i) Candidates should identify differences here though we should link together two discrete accounts. Ideas such as:  
the 1983 lava flow was more extensive;  
1983 lava flow to S/SW whereas 1923 to N/NE;  
1983 flow from higher point; 3340 metres, 1923 from 2153 metres (dev) etc  
3 @ 1 mark or development for illustrative use of figures (3)
- (ii) Candidates should explain why volcanoes are formed at **destructive** margins. Credit written answers or information included as part of labelled diagram (do not double credit here). Expect reference to ideas such as:  
plates converge;  
subduction of one plate (oceanic);  
greater density of oceanic plate;  
friction/heating;  
destruction of oceanic plate/turns to magma/melts;  
build up of magma/pressure;  
magma rises through lines of weakness;  
lava solidifies over successive eruptions to create volcano;  
5 @ 1 mark or development (5)

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- (c) Candidates should give reasons why people choose to live close to active volcanoes. They could refer to examples they have studied, if so these can be credited as development marks (MAX 2) if linked with appropriate points [e.g. yields of crops will be increased by fertile volcanic soils; as they are in the rice fields on the slopes of Mount Fuji (dev)] but do not credit examples in isolation.

Expect ideas such as:

fertile volcanic soils;  
geothermal power;  
attract tourists/tour guides/souvenirs etc;  
resource extraction/or examples eg sulphur;  
vulcanologists live close by to study volcanoes;  
they have lived there all their lives/sentimental attachment;  
close to family/friends;  
work/education in area;  
cannot afford to move;  
pressure of living space;  
confidence in prediction/safety;  
willing to take the risk etc

7 @ 1 mark or development (7)

**TOTAL 25 marks**

#### Question 4

- (a)(i) 1201 to 1399 mm

1 mark (1)

- (ii) A. Area of land drained by a river and its tributaries.  
B. Area of high land which surrounds drainage basin/separates drainage basins

2 @ 1 mark (2)

- (iii) Ideas such as:

discharge will be greater at Y/smaller at X;  
the river has gathered water from a larger area at Y;  
tributaries will have joined by Y/X is only a tributary;  
Y is a higher order stream/river  
X is nearer the source/Y is further downstream etc

3 @ 1 mark (3)

- (iv) W shows a delta (1 mark reserved)

the delta is formed as a result of:  
deposition of sediment/alluvium by river;  
as speed of flow slows down/cannot carry load;  
absence of major tidal flows/currents;  
impact of salt water causes further deposition;  
distributaries form etc

4 @ 1 mark or development (4)

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- (b)(i)** Features should ideally be evident from photographic evidence though some observations may be 'by implication'. No maximum mark on river/valley.

Ideas such as:

steep sided valley;  
narrow valley floor/river occupies all valley floor/no flood  
plain/V-shaped valley;  
narrow river/stream;  
steep long profile;  
irregular long profile;  
contains rock materials;  
white water/appears fast flowing;  
waterfall etc

3 @ 1 mark **(3)**

- (ii)** Candidates should explain how the processes have shaped the landscape rather than simply describing its features or naming the processes. Credit written answers or information included as part of labelled diagrams (do not double credit here). Expect reference to the effects of processes such as:

weathering processes such as – freeze thaw; biological etc;  
mass movement;  
river erosion processes such as corrasion; corrosion; hydraulic action etc

No maximum for weathering/mass movement/river erosion.

5 @ 1 mark or development **(5)**

- (c)** Candidates should describe both the advantages and disadvantages for people of living on a flood plain. Credit up to 5 **MAXIMUM** for advantages/disadvantages. Candidates could refer to examples they have studied, if so these can be credited as development marks (MAX 2) if linked with appropriate points [e.g. people can expect high yields from crops grown; as they obtain on the fertile flood plains of the river Nile (dev)] but do not credit examples in isolation.

Expect advantages relating to issues such as:  
agriculture/fertile soils;  
water fro irrigation;  
communications (by river; by road/rail on flood plain);  
river is source of food/fish;  
flat building land;

Expect disadvantages relating to issues such as:  
flooding;  
instability of foundations;  
need to bridge river;  
often densely populated/competition for space;  
water borne diseases etc

