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Mark Scheme (Results)

Summer 2012

GCE Geography
Global Challenges
6GE01

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Question Number	Answer	Mark
1(a)(i)	Melbourne	(1)

Question Number	Answer	Mark
1(a)(ii)	Point mark any 2 explanations: • Lowest rain on record / greatest deficiency ❶ • They are highly populated (two major cities) ❶ • An area of high water demand (outstrips supply)❶ • El Nino linked to drought ❶ Do not accept 'it has the most red'.	(2)

Question Number	Answer	Mark
1(a)(iii)	C Wildfires	(1) □

Question Number	Answer	Mark
1 (b)	Expect explanations, which may include some description, of how El Nino leads to drought: • El Nino cycles occur roughly 3 – 7 years in the Pacific Ocean ❶ • Colder water off Australia/ Indonesia / Asia ❶ • Explains colder water means less evaporation so drought on land – Australia/ Indonesia / Asia ❶ • Role of high pressure / anti –cyclone conditions plays in drought for western regions ❶ • Explains change /cycle is associated with trade winds weakening / reversing ❶ • And may develop this (e.g provides accurate account of warm weather 'sloshing' east, or details of cold currents) ❶ • Credit La Nina droughts (as part of cycles) ❶e.g. intensification of dry conditions in South America ❶ • Credit definition of drought ❶ and explanations of human factors that exacerbate drought in Australia.❶ Credit accurately drawn diagram(s) used to support the answer. Also credit other valid and located drought ideas and concepts (teleconnections ideas ideas, Walker circulation). Do not credit details of what is happening in low pressure / high rainfall / flood rich regions or impacts of drought.	(5)

Question Number	Answer	Mark
2 (a) (i)	The long term change shown is cyclical or a move towards an elliptical orbit. Award 1 mark for any of the following effects: • Regular cycles / fluctuations of cooling & warming • Shift to an ice age or inter–glacial. • Periods with warmer winters and cooler summers • Other acceptable interpretations should be credited Do not credit 'global warming' and other human triggered trends or very general statements e.g. 'getting warmer'.	**(1)**

Question Number	Answer	Mark
2 (a)(ii)	E Changes in the tilt of Earth's axis	**(1)**

Question Number	Answer	Mark
2 (b)	Award ❶ mark for statement that increased activity leads to warmer Earth / or decreased activity leads to cooling. Award ❶ mark for the explanation: • More sunspots leads to warming • Solar flares leads to warming • Magnetic storms / activity leads to warming • 11 year cycles of sunspots occur Award ❶ mark for statement that eruptions can lead to cooler Earth or more rain. Award ❶ mark for development, such as: • Dust / ash /gas (SO2) in atmosphere reflects radiation • Applied use of example e.g. Krakatoa 1883 led to 1C fall in global temperatures • Dust acts as condensation nuclei **Do not accept volcanic activity as explanation of global warming.**	**2** **2** **(4)**

Question Number	Answer	Mark
2(c)	Explanations should focus on how human activity has led to rising levels of greenhouse gases. • GHG concentrations have all increased since 1750 ❶ • Fossil fuels for industry /heating / transport release CO2 ❶ may have figures (from 280 to 380+ ppm) ❶ • Global population growth ❶ idea of affluence / consumption rising ❶ gives examples e.g. in NICs ❶ • Deforestation causes CO2 rise ❶ loss of carbon sink ❶ • Methane increases driven by agriculture e.g. rice cultivation / cattle ranching ❶ a very potent gas ❶ also landfill ❶ • Nitrous oxide linked with industry / agriculture ❶ and may have details ❶ • Credit accurate statements about role of water vapour e.g. aeroplanes ❶ and role of CFCs as a long-life GHG (do not credit ozone depletion)❶ • Credit other valid ideas❶	(5)

Question Number	Answer	Mark
3(a)(i)	Autumn	(1)

Question Number	Answer	Mark
3(a)(ii)	• Temperature rise could either bring increased evaporation and more rain ❶ or increased desertification ❶ • Imprecise nature of scientific prediction / debated science of climate change ❶ including the IPCC models ❶ gives examples of uncertainty e.g ITCZ movement, positive feedback ❶ • Unknown if climate mitigation / agreements will work ❶ • Credit other valid suggestions ❶ or use of data	(3)

