

GCSE

Edexcel GCSE

Geography B (1313 4H)

Summer 2006

Mark Scheme (Results)

Question A1

- (a) i) Mexico City or Tokyo (1)
 ii) Mexico City (1)

- (b) i) Push = factors/conditions **forcing** people to leave an area (1)
 Pull = factors/conditions **attracting** people to move into an area (1)
 Accept positive and negative factors if correctly matched to push and pull respectively.
 NB annotations on a diagram are acceptable
 (but credit annotations only, not the diagram itself) 1+1

Credit any appropriate factors
 e.g. push - lack of: jobs (1) food (1) education (1) healthcare (1)
 transport (1) sanitation (1); crop failure (1)
 natural disasters (1) etc.
 pull - better: housing (1) water supply (1) etc.
 entertainment (1) paid employment (1) etc.
 Credit appropriate references to urban-rural and international migration. (4)

- ii) lack of infrastructure (1)
lack of: clean/ running water (1) sanitation/sewerage(1) electricity (1)
 doctors/ hospitals/medical care(1) jobs(1) schools/education (1)
 crime (1) disease (1) housing in danger of demolition/removal(1)
 overcrowding (1) poor quality construction (1)
 Poor living conditions (1) only if not gained a mark for a specific example of this 4x1
 (4)

(c) (i)

Level 1 1 - 2 marks	Mentions one or two general facts about the growing importance of Cambridge e.g. increase in jobs; improved transport connections to London May make little or no reference to information from the fact-file, or simply repeat facts.
Level 2 3 - 4 marks	Mentions three or four facts about the growing importance of Cambridge, or links one or two to facts about transport problems eg. Increase of (over 9000) jobs (in 1980s) means more congestion in rush hours/throughout the day. Must quote from the fact-file to gain the top mark.
Level 3 5 marks	Explains two facts about the growing importance of Cambridge e.g. as Cambridge is a market town and historic university city, there are many tourists, which has generated increased transport demands/added to commuter traffic/required an expansion of public transport/causes congestion throughout the day. <u>Must expand on information</u> from the fact-file at this level.

(5)

- ii) Congestion/slower traffic/traffic jams (1)
 Noise (pollution) (1) air pollution (1)
 Difficulty getting to work (1) danger of accidents (1)
 Parking outside residents homes (1)
 Not pollution on its own (3)

(d) **park and ride:**
 cars left in designated car park on edge of city (1)
 and public transport / bus taken into city centre (1)
 fewer cars (in city centre) (1) less air/noise pollution (1)
 traffic moves more freely (1) so travel times reduced (1)
 less road maintenance (1)

congestion charging:
 paying a fee to use roads in city centre (1)
 means fewer cars (1) and less air/noise pollution (1)
 traffic moves more freely (1) so travel times reduced (1)
 also encourages use of public transport / other methods (1)
 money gained can be reinvested in roads/transport (1)

improved public transport:
 more frequent buses / trains or more routes operated (1)
 means fewer cars (1) and less air/noise pollution (1)
 traffic moves more freely so travel times reduced (1)
 integration of bus/train/tram (1) cheaper fares (1)

cycle lanes:
 enables cyclists to ride safely (1) and more quickly (1)
 causes zero pollution (1) and is healthy (1) reduces the use of cars (1)

restrictions on car use:
 cars banned from certain roads (1) at certain times / peak periods (1)
 maybe by road pricing / charging (1)
 means fewer cars (1) and less air/noise pollution (1)
 traffic moves more freely (1) so travel times reduced (1)
 also encourages use of public transport / other methods (1)
 less road maintenance (1)
 [NB max 3 marks if candidate omits either how it works or
 how it helps to make cities more sustainable.] 1+3, 2+2 or 3+1

(4)

(e)

