

Page 1	Mark Scheme	Syllabus	Paper
	IGCSE – June 2003	0460	01

- 1 (a) (i) 60/61 years,
39/38 years. 2 at 1 mark [2]
- (ii) **X** birth rate well above death rate,
Y as above but then reduction in growth,
increased death rate/declining birth rate,
Z birth rate above death rate, then decline/BR similar to DR. 3 at 1 mark [3]
- (b) (i) tradition,
religious pressures,
zeal for son - inheritance,
ignorance of large sectors of the population on need to reduce B.R/
low literacy rate/awareness,
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. 4 at 1 mark [4]
- (ii) **prevent** overpopulation,
avoid increase in dependency ratio,
lowering of living standards,
poverty,
shortages - water/land,
reduce risk of
greatly increased demand on resources,
high levels of 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]
- (iii) better medical facilities,
more food,
improved diets less malnutrition,
housing improvements,
improvements to water/sanitation,
more spending on older people,
education/awareness of need to look after the body/exercise etc. 4 at 1 mark [4]
- (c) (i) 5-9 years [1]
- (ii) depend economically on the 15-64 years/working population. [1]

Page 2	Mark Scheme	Syllabus	Paper
	IGCSE – June 2003	0460	01

- (iii) broad based pyramid - progressive,
large percentage below 15 years,
small population over 65,
0-4 narrower than 5-9,
credit reference to the shape of the pyramid,
no credit for references to birth rate/death rate.
- 3 at 1 mark [3]
- (iv) narrowing/reduction in youngest age groups –
lowering of birth rate,
increase in over 65s -
increase in life expectancy/reduction of death rate,
increase in 15-64 year olds -
reduction in young age groups.
- 3 at 1 mark [3]
- 2 (a)** (i) CBD or rural-urban fringe. [1]
- (ii) land too expensive in CBD,
planning control in rural-urban fringe/urban area not grown
out this far yet. [1]
- (iii) superstore - 1,
district shopping centre - 2,
row of shops - 5,
small shops - 8/9. [1]
- (iv) size,
sphere of influence/threshold differences,
order of services - convenience/durable goods.
- 2 at 1 mark [2]
- (v) out-of-town/not surrounded by residential areas,
larger,
has area around store - parking,
near major road junction,
higher order shop/needs large threshold/sphere of influence,
room for expansion.
- 3 at 1 mark [3]
- (vi) large area,
spacious layout/large car parking area,
away from congestion,
possibly room to expand,
possibly cheaper land,
near road junction - outer ring road and road from CBD,
proximity to large residential area.
- 3 at 1 mark [3]
- (vii) Z - more main roads,
grid-iron/rectangular pattern. [1]
- (viii) older,
less planning in area Z. [1]

Page 3	Mark Scheme	Syllabus	Paper
	IGCSE – June 2003	0460	01

- (b) For each choice:
description 1+1mark
reason 2+2 marks [3,3]
- (c) (i) *shortage of land in the CBD*
limited space,
great demand for location in the CBD –
shops/offices,
centre of city – convergence of routes,
large number of workers,
rush hours.
- housing shortages*
large population,
urbanisation/large numbers of migrants,
building programmes cannot keep pace with demand.
- traffic congestion*
increase in urban population,
preference for private transport,
commuting,
rush hours.
- For the chosen problem 2 at 1 mark [2]
- (ii) *shortage of land in the CBD*
encourage activities to locate away from city centre,
skyscrapers,
reclamation,
urban renewal.
- housing shortages*
build more houses,
develop new towns/satellite towns,
encourage movement away from city.
- traffic congestion*
encourage traffic away from city centres/by-pass roads,
promote public transport,
new public transport developments – mass rapid transport systems,
stagger working hours,
urban motorways/freeways,
encourage out of town parking,
charges for entry to city centre,
roundabouts NOT traffic lights.
Credit reference to actual examples to illustrate MAX. 1 mark
4 at 1 mark [4]
- 3 (a) (i) material carried by river – sand, stones, mud etc. [1]
- (ii) **three** of:
suspension,
solution,
saltation,
traction load.
3 at 1 mark [3]