Question Number	Answer	Mark
3(a)(iii)	Answers should focus on economic impacts, can be positive and negative. • Less rainfall reduces livelihood for subsistence farmers / farmers who sell their own crops ❶ may give extension facts /figures ❶ • Less rainfall reduces income for cash-crops commercial sector / formal sector / TNCs ❶ may provide example e.g. tea /coffee in Kenya ❶ • Wetter climate could help crops so positive economic impact ❶ but possible negatives too e.g. flood risk to agriculture, businesses ❶ • Changing climate could threaten (or boost) tourism ❶ perhaps linked to changes in flora / fauna / activities ❶ • Cost of rising health care linked to change e.g. Malaria ❶ • Changes shown could lead to economically damaging storm activity ❶ • Credit recognition of different <u>scales</u> of impact e.g. individual incomes as well as national GDP ❶ Credit other valid economic suggestions ❶ and extended points ❶ *No credit for 'farmers can't grow crops'.*	**(4)**

Question Number	Answer	Mark
3(b)	Answers should focus on explanations for rising **food** insecurity : • Less food produced if water availability lessened / desertification (*do not credit warmer = less food*) • Changing climate could limit growing locations (may extend e.g. idea of biomes or actual crop data). • Increased hurricane frequency and impacts on crops (may use examples e.g. bananas in Caribbean). • Land lost to sea-level rise due to thermal expansion / melting (and may have applied examples) • Makes <u>global link</u> between less food grown in some places and availability elsewhere (imports, exports) • Arctic ecology changes could limit local food for Inuit etc. • Loss of income for farmers e.g. loss of cash crop so can't by food either. • Credit explanation of other contributing factors to food insecurity e.g. population growth or rising affluence of BRICs. ❶ mark for each valid point and ❶ for extension/ example	**(5)**

Question Number	Answer	Mark
4 (a)	E bread and bacon	(1)

Question Number	Answer	Mark
4 (b)	Expect a range of reasons for TNCs worldwide sourcing : Lowering costs helps explain why: • Cheaper labour costs in some places • Cheaper land costs in some places • Offers profit motive as an explanation Location / site factors help explain: • Attractions of export processing zones / EPZs • Climatic barriers to production in home country • Seasonality of production / need all – year supplies • manufacturing assembly parts from supply chains / global production networks Globalised world factors: • Improved ICT fosters out sourcing • Fallen transport costs fosters out sourcing • Lower tariffs in trade blocs encourages sourcing • Range of suppliers minimises disruption risk. Other good geographical ideas should be credited ❶ mark for each idea and ❶ mark for any extension /example.	(4)

Question Number	Answer	Mark
4(c)	Answers should focus on explanations of TNC product adaption: • Credit mention / definition of glocalisation • Profitability – these are sales strategies • Culture – some items not wanted / liked / to taste • Religious objections • Youthful product, not yet mass marketed • Affluence – not all markets can afford the cost of a TNC's full range including 'premium' products • Local availability of parts/ingredients may affect product • May have other creditable ideas ❶ Mark for each different explanation and ❶ mark for each extension /example that supports that explanation. *One example of a TNC (e.g. McDonald's in India) can reach full marks if several explanation feature.*	(5)

Question Number	Answer	Mark
5(a)	D Economic migrants	**(1)**

Question Number	Answer	Mark
5 (b)	1. Up to three marks for: • Different population sizes ❶ • Distances to travel ❶ may make estimates of distances or uses data to compare ❶ • Applied idea of intervening obstacles ❶ • Availability of travel routes / easy travel ❶ • Lack of work at source ❶ or ability to afford travel❶ • Political push (asylum) ❶ or cultural reasons/links e.g. French speakers working in France (former colony) ❶ • Credit other valid push / connection factors but not pull factors. 2. Up to 3 marks for : • The EU estimates numbers of illegal migrants ❶ • Inaccurate recording at source ❶ • Poor source border controls / better in EU ❶ may develop with hi – tech/ secure border example ❶ • More leave Egypt than enter the EU legally ❶ • Credit refugees who were not recorded leaving ❶ e.g. Arab spring (accept this) ❶ Credit other valid suggestions **3+3 no transfer**	3 3 (6)

