

Mark Scheme (Results) Summer 2007

GCSE B

GCSE Geography (1313) Paper 2F

1313/2F Summer 2007

A1 (a) i) A - Deaths
B - Births
C - Immigrants
D - Emigrants

Three or four correct 2 marks
One or two correct 1 mark

2 marks

ii) Births (1)
Immigrants (1)

2 marks

(b) Africa (1)
Europe (1)
Russia (1)
LEDCs (1)

4 marks

(c) i) Number of people dying (1) in a year (1) per 1000 of population (1)
Do not accept number of deaths

2 marks

ii) Country B

1 mark

iii) Has a high or higher birth rate (1)
Has a high/medium death rate (1)
Has a high or higher rate of natural increase (1)

2 marks

(d) Family planning

Contraceptives are available (1) and affordable (1)
and people understand their use (1)
so women are less likely to get pregnant (1)
Accept abortion or sterilisation as alternatives to contraception

Health care

Babies are immunised against disease (1) and hygiene is improved (1)
so infant mortality is reduced (1) and parents have less incentive to have a large family (1)

Education for girls

Educated girls are likely to be more ambitious/qualified (1) and want a career (1)
so they marry later (1) and start a family later (1) and have less time to reproduce (1)

Accept education about sex (1) and then same points for family planning above.
Also accept education about advantages of smaller families (1)

so women are less likely to get pregnant (1)

3 marks

Accept education gives girls more independence to make decisions about having children (1)

(e) i) Japan

1 mark

ii) Japan has a large GNP per person (1) OR over £35,000 GNP per person
so Japan is a wealthy/rich country (1) OR GNP measures wealth/living standards (1)

2 marks

iii) People in Japan are richer than those in China (1)
so they use more energy in their homes (1) eg for heating/electrical appliances (1)
and own more cars (1)

Japan is more industrialised than China (1)

so it uses more energy in factories/offices/shops (1)

Japan has more technology than China (1)

People in Japan are more likely to waste energy (1)

Accept the opposite points for China, but don't double mark.

3 marks

(f) More rapid depletion of energy reserves (1) that are fossil fuels/non-renewable (1)

Due to increased demand for/use of energy (1)

especially as industrialisation occurs (1) or living standards rise (1)

Energy prices will rise (as stocks are depleted) (1)

Accept the effect will be limited because people in LEDCs use small amounts of energy (1)

2 marks

(g) i) Something that will run out (1)

Something that will not replenish itself (1)

Something that is finite (1)

1 mark

ii) Coal (1)

Oil or crude oil or petroleum or petrol (1)

Natural gas or methane (1)

Nuclear (1)

Accept fossil fuels as a general term

1 mark

iii)

Level 1 1 - 2 marks	Mentions one or two environmental effects: e.g. Biogas plants recycle organic matter; transport of oil can result in pollution of sea; opencast coal mining is an eyesore; solar power plants do not make any noise; wind is a sustainable energy source
Level 2 3 - 4 marks	Mentions a range of environmental effects OR Explains one or two environmental effects simply:

	<p>e.g. Biogas plants recycle waste organic products like animal dung to make fertiliser; burning coal produces carbon dioxide, a greenhouse gas; nuclear power stations produce radioactive waste which is difficult to dispose of.</p> <p>OR Explains one effect thoroughly eg knock ons</p> <p>To reach the top mark: Writes in sentences with a clear and structured style. Spells, punctuates and uses the rules of grammar with some accuracy.</p>
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Accept any energy resource (renewable or non-renewable)
Accept thermal energy and fossil fuels in general.

4 marks

Total 30 marks

A2 (a) i) 50

1 mark

ii) 8 am

1 mark

iii) Only a small amount of the rain fell (directly) into the river (1)
(Most of) the rainwater had first to flow over the ground or as surface run-off (1)
or through the soil/rocks (1) or through the drainage basin (1)

1 mark

Accept rainwater was intercepted by vegetation (1)

(b) i) When a river overflows (its banks) (1)
When a river bursts its banks (1)
When a river exceeds its carrying capacity (1)

1 mark

ii) Yes

1 mark

(c) i) Damp/grey mark/stain on walls of buildings

1 mark

ii) 1.5 metres

1 mark

(d) i) D = Cars battered/swept along/piled up (1) or bushes uprooted (1)
E = The great force/speed of the floodwaters (1)
Accept flood waters were deep/high (1) to explain piling up of cars
1 + 1 = 2

