

CAMBRIDGE
INTERNATIONAL EXAMINATIONS

November 2003

INTERNATIONAL GCSE

MARK SCHEME

MAXIMUM MARK: 75

SYLLABUS/COMPONENT: 0460/01

GEOGRAPHY
Core



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- 1 (a) (i)** 1 high and fluctuating,
2 falling,
3 low,
4 low and fluctuating.
- 4 at 1 mark [4]
- (ii)** Stage 2.
- [1]
- (iii)** birth rate still high,
death rate falling steeply/low death rate,
biggest gap between birth rate and death rate.
- 2 at 1 mark [2]
- (iv)** where death rate rises above birth rate in Stage 1.
- [1]
- (v)** death rate higher than birth rate.
- [1]
- (b) (i)** tradition,
religious pressures,
zeal for son - inheritance,
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.
- 4 at 1 mark [4]
- (ii)** prevent overpopulation/demand on resources,
avoid increase in dependency ratio,
lowering of living standards,
poverty,
shortages - water/land,
high levels of future unemployment,
famine/food shortages,
malnutrition,
decline of infrastructure - e.g. roads,
inadequate housing/squatters,
exhaustion of soil,
inadequate educational facilities,
lack of health facilities,
possible civil unrest.
- 4 at 1 mark [4]

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- (iii) better medical facilities, medicines, more doctors/hospitals, more food, improved diets less malnutrition, housing improvements, improved water supplies/sanitation, development of industries, improved standard of living, education on hygiene/diet. } up to 2 marks
- 4 at 1 mark [4]
- (iv) underpopulation/underuse of resources, ageing population, increase in dependency ratio, increased spending on older dependents, max 2 marks
stagnant/declining population growth, labour shortages, max 2 marks, lack of defence forces.
- 4 at 1 mark [4]
- 2 (a) (i) population in towns/cities. [1]
- (ii) A 191, B 977. [2]
- (iii) Latin America. [1]
- (iv) much higher in the developed regions – 73.3 % + developing regions lower - 24-37%. 2 at 1 mark [2]
- (v) Australia - New Zealand. [1]
- (b) (i) pull-push factors - no repetition/obverse, max 4 marks
high birth rates, rural-urban migration. 5 at 1 mark [5]
- (ii) 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, flat roof, single storey, small building/houses, poles for electricity. 5 at 1 mark [5]

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- (iii) **A** 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,
 unemployment/limited/low incomes of squatter dwellers,
 social problems – maximum, 1 mark
 traffic congestion (credit once in **A** or **B**).
5 at 1 mark [5]
- B** loss of land for other uses,
 pollution,
 water - waste/garbage in river,
 air,
 visual,
 social problems (credit once in **A** or **B**),
 fire hazard.
3 at 1 mark [3]
- 3 (a) (i)** named parts/areas within
 Circum-Pacific zone,
 S. Europe - Middle East - S.E. Asia.
2 at 1 mark [2]
- (ii) yes. [1]
- (iii) plate boundaries,
 unstable areas. [1]
- (iv) mountains formed by folding of rocks,
 areas where most of earth's earthquakes experienced,
 volcanoes likely to erupt.
 Reserve 1 mark for each
3 at 1 mark [3]
- (v) great strength epicentre 7-8/magnitude,
 up to 150 km. 6-7,
 affected wide area,
 including a number of large cities.
2 at 1 mark [2]

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- (vi) strength,
size of area affected,
population density,
location - rural/urban area,
time of day,
type of buildings,
depth of focus,
emergency services. 2 at 1 mark [2]
- (b) (i) **E** higher,
steeper cone,
F covers wider area. 2 at 1 mark [2]
- (ii) **F** basic - more fluid/low in silica,
flows quickly,
accept obverse -
E acid - viscous/more silica,
moves slowly/solidifies quickly. 2 at 1 mark [2]
- (iii) pressure,
magma reaches surface through a fissure/weakness. 2 at 1 mark [2]
- (c) fold mountains -
communications difficulties/isolation,
steep slopes difficult for agriculture,
housing,
low temperatures,
high rainfall,
thin soils,
avalanches. 4 at 1 mark [4]
- active volcanoes –
loss of life,
injuries/toxic fumes,
destruction of property,
loss roads/interference with communications,
loss of agricultural land/crops/forests,
evacuation. 4 at 1 mark [4]
- 4 (a) (i) **A** barograph/aneroid barometer/barometer,
B anemometer,
C wind/weather vane/weather cock. 3 at 1 mark [3]
- (ii) metal cylinder (vacuum),
spring contracts/expands - pressure changes, max 1 mark
conveyed to pointer,
rotating drum with paper/barograph,
trace shown. 3 at 1 mark [3]