Question Number	Answer	Mark
5(c)	Answers should focus on <u>reasons</u> why people within the EU migrate to the Mediterranean coast, not a description of the migration flows <u>within the EU</u>. Reasons include: • Warm climate ❶ may be linked to specific ages groups ❶ or has actual data ❶. • Free movement in EU encourages this ❶ may extend e.g. Schengen Agreement. • Award ❶ mark for details of a specific work opportunity, e.g. construction/tourism (❶ mark for a list of jobs). • Award ❶ mark for details of a specific economic benefit of moving, e.g. lower housing costs than UK (❶ mark for a list of economic benefits). • Idea of cultural hubs ❶ e.g. Cannes Film Festival/ media hub ❶. • Idea of attractive enclaves ❶ e.g. 'Brit' ex-pat villages such as Villefranche Sur Mer ❶. • EU infrastructure (ICT and travel) encourages internal migration to attractive places ❶ may have details ❶. • Credit other valid reasons. *Do not credit un-grounded comments, e.g. "better Weather" (better how/than where?) or "cheaper housing" (cheaper then where?)*	(5)

Question Number	Answer	Mark
6(a)	Award ❶ for any two *specific* concern provided in the answer space (credit best two if multiples provided): • Pollution from GHG/combustible gases. ❶ • Groundwater pollution from leachate. ❶ • Smell/noise affects property/amenity value ❶ (do not credit 'smelly'). • Unsightly land linked with property values ❶ (do not credit 'ugly'. • Specific health risks, e.g. asbestos/may attract vermin. ❶ • Ecological footprint becoming too large. ❶ or idea of more and more land needed over time ❶ • Not sustainable development/should recycle. • Non bio-degradable materials accumulating. ❶ *Credit all other valid reasoned points (e.g do not credit "land is not used" but do credit "land could be used for housing").*	(2)

Question Number	Answer	Mark
6(b)	Award ❶ mark for a valid strategy: recycling, reuse, lower packaging, composting, incineration for energy recovery, etc. Award further marks for explaining how environment is helped (do not credit description of schemes, e.g. coloured bags, etc; do not credit 'less landfill'). • Uses carbon footprint concept.❶ • Uses ecological footprint concept.❶ • Notes non-biodegradable nature of landfill; argues less harm done to birds/animals. ❶ • Recognises recycling use less oil/energy than new production.❶ • Other valid environmental benefits of named strategy.❶	**(3)**

Question Number	Answer	Mark
6(c)	Answers should focus on explanations of how globalisation has increased consumption of goods and resources: • Credit definition of globalisation.❶ • Outlines how globalisation brings cheaper goods/lowers costs so people buy more ❶ may explain why e.g. lower labour costs. ❶ • Globalisation is associated with low-cost transport which lowers costs ❶ and ICT-led out-sourcing. ❶ • Outlines how globalisation has brought wealth to NICs/BRICs so consumption rising there ❶ may have details of why. ❶ • Trade bloc growth has a role ❶ e.g. lack of internal tariffs lowers market prices. ❶ • 'Global culture' ideas e.g. exposure to new types of food or goods ❶ due to 'shrinking world'.❶ • Strategies of TNCs e.g. glocalisation builds new consumer markets ❶ & power of media/adverts. ❶ • Also credit R & D role of TNCs following a profitable 'global' model ❶ – so innovation and more sales.❶ *Credit other valid ideas and award marks for any applied use of examples. For full marks, there should be explicit recognition <u>consumption rises</u> due to cheap goods, etc.*	**(5)**

Question Number	Indicative content

Question Number	Indicative content
7 (a)	**Strongest earthquakes** – Examples shown have high disaster potential, but lower magnitude EQs have sometimes been more damaging. Credit knowledge of different measurement scales. **Not always most costly** – invites use of disaster equation (population density issues); or costs framework (lives lost, property damaged, etc). New Zealand stands out especially.