Page 4	Mark Scheme	Syllabus	Paper
	IGCSE – June 2003	0460	01

- (iii) loss of energy,
insufficient water/small volume,
especially during dry season, shallowing of channel/braiding,
inner/convex bank of meander,
river enters still water of lake/sea,
decrease in velocity,
lessening of gradient –
below waterfall,
river carries more load than it can transport. [1]
- (b) (i) straighten its course. [1]
- (ii) **Q**
cliff at **A**, slip-off slope at **B**,
opposite at **R**,
symmetrical channel at **P**.
4 at 1 mark [4]
- (iii) **outer/concave bank** – more volume, greater velocity,
more erosion – undercutting, bank collapse – steep slope.
inner/convex bank – less volume, less velocity,
deposition – slip-off slope.
2 at 1 mark [2]
- (c) (i) west/NW/WNW. [1]
- (ii) 2 km. [1]
- (iii) **three** of:
waterfall – resistant rock/cap rock,
level topped,
high,
river splits over waterfall,
river shallow above waterfall,
deposition above the waterfall/islands with vegetation,
turbulence,
gorge/very steep sides/cliff,
gorge meanders,
deposited rock fragments – side of gorge,
gullies.
3 at 1 mark [3]
- (iv) interruption of river transport – waterfall,
problem of bridging the gorge,
road bridge carrying main road from settlement of Victoria Falls,
tourism – hotels,
employment,
contributed to growth of settlement,
hydro-electric power.
3 at 1 mark [3]

Page 5	Mark Scheme	Syllabus	Paper
	IGCSE – June 2003	0460	01

- (d) (i) resistant cap rock,
underlying softer rock eroded,
eddying/plunge pool,
undercutting,
by splashback. 3 at 1 mark [3]
- (ii) unsupported,
collapse,
retreat leaving gorge 2 at 1 mark [2]
- 4 (a) (i) **temperatures:**
high temperatures all year/every month 20° C - 30° C,
low annual range 6° C,
highest temperature - May 29° C. 2 at 1 mark [2]
- rainfall:**
high annual rainfall,
highest Dec. 270-280mm,
lowest rainfall Feb, May and Sept. about 180 mm,
no dry season. 2 at 1 mark [2]
- (ii) **A** emergents/upper layer,
B canopy layer,
C lianas,
D buttress roots/undergrowth/shrubs. 4 at 1 mark [4]
- (iii) lack of sunlight. [1]
- (iv) **three of:**
tall trees compete for sunlight,
little undergrowth – lack of sunlight,
heavy rainfall/high temperatures – prolific growth,
evergreen – no seasonal rhythm,
drip tips/waxy leaves/allow water to flow off quickly,
shallow roots – high rainfall – water in top layer of soil. 3 at 1 mark [3]
- (b) (i) 14% [1]
- (ii) timber,
farming/cattle ranching,
roads. 2 at 1 mark [2]
- (iii) no – marks for **two** reasons
trees gone,
empty fields,
pasture overgrown,
decline in cattle rearing,
farming unprofitable. 2 at 1 mark [2]

Page 6	Mark Scheme	Syllabus	Paper
	IGCSE – June 2003	0460	01

- (iv) increased run-off,
rivers – more volume – flooding
nutrient cycle broken/interrupted,
no roots to absorb nutrients from soil,
no replacement of nutrients with leaf fall and decay,
loss of nutrients to soil,
leaching by heavy rainfall,
higher rate of surface run-off with loss of nutrients,
loss of species,
animals die – loss of habitats,
may become extinct,
burning – contributes to global warming.
- 4 at 1 mark [4]
- (c) **n.b.** other natural environments acceptable as well as tropical rain forest,
with economic developments natural areas becoming less,
preserve the ecosystem,
prevent loss of species – plant and animal,
tourist potential,
control problems –
flooding,
soil erosion,
global warming etc.
- 4 at 1 mark [4]
- 5 (a) (i) **A** 9/8%,
B 60%.
- 2 at 1 mark [2]
- (ii) **X** more in tertiary,
more in secondary/manufacturing,
less in primary.
- 3 at 1 mark [3]
- (iii) **X** developed countries – **Y** developing,
Y greater dependence upon agriculture,
agriculture in **X** more mechanised,
X developed manufacturing C19-C20, **Y** developing manufacturing,
X more developed economies – greater demand for services,
X greater amount of skill/educated/trained labour force,
X more capital for investments.
- 3 at 1 mark [3]
- (b) (i) vehicle constructed by adding components on an assembly line,
inputs – what goes into assembly
- components and raw materials, labour etc.
- 2 at 1 mark [2]