2 marks

ii) D = Mud in restaurant/on furniture/over floor (1)

E = Transport/deposition by the floodwater (1)

1 + 1 = 2

2 marks

(e) To rescue people (1) trapped in buildings (1)

To take injured people to hospital (1)

Roads in the village were under water/impassable (1)

2 marks

(f) i) River Valency

1 mark

ii) River Jordan (1) or Marshgate Stream (1)

1 mark

iii)

Level 1 1 - 2 marks	Mentions one or two factors lifted from Diagram 1: e.g. 50 mm rain fell in 1 hour; saturated ground; ground is steep; trees washed under bridge.
Level 2 3 - 4 marks	Elaborates on, or explains simply, one or two of the factors shown on Diagram 1: e.g. Intensive/torrential/heavy rainfall fell; the saturated ground prevented rain from soaking in; the steep slopes caused rapid run- off; trees washed under bridge formed a dam.

4 marks

(g) i) **Building levees**

Increases the size of the channel (1) by raising the height of the banks (1)

So channel can hold a larger discharge (1) before it overflows (1)

Building a dam

Evens out the flow of the river (1) by storing water behind the dam/in a reservoir (1)
when the discharge is high (1)

so reduces the discharge the downstream channel has to hold (1)

2 marks

ii) It is costly (1)

It is a hard engineering method (1)

It interferes with nature (1)

It may make flooding worse in the long term (1) if dam/levee bursts (1)

A concrete dam/levee looks unattractive/unnatural (1)

A dam causes loss of land/wildlife/houses under the reservoir (1)

1 mark

(h)

Level 1 1 - 4 marks	Mentions one or two problems: e.g. cliffs collapsed; buildings fell into sea; harbour silted up; flooding by waves. Mentions one or two management methods: e.g. seawall, rip-rap, gabions, revetment, groynes, beach recharge/nourishment, cliff grading, dredging. Accept land use changes: e.g. relocating a hotel; stopping vehicles using a collapsed road.
Level 2 5 - 8 marks	Describes one or two problems in some detail: e.g. cliffs undermined, causing rock falls and injuries; loss of farmland and farm buildings to sea; hotel fell into sea causing loss of jobs/income; beach washed away leaving cliff exposed to erosion; soft clay cliffs weather/slump/erode easily. Mentions a range of management methods OR Explains simply how one or two management methods work: e.g. groynes check longshore drift and so encourage beach build-up; rip-rap protects cliffs from erosion by absorbing wave energy; drainage pipes in cliffs reduce lubrication and slumping. OR explains simply one or two land use changes: e.g. rebuilding a road to follow a safer route further inland. To reach the top mark: Writes in sentences with a clear and structured style. Spells, punctuates and uses the rules of grammar with some accuracy.

NB Do not accept problems unrelated to physical processes e.g. litter, congestion

8 marks

Credit place specific details

Total 30 marks

B3 (a) i) Lake formed after a river is dammed (1)

Lake behind a dam (1)

Artificial or manmade lake (1)

Accept a place where water is stored (1)

1 mark

ii) Picnicking (1)

1 mark

(b) i) 260 (1)
northeast (1)
A629 (1)
4 (1)

4 marks

ii) High land (1) so rainfall will be heavy (1)
and water is easily piped downhill to settlements (1)
Outside a National Park (1) so is not a protected area (1)
Sparsely populated area (1) so low pollution risk (1)
Three other neighbouring reservoirs (1) suggest impermeable rock (1)
Three streams supply water to it (1)
Farmland in upland area is low value land (1)

3 marks

In a valley (1)

iii) Loss of land/farmland (1)
Loss of homes/village (1)
Loss of plants/animals/wildlife (1)
Loss of scenic value (1) OR eyesore (1)
Fear of dam breaking and causing a flood (1)

2 marks

c) i) Leaked/washed (from farm/fields) into streams feeding reservoir (1)
Spray (on farm/fields) blown by wind into reservoir (1)

1 mark

ii) Water is polluted/unsafe to drink (1)
Need/expensive to treat/clean up (1)
Reputation of company harmed (1)