Level	Mark	Descriptor
Level 1	1-4	Little structure. Unselective use of Figure 7, very basic links only made with EQ magnitude; or may show basic recognition of threat posed to poor places. There are frequent written language errors.
Level 2	5-7	Some structure. Some competent explanation of reasons why human costs of strong EQ events may vary. Some geographical terminology is used. There are some written language errors.
Level 3	8-10	Structured account. Can offer several reasons why costs of strong EQ not necessarily high. Sound explanation linked to ideas taken from Figure 7 and/or own examples. Appropriate geographical terms show understanding. Written language errors are minor.

Question Number	Indicative content
7 (b)	**Physical factors** – expect details to be provided of plate boundaries (Philippines/Eurasian subduction), cyclone belt, slope gradients (landslides) as important factors making this location a disaster hotspot. May include El Nino/La Nina events. **Range of hazard risks** – this is a hazard hotspot location. May recognise that risks are not the same for all types of hazard; or may note that some risks are connected (e.g. landslides triggered by other events); or can recognise extreme events and possibly their recurrence intervals (e.g. Pinatubo 1991).

Level	Mark	Descriptor
Level 1	1-4	Little structure. Simple statements only (e.g. lists a few hazards and may assert poverty problem). Geographical terminology is rarely used. There are frequent written language errors.
Level 2	5-8	Some structure. A partial answer that describes at least two hazards. Limited/generalised details or examples. Some geographical terminology used. Some written language errors.
Level 3	9-12	Structured account that offers a range of hazards/factors (do not expect all of the main ideas to be covered). Examples and explanation of the disaster hotspot are specific. Geographical terms show understanding. Written language errors are minor.
Level 4	13-15	Well-structured, detailed explanation of the physical factors that make the Philippines a disaster hotspot. Uses appropriate geographical terms to show understanding. Written language errors are rare.

| 8 (a) | **Different countries** – groupings of MEDCs/EU/USA and BRICs/NICs are shown. Popular themes likely to be: commitment low in USA, where concerns are also lowest; easier to adopt low-impact lifestyle in a lower-income country (less sacrifice needed). |
| | **Attitudes** – Personal feelings may relate to personal optimism which is also shown in Figure 8; the risks faced by particular countries and cost of adapting may colour views; cultural arguments could be applied to try and explain differences. May suggest factors that may impact on optimism (e.g. fatalism of some well-educated people in EU/USA). May pick up on 'act local' theme. |

Level	Mark	Descriptor
Level 1	1-4	Little structure. Very basic points only about one or two places/types of country. Geographical terminology is rarely used. There are frequent written language errors.
Level 2	5-7	Some structure. Outlines a range of possible reasons for a small specified range of countries/people. Some geographical terminology used. Some written language errors.
Level 3	8-10	Well-structured account that outlines some specific credible reasons for some clearly specified countries within wider context of reasons for concern and optimism. Appropriate geographical terms show understanding. Written language errors are minor.

Question Number	Indicative content
Question Number	Indicative content
8 (b)	**Global warming** – Expect the problem to be outlined, perhaps in terms of direct temperature rises (and impacts on agriculture) or indirect problems such as sea-level rise and biodiversity impacts. **Uneven and unfair** – Focus should be on who/where the worst 'losers' will be (uneven) and why this can be viewed as an injustice e.g. African populations, already suffering from a lack of level playing field in trade/aid, may suffer the worst impacts of climate change despite their low GHG emissions. Accept idea of environmental injustice for species, e.g. Arctic animals.

Level	Mark	Descriptor
Level 1	1-4	One or two simple/general statements on impacts only e.g. asserts 'poor Africans' or 'polar bears will lose homes'. Geographical terminology is rarely used. There are frequent written language errors.
Level 2	5-8	Some structure. A partial answer describing some environmental/ecological changes harming poor people or a simple contrast made between polluters and 'victims' Limited/generalised details or examples. Some geographical terminology is used. There are some written language errors.
Level 3	9-12	Structured account that attempts to explain why some places/people are more affected than others. Can explain why this is unfairness, e.g. polluters versus those impacted. Examples and explanation are more specific. Geographical terms show understanding. Written language errors are minor.
Level 4	13-15	Well-structured, detailed explanation of the different impacts on a range of environments that explicitly recognises the impacts are both uneven and unfair. Uses appropriate geographical terms and exemplification to show understanding. Written language errors are rare.