Page 7	Mark Scheme	Syllabus	Paper
	IGCSE – June 2003	0460	01

	(ii)	A cheaper production/skilled labour.	[1]
		B reduce transport costs.	[1]
		C assembly line/mass production, storage of raw materials, finished vehicles, parking for workers, room for possible expansion.	<u>2 at 1 mark</u> [2]
		D mass production, some skilled labour - component production, semi-skilled/unskilled - assembly work, office work, transport.	<u>2 at 1 mark</u> [2]
(c)	(i)	named example - crop/system.	[1]
	(ii)	for each of three of transport, capital, labour, markets <u>Reserve 1 + 1 + 1 marks</u> additional marks <u>2 marks</u>	[5]
	(iii)	processes - e.g. sowing, transplanting seedlings etc. <u>3 at 1 mark</u> n.b. for a general account allow 3 MAX for processes ONLY	[3]
6 (a)	(i)	20%	[1]
	(ii)	coal.	[1]
	(iii)	less pollution, both are renewable sources of energy.	<u>2 at 1 mark</u> [2]
	(iv)	A wind not constant, noise. B sun's energy varies, difficult to store. allow cost/visual pollution in either A or B	<u>1 mark</u> <u>1 mark</u> [2]
	(v)	high cost, oil/natural gas provide more energy, competition with renewable forms of energy, declining reserves, non renewable, pollution - allow development up to <u>2 marks</u>	<u>3 at 1 mark</u> [3]
(b)		plentiful supply, transportable – supertankers/pipelines.	<u>2 at 1 mark</u> [2]

Page 8	Mark Scheme	Syllabus	Paper
	IGCSE – June 2003	0460	01

- (c) **advantages**
less pollution than coal,
large reserves of uranium,
low running cost.
- Reserve 2 marks
- problems**
concerns over safety/possible accidents,
Chernobyl,
radio-activity - health problems,
difficulty of storing/disposing of nuclear waste,
nuclear power stations take a long time to build,
expensive to dismantle,
competition with renewables.
- Reserve 2 marks
- additional mark for either 1 mark [5]
- (d) (i) named region/country - reference only (no marks for name)
income,
employment directly,
other related employment - building, transport etc.,
diversifies economy,
preservation of cultural heritage,
improved standard of living,
better cultural understanding,
preserves natural environment,
tourist facilities can be used by local people,
prestige for country.
- 5 at 1 mark [5]
- (ii) **A** area (allow national parks in general) [1]
- B** publicity,
education/awareness,
planning control,
develop nature tours,
encourage activities which are compatible with nature –
bird watching, jungle trekking, rafting etc.
establish national parks/forest parks etc.
- 3 at 1 mark [3]

Page 1	Mark Scheme	Syllabus	Paper
	IGCSE – June 2003	0460	02

- 1 (a) (i) steep rise in population up to 1999,
constant/steady growth,
almost trebled 1950-99,
varied estimates over the next 50 years,
high estimate will almost double again,
low estimate will level out at about 7 billions from 2020.
3 at 1 mark [3]
- (ii) **X** birth rate well above death rate,
continues to grow rapidly.
Y as above but then reduction in growth,
increased death rate/declining birth rate.
2 at 1 mark [2]
- (iii) **Z** birth rate above death rate,
then decline - lowering of birth rate,
reasons for low birth rate.
2 at 1 mark [2]
- (b) (i) **A** reduction in birth rate –
birth control/contraceptives,
abortion,
sterilisation,
education about family planning/awareness/advertisements,
reward examples e.g.
China's one-child policy,
salary bonus - 10%,
priority in education/health facilities/employment/housing,
fines - 2nd child/annual tax, 1 mark details - one child policy,
death rate higher than birth rate in some countries,
emancipation of women etc.
fall in birth rate - ageing population.
credit references made to rise in birth rate also.
- B** fall in death rate –
better medical facilities,
more food,
improved diets less malnutrition,
housing improvements,
more spending on older people,
education/awareness of need to look after the body/exercise etc.
increase in death rate in some countries -
aids etc.,
- For each of **A** and **B** Reserve 3 + 3 marks
Additional mark for either 1 mark [7]