1 mark

iii) Fines for farmers polluting water (1)
Education of local farmers about good pesticide practices (1)
e.g. Don't spray in windy conditions (1)
Don't spray when heavy rain is expected (1)
Don't spray if ground is frozen or waterlogged (1)
Provide no-spray buffer zones close to water (1)
Store pesticides carefully to prevent leaks (1)
Dispose of containers and waste chemicals safely (1)
Encourage switch to organic farming (1)
Use crop rotation to protect against pests (1)

1 mark

(d)

Level 1 1 - 3 marks	Mentions a few reasons for rising water demand: e.g. population growth; rising living standards; urban growth; growth of manufacturing; intensification of farming; growth of leisure industry.
Level 2 4 - 6 marks	Explains a few reasons in some detail: e.g. Increased ownership of domestic appliances like dishwashers; migration of people from rural areas requires piped water supplies in cities; provision of a piped water supply can encourage waste; irrigation of desert areas to increase food supplies; more water needed for tourist resorts built in semi-arid areas.

Max. 5 marks for reasons but with no reference to increasing use.

Place-specific details are not required but should be credited if given.

6 marks

Total 20 marks

B4 (a) Light (1)
few (1)
increases (1)

3 marks

(b) i) 300 (1)
east (1)
B6106 (1)
2 (1)

4 marks

ii) On high ground (1) so will be exposed to strong winds (1)
Outside a National Park (1) so is not in a protected area (1)
Near a road (1) so maintenance of turbines will be easier (1)
On farmland (1) that is unlikely to be of high value (1)
Few houses nearby (1) so causes less nuisance from noise (1)

3 marks

(c) i) Y

1 mark

ii) Houses/buildings at X generate heat or have central heating (1)
and some is released into the air (1)
Cars/vehicles on roads at X generate heat (1)
Vegetated surface at Y absorbs less solar energy (1)
Evapo-transpiration from vegetation at Y has a cooling effect (1)
Calm conditions meant surface differences impacted on air temperatures (1)

2 marks

Not accept cooling effect of wind at Y

(d) i) The world's/earth's atmosphere/climate is getting warmer/hotter (1)

1 mark

The world's/earth's temperatures are rising (1)

NOT accept just "the world/earth is getting warmer/hotter"

ii)

Level 1 1 - 3 marks	Mentions that higher temperatures have been recorded recently and probably that ice sheets are melting and/or sea level is rising. May mention changes in other associated weather features: e.g. more storms, more droughts, more floods
Level 2 4 - 6 marks	Mentions a range of direct and/or indirect evidence, or describes a few pieces of evidence in some detail: e.g. Gives a basic statistic on the recent rise in temperatures (e.g. 10 warmest years on record occurred in last 15 years); comments on the more frequent recent use of the Thames Flood Barrier; or points to recent glacial retreat in the Himalayas/Greenland/Mt Kilimanjaro etc. May explain simply how weather features like storms and droughts are linked to global warming.

6 marks

Total 20 marks

C5 (a) i) Cutting down a large area of trees

1 mark

ii) 26,000 square km

1 mark

iii) Ranchers (1), loggers (1), soya farmers (1)

1 mark

iv) It has a huge variety of wildlife (1)

It plays a major role in the world's climate (1)

It is being destroyed at a fast rate (1)

Plants may provide cures for diseases (1)

2 marks

(b) i) A few/scattered trees (1) OR woodland (1) but NOT forest
Tall trees (1) with thin trunks (1) and no lower branches (1)
Layer of smaller trees OR undergrowth of bushes/shrubs (1)
which is thick/covers the ground (1)

2 marks

Accept emergent layer (1) and canopy (1)

ii) Channels/gulleys/ditches/hollows (1)

1 mark

Accept ground is bumpy/uneven etc (1) but NOT hilly

iii) Running water

1 mark

(c) i) Removal of forests prevents absorption of water through roots or from soil (1)
Removal of forest prevents interception of rain (1)
and exposes the ground to rainfall (1)
which is more forceful than water dripping off vegetation (1)
Infiltration is reduced (1) with the lack of leaf litter on ground (1)
Surface run-off increases (1), especially on sloping ground (1)

Accept an answer referring to wind erosion:

Removal of trees means roots no longer bind soil (1)

and soil dries out with less shade (1)

Loss of humus from leaf-fall (1)

destroys soil structure/makes soil more crumbly (1)