Level 1 1 - 3 marks	Mentions one or two advantages e.g. provides jobs, money Mentions one or two disadvantages e.g. profits go overseas, labour force is poorly paid.
Level 2 4 - 6 marks	Mentions three or four of advantages, or describes one or two in more detail e.g. brings investment and foreign currency, development of transport and infrastructure, prestige Mentions three or four of disadvantages, or describes one or two in more detail e.g. few local skilled workers employed, may increase national debt. To reach the top mark at this level, candidates should write in sentences with a clear and structured style; they should spell, punctuate and use the rules of grammar with some accuracy.
Level 3 7 - 8 marks	Explains one or two advantages in detail e.g. increased GNP leads to increased demand for goods and growth of new industries (multiplier effect) Explains one or two disadvantages in detail e.g. mechanisation reduces opportunities for jobs, GNP grows less quickly than that of the parent company's MEDC, so the gap widens To gain the top mark, should show detailed knowledge of the chosen TNC example / location. To reach the top mark at this level, candidates should write in sentences that are clear, structured and coherent; spell, punctuate and use the rules of grammar with accuracy, using specialist terms appropriately.

Max. 6 marks if TNC not named

(8)

Total for question: 30 marks

Question A2

- (a) Sand (1)
Shingle (1) (2)

- (b) (i) To stop LSD (1) by trapping sand to form beach (1)
OR Prevents loss of sand (1) by LSD (1)
to form or keep beach (1) which breaks waves(1)
and absorbs wave energy (1) (3)

- (ii) e.g. beach nourishment (1) / cliff drainage/grading (1) dune stabilisation(1)
Advantages: adding sand makes beach wider/higher (1)
cliff drainage removes water/weight in the cliff (1)
cliff grading makes slope gentler/more stable (1)
planting dune grasses stops sand erosion by wind(1)
cheap(er) (1) / blends in with environment/'natural' (1)
Disadvantages: doesn't last (as) long/not (as) permanent (1)
expensive if it has to be continually repeated (1)

NB 1 mark each for type, advantage, disadvantage (3)

- (c) e.g.
For: Environmentalists / naturalists
to prevent loss of nature reserve / wildlife / habitats

Against: Residents / businessmen / taxpayers expense not justified in an area where there are no properties etc.

Level 1	1 - 2 marks	Mentions one or two arguments for and/or against protection. May not name any groups of people.
Level 2	3 - 4 marks	Explains one or two arguments for and/or against protection. Names at least one group of people.
Level 3	5 marks	Explains three arguments for and against protection (1+2 or 2+1). Names at least one group of people for, and one against.

- (d) (i) Stour (5)
(1)

- (ii) River is close to / restricted by housing / built up area (1)
river is tidal (1) land is flat / low-lying (1)
Lots of impermeable surfaces (1) (2)

- (e) (i) Loss of / damage to: property (1) possessions (1)
business/jobs/livelihoods (1)
Disruption of transport (1) loss of power (1) (3)

- ii) Widening (1) deepening (1) straightening (1) the river channel
creating wetlands (upstream) (1) building levees (1)
controlling / preventing development / building near the river (1)
afforestation (1)

+ 1 mark for development: eg. Widening/deepening/levees to increase channel capacity (1)
straightening to speed up river flow (1)
wetlands to absorb floodwater (1)
forests planted to encourage infiltration of water (1) (3)

(f)

Level 1 1 - 3 marks	Mentions one or two effects e.g. deaths, destruction of property. Mentions one or two responses e.g. search and rescue by emergency services.
Level 2 4 - 6 marks	Mentions three or four effects, or describes one or two in more detail e.g. deaths due to collapsed buildings / fire; disruption of infrastructure Mentions a range of responses, or explains one or two in more detail e.g. use of international aid agencies, short and long term responses. To reach the top mark at this level, candidates should write in sentences with a clear and structured style; they should spell, punctuate and use the rules of grammar with some accuracy.
Level 3 7 - 8 marks	Describes three or four effects, some in detail e.g. effect on economy of the area, short and long term effects. Explains a range of responses, some in detail e.g. use of thermal imaging cameras to locate trapped people. To gain the top mark, should show detailed knowledge of the chosen example / location. To reach the top mark at this level, candidates should write in sentences that are clear, structured and coherent; spell, punctuate and use the rules of grammar with accuracy, using specialist terms appropriately.