- (ii) overpopulation,
 increase in dependency ratio,
 pressure on services - electricity/gas/sanitation etc.,
 lowering of living standards,
 poverty,
 greater demand on resources,
 high levels of unemployment,
 famine/food shortages,
 malnutrition,
 decline of infrastructure - e.g. roads,
 inadequate housing/squatters,
 shortages - water/land,
 exhaustion of soil,
 lowering of educational facilities,
 lack of health facilities,
 possible civil unrest etc.
- 5 at 1 mark [5]

- (c) broad/wide based pyramid - progressive,
 large percentage below 15 years,
 small population over 65,
 0-4 narrower than 5-9,
 reference to shape,
 high dependency ratio.
- Reserve 2 marks
- high birth rate,
 low life expectancy/high death rate,
 lowering of birth rate.
- Reserve 2 marks

MAX reference to reasons for high BR and high DR
 additional marks

1 mark
2 marks [6]

- 2 (a) (i) **A** large area,
 spacious layout/large car parking area,
 away from congestion,
 possibly room to expand,
 possibly cheaper land,
 near road junction - outer ring road and road from CBD,
 proximity to large residential area.
- 4 at 1 mark [4]

B junction of roads,
 in large residential area,
 away from CBD.

3 at 1 mark [3]

- (ii) more local stores - convenience goods,
 small sphere of influence/low threshold,
 fewer district shopping centres - competition,
 need larger threshold,
 most of local shops - in older residential areas.
- 3 at 1 mark [3]

	(iii)	Area Z older, grid-iron/rectangular layout, less planning.	<u>2 at 1 mark</u>	[2]	
	(b)	description/location reasons additional mark For each choice	<u>Reserve 1 mark</u> <u>Reserve 2 marks</u> <u>1 mark</u> <u>4 + 4 marks</u>	[4]	
	(c)	to prevent urban sprawl, protect agricultural land, provide open space around town/city - recreation, prevent joining up of neighbouring towns/cities, formation of conurbations, credit reference made to measures such as green belts, towns/cities in developing countries - prevent development of squatter settlements. no credit for examples.	<u>5 at 1 mark</u>	[5]	
3	(a)	(i)	description of – suspension, solution, saltation, traction load. 2 names only without description	<u>1 mark</u> <u>4 at 1 mark</u>	[4]
		(ii)	loss of energy, insufficient water/small volume, especially during dry season, shallowing of channel/braiding, inner/convex bank of meander, river enters still water of lake/sea, decrease in velocity, lessening of gradient – below waterfall. river carries more load than it can transport,	<u>4 at 1 mark</u>	[4]
	(b)	(i)	waterfall - resistant rock/cap rock, level topped, high, river splits over waterfall, river shallow above waterfall, deposition above the waterfall/islands with vegetation, turbulence, rapids, gorge/very steep sides/cliff, gorge meanders, deposited rock fragments - side of gorge, gullies.	<u>6 at 1 mark</u>	[6]