Ground is no longer sheltered by trees (1)

Wind blows away loose soil (1)

3 marks

ii) Steep slopes are difficult to build on (1)

Steep slopes are difficult to cultivate/grow crops on (1)

and lack vegetation for animals to graze on (1)

Soil is eroded/washed away (1)

causing silting of rivers (1) which leads to flooding (1)

Soil is starved of humus/nutrients from leaf-fall (1)

leaving the ground infertile (1)

Steep slopes will be prone to collapse/mass movement (1)

Bumpy land is difficult/dangerous to walk/travel on (1)

People may have to abandon their damaged land (1)

2 marks

Cost a lot to restore the land (1)

(d)

Level 1 1 - 3 marks	Mentions one or two simple effects: e.g. burning stubble damages soil; chemicals cause pollution; pesticides kill wildlife; removing hedges destroys habitats. May mention one or two reasons: e.g. to kill pests; to enrich soil; to grow more; to make more money.
Level 2 4 - 6 marks	Explains in some detail one or two effects: e.g. burning stubble reduces humus content/increases erodibility of soil; chemical fertilizers can be washed into rivers and pollute them; chemical pesticides reduce biodiversity; removing hedges causes soil erosion by wind. Mentions three reasons or gives at least one reason in some detail: e.g. burning stubble cuts labour costs; chemical fertilizers produce higher crop yields; removing hedges enables large machinery to be used; demand for food is increasing as population grows.

Place-specific details are not required but should be credited if given

6 marks

Total 20 marks

C6 (a) i) Protecting wildlife

1 mark

ii) To stop people hunting endangered animals

1 mark

(b) i) Hotels (1)

Restaurants (1)

Walkways (1)

Casino (1)

Golf course (1)

3 marks

ii) It will encourage people to take an interest in wildlife/the environment (1)

It will have solar power plants (1) which is renewable a renewable energy source (1)

It will breed tigers (an endangered species) (1)

2 marks

iii) Large scale development will have a negative impact on the environment (1)

Building of hotels, etc will destroy vegetation (1) and reduce habitat for wildlife (1)

Building work/motor boats will disturb wild animals (with noise) (1)

Construction of waterways will threaten mangrove ecosystem (1)

and facilitate entry of poachers into the forest (1)

Light from hotels will disturb wild animals at night (1)

(Oil spills from) motorboats will pollute water (1)

Motor boats will erode river banks (1)
 Sewage/detergents from hotels may pollute water (1)
 Tigers bred in captivity cannot be released into the wild (1)

3 marks

Large buildings etc will be an eye sore (1)
 Tourists will drop litter (1)
 Tourists trample vegetation/pick flowers (1)

(c) i) Jungle/thick forest (1)

Tall trees (1)
 Shade under canopy (1)
 Mangrove trees (1)
 White bark (1)
 Large ferns/palm leaves (1)
 Thick undergrowth/tall shrubs (1)
 Plants/reeds growing in water (1) or vegetation to edge of river bank (1)

2 marks

ii) Advantage

Sell fish to hotels/restaurants (1)
 Get employment in hotels/restaurants (1) or as tourist guides (1)

1 mark

Disadvantage

Denied access to some rivers for fishing (1)
 Fish stocks reduced by pollution of water (1)
 Fish disturbed by noise of speedboats (1)
 Lose land/home - displaced by building development (1)

1 mark

(d)

<p>Level 1 1 - 3 marks</p>	<p>Mentions attitude of one or two groups: e.g. farmers want to grow crops, tourists want to walk on land. OR Mentions one or two problems: e.g. litter, traffic congestion, air pollution, parking, erosion. Mentions one or two simple solutions: e.g. litterbins; signs, car parks.</p>
<p>Level 2 4 - 6 marks</p>	<p>Describes one or two problems simply and identifies at least some of the conflicting groups involved: e.g. tourists drop litter on farmland causing harm to livestock; tourists annoy residents by taking parking spaces in village; motorcyclists annoy farmers by eroding footpaths; farmers annoy tourists by blocking off footpaths. Describes simply one or two solutions: e.g. introduce traffic management such as park and ride; publicize the country code; fence off and repair eroded paths.</p>

Place-specific details are not required but should be credited if given

6 marks
 Total 20 marks

