

CAMBRIDGE
INTERNATIONAL EXAMINATIONS

November 2003

INTERNATIONAL GCSE

MARK SCHEME

MAXIMUM MARK: 75

SYLLABUS/COMPONENT: 0460/02

GEOGRAPHY
Extended



Page 1	Mark Scheme	Syllabus	Paper
	IGCSE – NOV 2003	0460	2

- 1 (a) (i) birth rate curve –**
 in 1, high constant,
 remains high in 2,
 steep fall in 3,
 low fluctuating in 4.
- [2]
- death rate curve –**
 high fluctuating in 1,
 steep decline in 2,
 steady fall in 3 and 4.
- [2]
- (ii) birth rate -**
 birth control measures.
- 2 at 1 mark [2]
- death rate –**
 improvements in health/medical,
 food,
 living conditions,
 greater affluence.
- 2 at 1 mark [2]
- (iii)** slower increase/rate of growth/remains steady,
 steeply falling/declining birth rate,
 birth control measures/family planning,
 death rate remains low.
- 3 at 1 mark [3]
- (b) (i)** tradition,
 religious pressures,
 desire for son - inheritance,
 ignorance of large sectors of the population on need to reduce B.R./low
 literacy rate/awareness/lack of education,
 difficulties of instituting family planning policies,
 size of country/dispersed nature of population,
 expense of introducing family planning policies,
 lack of/unpopularity of abortion/sterilisation,
 pressure in rural areas - need children to work on farms,
 large number of children to look after parents in old age,
 high infant mortality - hence large families – falling death rate,
 polygamy.
- 6 at 1 mark [6]
- (ii)** underpopulation/underuse of resources,
 ageing population,
 increase in dependency ratio,
 increased spending on older dependents,
 stagnant/declining population growth,
 labour shortages, max 2 marks
 armed forces shortages.
- 5 at 1 mark [5]

Page 2	Mark Scheme	Syllabus	Paper
	IGCSE – NOV 2003	0460	2

- (iii) may not experience decline in birth rate,
may not industrialise,
with lower birth rate and death rate.

3 at 1 mark [3]

- 2 (a) relatively slow rate of growth - developed regions,
rapid increase - developing regions,
greatest increase - Asia,
percentage living in urban areas increased throughout the world,
continued to grow - developed regions,
highest percentage - Australia and New Zealand,
great increase in percentage growth in developing regions,
especially Latin America.

max 3 marks for calculated stats

6 at 1 mark [6]

- (b) (i) no planning,
poor building materials - metal sheeting etc.,
lack of open spaces,
no roads,
overcrowding/high density of settlement,
open drains/sewers,
run into river,
waste/garbage/pollution in river,
flatroof,
small building/houses,
poles for electricity,
single storey.

6 at 1 mark [6]

- (ii) rapid urbanisation/rural-urban migration,
pull-push factors - no repetition/obverse, max 5 marks
high birth rates,
lack of cash/poverty,
better to squat than to sleep anywhere/rough.

6 at 1 mark [6]

- (iii) buildings do not regulate temperatures,
may not be waterproof,
lacking basic facilities - electricity, piped water, sanitation,
overcrowding/high density of settlement,
large numbers per property,
health hazards - disease,
untreated sewage,
lack of social/medical facilities,
unemployment,
high infant mortality,
low life expectation,
inability of squatters to afford better housing,
limited availability of alternative housing,
limited/low incomes of squatter dwellers,
social problems -
pollution -
water - waste/garbage in river,

maximum 1 mark
maximum 2 marks

Page 3	Mark Scheme	Syllabus	Paper
	IGCSE – NOV 2003	0460	2

visual,
traffic congestion,
fire hazard.

7 at 1 mark [7]

- 3 (a) (i)** plate boundaries,
Circum-Pacific zone,
S. Europe - Middle East - S. E. Asia,
Mid Atlantic,
E. African rift valley.
3 of these/parts of these areas.

3 at 1 mark [3]

- (ii)** plate boundaries if not given in **(a) (i)**,
destructive plate boundaries/subduction,
constructive plate boundaries/sea floor spreading,
earth movements associated with rift valley formation,
instability/release of pressure,
faulting,
sudden movements,
conservative boundaries.

3 at 1 mark [3]

- (b) (i)** destructive plate boundary/converging plates,
pressure/compressional forces/subduction,
folding of layers of sediment,
anticlines/synclines,
symmetrical/asymmetrical,
overfolds,
recumbent folds,
overthrusts/nappes,
subduction,
sediment accumulation.

} Max 1 mark

5 at 1 mark [5]

- (ii)** great strength epicentre 7-8 magnitude,
up to 150 km. 6-7 magnitude,
large number of fatalities,
affected wide area,
including a number of large cities,
others - less strong,
affect a more restricted area,
area with a low population density,
timing of earthquake,
depth of focus.

4 at 1 mark [4]

- (iii)** basic - more fluid/low in silica, acid- viscous/more silica,
gentle slopes, steeper slopes,
flows quickly, moves slowly/solidifies quickly.