Page 4	Mark Scheme	Syllabus	Paper
	IGCSE – June 2003	0460	02

- (ii) interruption of river transport - waterfall,
 problem of bridging the gorge,
 road bridge carrying main road from settlement of Victoria Falls,
 tourism - hotels,
 employment,
 contributed to growth of settlement,
 hydro-electric power.
 5 at 1 mark [5]
- (c) resistant cap rock,
 underlying softer rock eroded,
 eddying/plunge pool,
 undercutting,
 erosional processes MAX 1 mark
 by splashback,
 unsupported,
 collapse,
 retreat leaving gorge.
 6 at 1 mark [6]
- 4 (a) (i) high temperatures all year/every month 20° C - 30° C,
 low annual range 6° C,
 highest temperature - April 29° C,
 high annual rainfall,
 highest Dec. 270-280 mm,
 lowest rainfall Feb, May and Sept. about 180 mm,
 no dry season.
 4 at 1 mark [4]
- (ii) emergents 40-45m,
 canopy layer 30m +,
 crowns interlock,
 lianas,
 epiphytes attached to branches/trunks,
 tall trees,
 straight trunks,
 first storey 15-20m,
 bark smooth,
 little leaf litter/undergrowth,
 trees close together,
 buttress roots,
 ferns, herbs and low growing plants, fungi,
 trees have broad leaves,
 drip tips,
 waxy/leathery leaves,
 shallow roots,
 evergreen forest.
 5 at 1 mark [5]
- (iii) tall trees compete for sunlight,
 little undergrowth - lack of sunlight,
 heavy rainfall/high temperatures - prolific growth,
 evergreen - no seasonal rhythm,
 drip tips/waxy leaves/allow water to flow off quickly,
 shallow roots - high rainfall - water in top layer of soil.
 4 at 1 mark [4]

Page 5	Mark Scheme	Syllabus	Paper
	IGCSE – June 2003	0460	02

(b) (i) **A** loss of forest,
 14% Amazonia last 10 years, usable timber trees gone,
 empty fields,
 pasture overgrown,
 decline in cattle rearing,
 farming unprofitable.

3 at 1 mark [3]

B less interception,
 more percolation,
 increases flow into rivers by throughflow,
 increased run-off,
 rivers - more volume – flooding,
 nutrient cycle broken/interrupted,
 no roots to absorb nutrients from soil,
 no replacement of nutrients with leaf fall and decay,
 loss of nutrients to soil,
 leaching by heavy rainfall,
 higher rate of surface run-off with loss of nutrients,
 loss of species,
 animals die - loss of habitats, may become extinct,
 burning - contributes to global warming.

4 at 1 mark [4]

(ii) **n.b.** other natural environments acceptable as well as tropical rain forest.
 with economic developments becoming less,
 preserve the ecosystem,
 prevent loss of species - plant and animal,
 tourist potential,
 control problems -
 flooding,
 soil erosion,
 desertification,
 global warming etc.

5 at 1 mark [5]

5 (a) **Y** greater dependence upon agriculture,
X developed countries, **Y** developing countries,
 agriculture in **X** more mechanised,
X developed manufacturing C19-C20, **Y** developing manufacturing,
X more developed economies - greater demand for services,
X greater amount of skill/educated/trained labour force,
X more capital for investments.

5 at 1 mark [5]

(b) **labour** - large labour force required,
assembly line,
skilled/semi-skilled,
components - large number,
central location - assembling from many subsidiary factories,
raw materials - availability of sheet steel etc,
siting factors - large area –
large factory, storage, parking,
level land,
capital - large-scale production,
factory,
purchase/storage large quantities of components/raw materials,
large labour force – salaries,
transport -
bringing components,
vehicles - markets,
assembling of large number of workers,
markets -
home/regional,
export details.
named location 1 mark
for each of 4+ factors 9 at 1 mark [10]

(c) credit crop names/locations if given, RES and MAX 1 mark
for each of natural inputs, human inputs, outputs/markets,
processes, capital. Reserve 2 + 2 + 2 marks
crops/outputs MAX 3 marks [10]

6 (a) (i) cost,
concerns over safety/radio-activity,
difficulty of storing/disposing of nuclear waste,
nuclear power stations take a long time to build,
expensive to dismantle,
limited life of power stations,
competition with renewables. 4 at 1 mark [4]

(ii) decline in reserves,
competition with oil/natural gas,
competition with alternative sources of energy,
high cost,
pollution - if developed up to 2 marks. 5 at 1 mark [5]

(iii) renewable,
little pollution,
lower running costs,
improved technology,
security of supply - countries do not rely on others,
some units small scale serve local areas - cut down on
transport costs,
short construction times,
countries may cut down on costly oil imports. 4 at 1 mark [4]