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- (iii) **B** - wind speed,
C - wind direction.
2 at 1 mark [2]
- (iv) high/on roof/pole,
away from buildings/trees/open area,
to record free flow of wind.
2 at 1 mark [2]
- (b) (i) west coast of continents and continental location,
around the two Tropics.
2 at 1 mark [2]
- (ii) high temperatures,
large annual range,
large daily range/high day – low night.
2 at 1 mark [2]
- low rainfall,
infrequent erratic,
unreliable,
heavy/thunderstorms/concentrated.
2 at 1 mark [2]
- (iii) many plants dormant for years,
quick growing plants,
shallow roots - short lived rains,
deep roots - underground water,
moisture stored in bulbs,
thick/hairy/waxy leaves/spiky,
thick bark,
storage in trunks.
2 at 1 mark [2]
- (c) deflation hollow/sand blown away,
reaches water bearing rock/aquifer,
sloping/dipping (strata),
receives water from rainfall outside the desert,
water at surface in oasis.
3 at 1 mark [3]
- (d) (i) exfoliation/alternate expansion and contraction/onion weathering.
[1]
- (ii) high temperatures in the day/over 40°C,
night falls below 10° C/cool,
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,
main rock rounded,
process accelerated with slight amount of rain.
2 at 1 mark [2]
- (iii) Results.
[1]

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- 5 (a) (i) farmer produces for himself and family,
food crops,
little or no sales. 2 at 1 mark [2]
- (ii) ploughing - turning soil, making it ready for sowing crops,
planting - sowing crops,
harvesting - gathering/picking crops/uprooting. 3 at 1 mark [3]
- (iii) cost of newer methods,
tradition/culture,
lack of education/understanding/knowledge of newer methods,
only small plots. 2 at 1 mark [2]
- (iv) farmer does not have to time activities with rainy season,
given supply of water/reliable,
2 crops/double cropping,
extends growing season. 2 at 1 mark [2]
- (v) HYVs/better yielding seeds, up to 2 marks
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-operatives. 4 at 1 mark [4]
- (b) (i) **A** for 10 years.
- B** poverty,
unequal distribution of wealth,
population explosion in developing world.
- C** there is no food shortage,
population and food supply have increased,
problem - population growth greatest in developing countries which does not
feed all its people,
food shortages likely to worsen in the developing world.
For each of A, B and C Reserve 1 + 1 + 1 mark
5 at 1 mark [5]
- (ii) overpopulation,
lack of investment/poverty,
outdated methods of production/lack of fertilizer,
war/political unrest,
natural disasters,
credit examples, e.g. drought - Sahel etc. } max 2 marks
4 at 1 mark [4]

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- (iii) efficient methods,
large investment,
subsidies,
EU/CAP,
large-scale production,
extensive use of fertilisers,
pesticides,
machinery,
low increase of population,
educated labour force/training/modern methods,
favourable natural inputs,
surplus for export.
- 3 at 1 mark [3]
- 6 (a) (i) 62-63%.
- [1]
- (ii) mechanised agriculture,
primary products imported more cheaply.
- [1]
- (iii) greater percentage in primary,
less in manufacturing,
less in service sector.
- 3 at 1 mark [3]
- (iv) **developed countries –**
agriculture more mechanised,
earlier manufacturing – C19-C20,
developing countries going through industrial development,
greater demand for services,
greater amount of skill/educated/trained labour force,
more capital for investments.
- 3 at 1 mark [3]
- (v) provide a service, - reserve 1 mark
teachers,
lawyers,
transport workers etc.
- 3 at 1 mark [3]
- (b) (i) area.
- [1]
- (ii) **labour –**
skilled labour,
well educated/universities/technical colleges,
expert management,
different skill levels - subcontracting/division of labour.
- transport -**
high speed transport - components and products,
proximity to/links to airport,
major road links.

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research and development -

research and development/universities,
government support.

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

3 factors

3 at 1 mark [3]

(iii) not tied to location factors, e.g. raw materials,
free location. [1]

(c) (i) 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.

3 at 1 mark [3]

(ii) northern parts of
Europe,
Asia-Northern/Siberia,
N. America/Canada,
Arctic regions.

2 marks [2]

(iii) rise of sea level with increase of temperature,
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 drier areas may experience more rain,
desertification.

4 at 1 mark [4]