Max. 6 marks if location not named

(8)

Total for question: 30 marks

Question B3

(a) (i) 4 of: atmosphere groundwater lakes rivers ice caps
 1 or 2 correct = 1 mark 3 or 4 correct = 2 marks

(2)

ii) ice caps (1)

(1)

(b)

Level 1 1 - 2 marks	Mentions one or two simple ways in which rainfall reliability varies e.g. regular rainfall in some areas lack of rainfall in deserts
Level 2 3 - 4 marks	Mentions one or two ways in which rainfall reliability varies, eg regular rainfall near the equator or describes one in some detail eg daily rainfall near the equator
Level 3 5 marks	Describes in detail two ways in which rainfall reliability varies eg daily thunderstorms/convection rain near the equator due to high temperatures; must refer to specific climatic regions for this top level

Credit any valid explanations of reliability

(5)

(c) (i) Two correct divisions (2)
 Correct shading of bar (1)
 NB Max. 2 marks if shading untidy

(3)

(ii) **Increase** in population/housing (1) **increased** domestic use/use of appliances eg dishwashers/washing machines(1)
increased recreational use (1) eg. use on golf courses / swimming pools (1)
increased industrial use (1) for cooling / cleaning (1)
increased irrigation (1) due to high temperatures/possible global warming (1) or increased evaporation (1)

(4)

(d)

Level 1 1 - 2 marks	Mentions one or two causes of pollution e.g. industrial waste, domestic sewage, leakages from boats, fertilisers from farmland Mentions one strategy e.g. controls on waste emissions
Level 2 3 - 4 marks	Mentions three or four causes of pollution, or describes one or two in some detail e.g. may refer to the type of pollutant and/or the source Explains one strategy e.g. may refer to specific schemes
Level 3 5 marks	Describes the causes of pollution in detail, <u>and</u> explains one strategy thoroughly Must include specific event / location detail for this top level

Max. 4 marks if lake / river not named

(5)

Total for question: 20 marks

Question B4

- (a) i) The period during which temps. are high enough (1)
 to allow crops to grow (1)
 when average temp. is above 6 deg. C (1)
 Accept: period of time when weather is suitable for growing crops (1) (2)

- ii) Longest / over 8 months in the SW/ Devon + Cornwall/ (S)W Wales (1)
 Shortest / under 5 months in the far N / NW/ Scotland/ Lake District/
 N Wales(1)
 Decreases from S/SW to N/NW (1) (2)

(b)

Level 1 1 - 2 marks	Mentions one or two ways in which farming type is affected by growing season e.g. sheep in shortest growing season areas
Level 2 3 - 4 marks	Mentions 3 or 4 ways in which farming type is affected by growing season, or explains one or two in some detail e.g. sheep where growing season is under 5 months, horticulture where growing season is over 8 months. May refer to specific climatic facts e.g. temps. above 6°C.
Level 3 5 marks	Explains in detail 2 or 3 ways in which farming type is affected by growing season; e.g. sheep in NW and highlands where growing season is under 5 months, horticulture in SW where growing season is over 8 months. May refer to specific climatic facts and / or to other factors eg rainfall, altitude.

(5)

- (c) i) Two correct divisions (2)
 Correct shading of bar (1)
 NB Max. 2 marks if shading untidy (3)

- ii) Marks must be for developed points not just accumulated single, undeveloped effects.
 Good: longer growing season (1) more/different crops able to be grown (1) e.g. mediterranean crops in Britain (1), Boost to tourism because of increased sunshine (1)

Bad: melting of ice caps (1) so increasing sea levels (1)
 leading to coastal flooding (1)
 higher energy in atmosphere (1) so stronger winds/more storms (1)
 NB Accept: more rainfall in some places but less in others (1)
 for *either* good or bad (but not both)
 Crop failure (1) so famine *(1) so forced migration (1)
 Deforestation (1) due to reduced rainfall (1)
 Declining fishing grounds (1) because fish migrate to cooler water (1)
 Spread of disease/illness (1) due to heat waves/spread of insects (1)
 Decline of ski resorts (1) due to lack of snow (1)
 NOT acid rain or destroying ozone layer