Page 7	Mark Scheme	Syllabus	Paper
	IGCSE – June 2003	0460	02

- (b) (i) named natural area 1 mark
natural attractions 3 at 1 mark
other reasons e.g. accessibility MAX 2 marks [4]
- (ii) help control: loss of natural landscape, natural attractions of area, up to 2 marks
prevent over-development of infrastructure - roads, airports, hotels
etc., up to 2 marks
cut loss of natural habitats,
check pollution up to 2 marks
general benefits e.g. employment MAX 2 marks
4 at 1 mark [4]
- (iii) publicity,
education/awareness,
planning control,
develop nature tours,
encourage activities which are compatible with nature –
bird watching, jungle trekking, rafting etc.
establish national parks/forest parks etc.
4 at 1 mark [4]

Page 1	Mark Scheme	Syllabus	Paper
	IGCSE – June 2003	0460	03

1	(a)	(i)	(estate) office.		= 1
		(ii)	187376 or 186376.	(Reversed or wrong square = 0)	= 1
	(b)	(i)	north-east.		= 1
		(ii)	2650 – 2800.		= 1
	(c)		forest, low forest/woodland, scrub, palms.	4 at 1	= 4
	(d)		banana and coconut.		= 1
	(e)		forest, narrow/deep valleys, highland/hilly/mountains, steep slopes, no flat land/all slopes/lack of flat, no/lack of roads/few, scrub/low forest/woodland.	4 at 1	= 4
	(f)		hospital/health, school/education, church/religion, post (office), police (station)/law, cemetery, public works department, water.	2 services = 1 mark 3 at 1	= 3
	(g)		mud/sand/beach, peninsula/point/headland, bay/cove, island/stack, cliffs, river mouth, wave cut platform, blow hole, (extract from place names).	4 at 1	= 4
2	(a)		P – mercury/alcohol, Q – muslin/gauze, R – wick/string/cord, S – water/reservoir/jar/bottle.	2 correct for 1 mark 2 at 1	= 2
	(b)		4°C,	= 1	
			dry bulb temp. minus wet bulb (temp)/25(°C) minus 21(°C).	= 1	= 2
	(c)		70%.		= 1

Page 2	Mark Scheme	Syllabus	Paper
	IGCSE – June 2003	0460	03

	(d)	amount of water (vapour) in air expressed (as a %) of what the air could hold (at a given temperature).		= 1
3	(a)	A = 4 B = 1	2 at 1	= 2
	(b) (i)	low birth rate low death rate, even shaped pyramid, few young many old.		= 1
	(ii)	high birth rate high death rate, wide base narrow top, many young few old, progressive.		= 1
	(c)	Stage 1/Stage 4, death rate higher than birth rate, more die than are born.	Stage and reason	= 1
	(d)	2, biggest difference between birth and death rate.	Both answers	= 1
4	(a)	2 correctly positioned lines.	2 at 1	= 2
	(b)	70(%)		= 1
	(c)	B	= 1	
		more primary/high, less secondary/few/smaller, less tertiary/few.	2 at 1 = 2	= 3
5	(a)	enlarged in size/more buildings/added riding stables.		= 1
	(b)	commuters.		= 1
	(c)	school, shop, post office, bus stop.	(2 services for 1 mark) 2 x 1	= 2
	(d)	riding stables, restaurant, car park.	3 at 1	= 3
6	(a) (i)	section/part of earth's crust/surface layer part of earth floating on mantle.		= 1
	(ii)	Nazca, South American, Antarctic.	Any 2	= 1

Page 3	Mark Scheme	Syllabus	Paper
	IGCSE – June 2003	0460	03

	(iii)	pulling apart/diverging /separating/spreading.		= 1
(b)	(i)	epicentre.		= 1
	(ii)	city, greatest intensity/nearest epicentre/above origin.	2 at 1	= 2
	(iii)	bursting of dam/loss of water supply/damage, flooding, tidal waves, break in communications/motorway, damage to boats/port, landslides, damage to bridge.	2 at 1	= 2
7	(a)	by-pass/motorway, (outer) ring road.	2 at 1	= 2
	(b)	bus lanes.		= 1
	(c)	(light/electric) railway/trains, park and ride, limited access/no private cars, pedestrianised streets, (inner) ring road, multi-storey, car parks.	4 at 1	= 4