3 at 1 mark [3]

Page 4	Mark Scheme	Syllabus	Paper
	IGCSE – NOV 2003	0460	2

- (iv) fertile/infertile soils -
relation to basic/acidic lavas,
mineral deposits, e.g. sulphur,
geothermal energy,
tourist potential,
volcanic activity,
evacuation,
loss of life,
loss of/damage to property,
destruction of agricultural land,
loss of communications.
- Reserve 2 for opportunities
Reserve 2 for problems
- Max 1 mark for examples
- 7 at 1 mark [7]
- 4 (a) latitude,
pressure systems and associated winds,
distance from sea/continentality,
altitude,
ocean currents,
aspect.
- 4 at 1 mark [4]
- (b) (i) area of infrequent, low rainfall,
hot/tropical location.
- 2 at 1 mark [2]
- (ii) **two** of -
latitude - 15° - 30° latitude,
around the two Tropics,
pressure - high pressure/descending air,
offshore trade winds,
distance from sea – west coast of continents and continental location,
away from maritime influence of onshore winds,
ocean currents -
cold currents offshore,
winds blowing over cold currents.
- 2 at 2 marks [4]
- (c) (i) blown sand/particles,
attacks rocks,
especially effective just above ground level.
- 2 at 1 mark [2]
- wind removes loose particles - sand and dust,
blown away.
- 2 at 1 mark [2]
- (ii) **A** weaker layers in rock outcrop,
eroded - abrasion,
most effective just above ground level - undercutting,
resistant rocks eroded more slowly - irregular shapes,
water erosion may play a more dominant role than wind erosion.
- 3 at 1 mark [3]
- B** deflation - sand blown away,
hollow created,
deflation reaches downwards to water bearing rocks –
permeable layer/aquifer.

Page 5	Mark Scheme	Syllabus	Paper
	IGCSE – NOV 2003	0460	2

3 at 1 mark [3]

- (iii) exfoliation/alternate expansion and contraction/onion weathering,
 high temperatures in the day/over 40°C,
 night falls below 10° C/cool, s,
 rock poor conductor of heat,
 rock surface expands during day,
 contracts at night,
 stress - outer part of rock cracks/joints,
 outer layers peel away,
 shattered rock fragments fall to floor/scree,
 main rock rounded,
 process accelerated with slight amount of rain.
 Reserve for results

1 mark
5 at 1 mark [5]

5 (a) (i) ploughing

wooden plough, buffaloes/oxen/draught animals,

planting

Reserve 1 mark for each method

sowing - broadcast,
 possibly into a nursery field,
 some direct seeding in main fields,
 transplanting plants by hand.

harvesting

picking/cutting/uprooting,
 sickle and other hand tools.

6 at 1 mark [6]

- (ii) cost of newer methods,
 tradition/culture,
 lack of education/understanding/knowledge of newer methods,
 small plots.

3 at 1 mark [3]

- (iii) farmer does not have to time activities with rainy season,
 given supply of water/reliable,
 2 crops/double cropping,
 extends growing season.

3 at 1 mark [3]

(b)

Green Revolution,
 HYVs/better yielding seeds,
 land reform,
 fertilisers,
 pesticides, } Max 1 mark
 fungicides,
 modern machinery - e.g. combine harvesters/rice harvesters,
 education/training/awareness of new methods,
 investment,
 terracing,
 co-operative.

6 at 1 mark [6]

Page 6	Mark Scheme	Syllabus	Paper
	IGCSE – NOV 2003	0460	2

- (c) (i) there is no food shortage,
population and food supply have increased,
food supplies have gone up faster and will continue to do so for 10 years,
problem - population growth greatest in developing countries which does not feed all its people,
food shortages likely to worsen in the developing world,
main problem – poverty and unequal distribution of wealth,
calorie intake increased.

3 at 1 mark [3]

- (ii) overpopulation,
lack of investment/poverty,
outdated methods of production/lack of fertilizer etc,
war,
natural disasters,
credit examples, e.g. drought - Sahel etc.

} Max 2 marks

4 at 1 mark [4]

- 6 (a) skilled labour,
well educated/universities/technical colleges,
expert management,
different skill levels - subcontracting/division of labour.
high speed transport - components and products,
proximity to/links to airport
major road links.

Reserve 1 mark for named location
Max 4 marks for any one factor

research and development/universities
government support.

science parks - planning,
away from congested areas,
possibly low cost land areas.

centre/centres.
allow development of factors listed, e.g. if specific illustrations given.

6 at 1 mark [6]

- (b) (i) increase in global temperatures,
average increase 4°C,
some areas over 8°C increase,
greenhouse gases especially CO₂,
traps sun's rays,
burning fossil fuels,
industrial pollution,
increased use of motor vehicles,
burning forests/deforestation,
release from some agricultural activities of greenhouse gases –
wet rice/cattle ranching - methane.

6 at 1 mark [6]

Page 7	Mark Scheme	Syllabus	Paper
	IGCSE – NOV 2003	0460	2

- (ii) rise in world temperatures,
 rise of sea level,
 melting of ice sheets,
 loss of low lying areas,
 river deltas,
 many cities - low lying areas - flooding,
 flooding of islands,
 flooding of coastal installations - storage tanks, piers,
 wildlife in salt marshes/coral reefs destroyed,
 salination of fresh water supplies,
 changes in global climates,
 effects on ecosystems,
 extinction of some species of animals/plants,
 loss in biodiversity,
 natural forest fires,
 droughts,
 crop yields could decline,
 present direr areas may experience more rain,
 desertification.

6 at 1 mark [6]

- (iii) A agreements between nations as to cutting down on CO₂ etc.,
 pollution controls, max 2 marks,
 control on forest burning,
 encouragement of public transport,
 alternative sources of energy,
 education/awareness.

3 at 1 mark [3]

- B** cost,
 lack of co-operation between nations, up to 2 marks
 reluctance to recognise the problem,
 difficult to reduce industrial production,
 increase in industrialisation - developing countries,
 difficult to cut down on traffic,
 reliance on fossil fuels,
 alternative fuels not really developed,
 vested interests,
 lack of education/awareness,
 population increase.

4 at 1 mark [4]