1 + 2 or 2 + 1 (3)

(d) Acid rain:

Level 1 1 - 2 marks	Mentions one or two activities e.g. industrial waste emissions, burning fossil fuels. Mentions the effects simply e.g. forests die, lakes acidified / fish die.
Level 2 3 - 4 marks	Mentions three or four activities, or describes one or two in some detail e.g. power stations emit SO ₂ , burning fossil fuels produces nitrous oxide (NO _x). Explains the effects simply e.g. acid rain causes buildings to corrode health risks.
Level 3 5 marks	Describes two or three of man's activities in detail, and explains the effects thoroughly eg. Acid rain causes limestone buildings to corrode. Must include specific process / location detail for this top level.

Max 4 marks if location not named

(5)

Urban micro-climate:

Level 1 1 - 2 marks	Mentions one or two characteristics e.g. increased temperatures, rainfall. Mentions the human activities responsible simply e.g. removal of vegetation and building tall offices.
Level 2 3 - 4 marks	Mentions three or four characteristics, or describes one or two in some detail e.g. urban 'heat island', disruption of wind flow, increased cloud/fog. Explains the human activities responsible simply e.g. buildings retaining / causing heat.
Level 3 5 marks	Describes 2 or 3 characteristics in detail, and explains the human activities responsible thoroughly eg. increased traffic in urban areas causing condensation nuclei; Must include specific process / location detail for this top level.

Max 4 marks if location not named

(5)

Total for question: 20 marks

Question C5

- (a) NB Difference must be stated, by mentioning A *and* B, or by using comparative terms e.g. 'more', 'less'/'fewer' etc.
A has flat land, B is hilly/undulating (1)
A has (one) large field(s), B has many small fields (1)
A has no hedgerows, B has many hedgerows (1)
A is arable/wheat, B is pastoral/grass (1)
A has machinery, B does not / no evidence of machinery (1)
Max. 2 marks for separate descriptions/sections containing valid points 4x1 (4)
- (b) Hedgerow removal: destroys wildlife / habitats (1)
exposes fields to wind (1) soil erosion (1)
Using chemical fertilisers: kills insects/wildlife (1)
chemicals enter food chain (1) are danger to animals (1)
wash out into rivers (1) leading to eutrophication (1)
Repeated ploughing: breaks down soil structure(1) compacts soil at depth(1)
can lead to soil erosion (1) kills soil organisms (1)
2+2+2 (6)
- (c) Using genes from one plant in another (1)
producing hybrids (1) cross-breeding (1)
crops which have changed/mutated due to artificial intervention (1)
NOT accept 'crops made by scientists'
Accept: where characteristics of one crop have been added to another to produce a better/improved variety (1)
(1)
- (d) i) They are seen as safe (1) and environmentally friendly (1)
reduce the need for chemical use (1) produce higher yields (1)
tolerate disease better (1)
they may reduce global hunger/food shortages (1)
they may reduce the cost of foods (1)
(2)
- ii) Genetic modification is unpredictable (1)
may produce health risks (1) may eliminate natural plants (1)
may contaminate other/organic crops (1)
may adversely affect insects (1)
may upset the natural ecological balance (1)
(2)

(e) Either: Desertification:

Level 1 1 - 2 marks	Describes the location in general terms, probably without a sketch map eg. Sahel in Africa Mentions one or two measures taken simply e.g. controlling grazing.
Level 2 3 - 4 marks	Describes the location accurately / precisely, and may include a sketch map eg. Sahel in N.Africa or near Sahara. Explains the measure(s) taken simply e.g. using irrigation to improve soil or crop growth.
Level 3 5 marks	Describes the location accurately and precisely, and may include a sketch map eg. Sahel South of Sahara naming countries eg. Mali, Sudan Explains the measure(s) taken in detail e.g. controlling grazing to help preserve vegetation which will reduce soil erosion. Must include specific process / location detail for this top level.