7 @ 1 mark or development **(7)**

**TOTAL 25 marks**



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### Question 5

- (a)(i)** Close to canal/ease of transport of raw materials/products  
1 mark (1)
- (ii)** A. Neder-over-Heembeek  
B. Evere-Brussels  
2 @ 1 mark (2)
- (ii)** Ideas such as:  
need for bigger premises/unable to expand in CBD;  
need for less expensive property;  
need for ground floor premises/access;  
movement away from CBD congestion etc  
3 @ 1 mark (3)
- (iv)** Candidates should give reasons for the development of science parks in Brussels and location within the city. No maximum mark on either aspect. Expect ideas such as:  
proximity of university/research centre;  
located within range of many major markets;  
airport available locally/easy of international travel;  
location close to ring road facilitates road transport;  
cheaper land close to edge of city;  
greenfield sites offer pleasant working environment;  
plenty of land available/more space than in centre  
4 @ 1 mark or development (4)
- (b)(i)** Ideas such as:  
low cost land;  
cheap labour supply/low wages;  
plenty of available workers;  
potential workers are skilled/educated;  
large potential market in Western Europe;  
ease of gathering components from European manufacturers etc  
3 @ 1 mark or development (3)
- (ii)** Candidates should explain the advantages of the location of car assembly plants in Eastern Europe to the local people. Ideas such as:  
more people in employment;  
higher wages;  
improvements in infrastructure;  
rising standard of living or specifics (e.g. housing/sanitation);  
improvement in public services or specifics (e.g. health care/education);  
greater demand for products of local industry;  
multiplier effect;  
develops technology within the country etc  
No MAXIMUM on any one factor, providing adequate development of points.  
5 @ 1 mark or development (5)

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- (c) Be prepared to accept reference to any type of craft industry, in any country, and at any scale. Candidates should both describe and explain the factors which encourage the development of the industry. They could refer to examples they have studied, if so these can be credited as development marks (MAX 2) if linked with appropriate points [e.g. one factor is the large market for traditional products created by tourism; as is the case in Kenya where tourists want to buy wooden carved animals (dev)] but do not credit examples in isolation.

Expect reference to factors which encourage the development of craft industries such as:

local/easily available raw materials;  
cheap raw materials;  
little capital needed for set-up;  
mainly done by hand/simple machines are used;  
skilled labour supply;  
local traditions;  
local market;  
market from tourism;  
government incentives;  
charities/aid organisations encourage development;  
governments want to retain traditional skills/culture etc

No MAXIMUM on any one factor, providing adequate development of points.

7 @ 1 mark or development (7)

**TOTAL 25 marks**

### Question 6

- (a)(i) Wilderness areas

1 mark (1)

- (ii) A = Dixie (National Forest)

B = Paria-Hachberry

2 @ 1 mark (2)

- (iii) Candidates should identify changes here though we should accept a description for 2000 alone as such answers imply changes which have occurred. Changes such as:

building of new highways/roads;  
damming of Colorado river/creation of Lake Powell;  
declining wilderness areas;  
creation of Glen Canyon National Recreation area;  
Glen Canyon City built etc

3 @ 1 mark (3)

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- (iv) Candidates should suggest reasons for the attractions of the area for tourists. Expect ideas such as:
- Attractions of National Park/National Forest/National Recreation Area (or names);  
 Large areas of wilderness/unspoilt land/solitude;  
 Attractions such as wildlife/vegetation;  
 Scenic attractions/beautiful countryside;  
 Activities such as hiking/climbing/cycling etc;
- 4 @ 1 mark or development (4)
- (b)(i) Accept arguments such as:
- creation of jobs;  
 creation of wealth within the local area;  
 generates further economic growth/multiplier;  
 development of the infrastructure/or examples;  
 value to American economy/export of coal;  
 Indian reservation is a cultural attraction etc
- 3 @ 1 mark or development (3)
- (ii) Expect reference to ideas such as:
- visual impact/destruction of landscape;  
 damage to habitats;  
 noise pollution from mine;  
 dust/atmospheric pollution;  
 threat to species;  
 increased traffic levels create noise/danger;  
 wilderness areas are in short supply/in need of protection etc
- 5 @ 1 mark or development (5)
- (c) Candidates should choose an area threatened by tourism, agriculture or manufacturing industry. Be prepared to accept reference to any example of their chosen economic activity, in any country, and at any scale. Candidates need to refer to an example they have studied, for which **one mark is reserved**.
- E.g. tourism in Botswana:  
 wildlife resources can be protected by encouraging sustainable tourism by:  
 restricting tourist numbers;  
 by dealing with a limited number of tourist firms;  
 ensuring wildlife is conserved;  
 ensuring vegetation/habitat is not cleared for tourist development;  
 encouragement of ecotourism;  
 education of tourists regarding environmental issues;  
 employing people to clear up regularly in sensitive areas;  
 restricting access to sensitive areas;  
 banning tourists from hunting activities;  
 low level building developments;  
 using local labour;  
 using local provisions etc
- No MAXIMUM on any one aspect, providing adequate development of points.
- 7 @ 1 mark or development (7)

**TOTAL 25 marks**