Page 1	Mark Scheme	Syllabus	Paper
	IGCSE – June 2003	0460	05

1 (a)	Name of student/group; date; time; weather; site number/location of recording	3 at 1 mark	[3]
(b)	e.g. SW Path and NE Path becomes narrower overall; (1.9 – 0.3m) (1.9 – 0.2) – no comparison required	2 at 1 mark	[2]
(c) (i)	Detailed discussion/comparison based on site distance from Information Centre with reference to both paths; comment on the changes across the path	Single point marking Res mark for across site/distance from IC. Max 4 if no data	[6]
(ii)	Unrepresentative site location; student inaccuracy in measuring/recognising bare ground; location of the centre of the path; no relief detail known	2 at 1 mark	[2]
(d) (i)	The number of visitors will change during the day; to gain a representative sample	1 at 1 mark	[1]
(ii)	Tally counts	1 at 1 mark	[1]
(iii)	400 m; total result highest at 400 m; over 400 m numbers rapidly decline	3 at 1 mark res 1 mark for distance credit data	[3]
(e) (i)	Trampling by feet; reduction in growth; removal of vegetation/plants/roots; roots no longer hold the soil together; susceptible to soil erosion by wind and water	5 at 1 mark	[5]
(ii)	Information Centre – 400 m SW centre of path; use alternative routes to let plants recover; fence off area; put down wooden boards/tarmac	3 at 1 mark res 1 mark for suggestion	[3]
(f)	At each 200 m site; design recording sheet; design environmental survey with scoring system; plenty of litter = high score/little little – low score	4 at 1 mark res 1 mark for location of survey	[4]

Total 30 marks

Page 2	Mark Scheme	Syllabus	Paper
	IGCSE – June 2003	0460	05

2	(a)	(i)	The order of settlement;	1 mark	[1 mark]
		(ii)	No of services/traffic volume increases/decreases; Population increases; area increases	3 at 1 mark res 1 mark des/exp	[3]
	(b)	(i)	Data which the candidate did not collect/not primary first-hand collected data but collected by someone else e.g. map/census/weather station data	1 mark definition 1 mark example	[2]
		(ii)	e.g. Settlement A has basic services of Church, Postal Agency, School; Settlement B and C have different services in addition to the basic services	2 at 1 mark	[2]
	(c)	(i)	Correct plotting of data on scattergraph: A = 4, 38 B = 7, 76 C = 14, 210	3 at 1 mark for correct plotting	[3]
		(ii)	As transparency best fit Line	2 marks if accurate 1 mark if within 2 mm	[2]
	(d)	(i)	Appropriate route way; appropriate extent of settlement	2 marks for each settlement type Max 1 if no diagram	[4]
		(ii)	Not to miss traffic; reference to linear or nucleated settlement patterns	1 mark for simple credit development	[2]
		(iii)	Different day; different time; different weather; representative sample/true picture/accurate/different traffic volume	2 at 1 mark res 1 mark for when and 1 mark for why	[2]
	(e)		Correct construction and completion of bar graph Axis number/divisions; labelling of both axes; Title appropriate; correct bars (i.e. 2, 10, 56);	5 at 1 mark	[5]
	(f)		Hypothesis true/correct; Comment in support using both traffic and services data concerning Settlements A, B and C focusing on the size of settlements and the number of services not type	4 at 1 mark res 1 mark for decision res 1 mark for traffic and services comment Max 3 mark if no ref to data	[4]

Total 30 marks

Grade thresholds taken for Syllabus 0460 (Geography) in the June 2003 examination

	maximum mark available	minimum mark required for grade:			
		A	C	E	F
Component 1	75		39	30	20
Component 2	75	50	28	17	
Component 3	60	46	35	27	22
Component 5	60	43	33	19	15

The threshold (minimum mark) for B is set halfway between those for Grades A and C.

The threshold (minimum mark) for D is set halfway between those for Grades C and E.

The threshold (minimum mark) for G is set as many marks below the F threshold as the E threshold is above it.

Grade A* does not exist at the level of an individual component.