Max 4 marks if LEDC area not named; Max 2 marks if MEDC area chosen

(5)

Or: Deforestation:

Level 1 1 - 2 marks	Describes the location in general terms, probably without a sketch map eg. Amazon in S.America Mentions 1 or 2 measures taken simply e.g. replanting.
Level 2 3 - 4 marks	Describes the location accurately / precisely, and may include a sketch map eg. Amazon in Brazil near equator. Explains the measure(s) taken simply e.g. selective forest clearance, replanting to preserve the forest and habitats.
Level 3 5 marks	Describes the location accurately and precisely, and may include a sketch map eg. Amazon in Brazil and Peru within Tropics. Explains the measure(s) taken in detail eg. replanting to preserve the forest, protecting wildlife and habitats, thereby encouraging sustainability. Must include specific process / location detail for this top level.

Max 4 marks if LEDC area not named; Max 2 marks if MEDC area chosen

(5)

Total for question: 20 marks

Question C6

- (a) i) rugged scenery / countryside (1) forests (1) peace / quiet (1) 2x1 (2)
- ii) walking / hiking (1) rock climbing (1) watching birds / wildlife (1) orienteering (1)
cycling/mountain biking (1) picnicking (1) photography (1) paragliding/hang gliding (1)
pony trekking/horse riding(1) kite flying (1) camping/caravanning (1) Sightseeing (1) 2x1 (2)
- (b) i) A place to which many tourists are attracted (1) or
a place which is very popular for tourists/visitors (1) (1)
- ii) more leisure time / holidays (1) higher / more disposable income (1)
greater accessibility / better roads (1) / greater car ownership (1)
more retired people who have more free time (1)
more advertising (1)
greater environmental awareness/appreciation (1) 3x1 (3)
- iii) **For:** they use local shops / hotels (1)
and bring income (1) and jobs (1)
local amenities (1) and roads (1) are improved
- Against:** increased noise (1) litter (1) congestion (1)
house prices have increased (1) so locals
cannot afford them (1)
jobs are only seasonal (1)
too many shops cater only for tourism (1)
- 1+3 or 3+1 or 2+2
Max 3 marks if for *and* against not covered (4)
- (a) Footpath erosion caused by 4x4s (1), by mountain bikes (1), by walkers (1) air
pollution caused by more traffic (1), by car exhausts (1)
visual pollution caused by building hotels (1)
damage to/destruction of habitats/wildlife by litter (1), by noise (1)
by trampling (1)
Max. 2 marks for causes of one type of damage.
Max. 2 marks for statements of damage: eg footpath erosion (1), visual pollution (1)
- ie. To score 3 marks, one type of damage **must** be explained 3x1 (3)

(d)

Level 1 1 - 2 marks	Describes the location of the LEDC area in general terms, probably without a sketch map eg Kenya in Africa. Mentions one or two effects on the environment / wildlife e.g. conservation of vegetation, protection of wildlife e.g. elephants.
Level 2 3 - 4 marks	Describes the location of the LEDC area accurately / precisely, and may include a sketch map eg Kenya in E. Africa Mentions three or four effects on the environment / wildlife, or explains one or two simply e.g. trophy hunters are satisfied with basic amenities (environmental impact is therefore less) and are limited in number so less damage is done to vegetation wildlife.
Level 3 5 marks	Describes the location of the LEDC area accurately and precisely, and may include a sketch map eg. Kenya in tropics/ Savanna area in E. Africa Explains one or two effects on the environment/ wildlife in detail e.g. trophy hunters are satisfied with basic amenities, so that environmental impact is therefore less, and are limited in number so that fewer animals are killed; this means that the eco-tourism is sustainable. Should show detailed knowledge of the chosen example / location

Max 4 marks if LEDC area not named; Max 2 marks if MEDC area chosen

(5)

Total for question: 20 marks

Total for paper: 100 marks