9 (a)	**Megacity migration** – invites focus on 'pulls' of Shanghai but could also discussion rural 'push' and links with agricultural TNCs. May mention international migration (e.g. with TNCs). **Globalisation** – there is scope to develop and extend the ideas provided: role of transport (Pudong airport); employment (World Financial Centre, TNC factories). *An answer that does not explicitly mention globalisation but is focused on factors linked to it (TNCS, technology) can still reach Level 3.*

Level	Mark	Descriptor
Level 1	1-4	Little structure. Very basic assertions about jobs on offer in cities. Geographical terminology is rarely used. There are frequent written language errors.
Level 2	5-7	Some structure. Some competent explanation of links between migration and globalisation factors (e.g. TNCs or airports). Some geographical terminology used. Some written language errors.
Level 3	8-10	Structured account. Sound explanation, based on Figure 9 and own ideas, for a range of globalisation-related reasons why people internally and/or internationally are drawn to megacities. Geographical terms show understanding. Written language errors are minor.

Question Number	Indicative content
9 (b)	**Globalisation** – Good definitions of the term should be rewarded, e.g. recognises different aspects. **Technology** - Expect discussion of role of ICT and social networks, 'shrinking world' effects/time-space compression; may acknowledge limits, e.g. China. May broaden to include transport technology, notably cheap flights & containerisation - vital for economic globalisation. **Trade blocs** – removing tariffs builds trade through comparative advantages and migration in case of the EU. May mention NAFTA, ASEAN, MERCOSUR. *Do not credit OPEC or OECD as they are not trade blocs.* **Max 10 if either trade blocs or technology missing.**

Level	Mark	Descriptor
Level 1	1-4	One or two simple/general statements only, e.g. use of internet. Geographical terminology is rarely used. There are frequent written language errors.
Level 2	5-8	Some structure. A partial answer that describes a couple of factors (internet and EU) or provides a list. Limited/generalised details or examples. Some geographical terminology is used. There are some written language errors.
Level 3	9-12	Structured account that attempts to explain both factors. Should be well-focused on globalisation at top of level. Examples and explanation are more specific. Geographical terms show understanding. Written language errors are minor.
Level 4	13-15	Well-structured, detailed explanation linking globalisation to trade bloc growth and a range of technologies. Uses appropriate geographical terms and exemplification to show understanding. Written language errors are rare.

Question Number	Indicative content
10 (a)	**Structure & characteristics** – Figure 10 shows impact on fertility rates and suggests youthful population structure (age/sex structure). Other characteristics can be discussed, e.g. ethnicity, incomes, health, employment. These changes may be analysed alongside other known trends, e.g. 'youthful in-migration helps offset naturally ageing structure'. **Recent international migration** – Focus likely to be migration from eastern Europe since 2004 but post-war/post-colonial movements are also relevant especially if tackling increases in the ethnic diversity of UK's population. **Do not expect a separation of characteristic and structure.**

Level	Mark	Descriptor
Level 1	1-4	Little structure. Unselective use of Fig. 10 (e.g. pop. numbers) and may state a single cause, e.g. 'Polish migrants'. Geographical terminology rarely used. Frequent written language errors.
Level 2	5-7	Some structure. Some competent explanation of some changes in population, e.g. 'numbers of babies and the migrations causing these changes'. Some geographical terminology is used. There are some written language errors.
Level 3	8-10	Structured account. Sound explanations, based on Figure 10 and own ideas, for a range of ways in which population structure has changed due to specific migrations. Appropriate geographical terms show understanding. Written language errors are minor.

Question Number	Indicative content
10 (b)	**Into the UK since the 1950s** – Credit any relevant flow since the 1950s. Most likely themes will be eastern Europe and post-colonial flows, although refugees/non-EU labour flows may be tackled. Ugandan Asians, Bangladeshi refugees, recent reverse movements of 'credit crunch'. **Changing pattern** – Credit reference to geographical patterns/variations in terms of <u>location</u> of sources of migrants or destinations within the UK, (e.g. may recognise greater diffusion of eastern Europeans into rural areas).

Level	Mark	Descriptor
Level 1	1-4	One or two simple assertions only, e.g. 'people have started to come to UK for work/benefits'. Geographical terminology rarely used. Frequent written language errors.
Level 2	5-8	Some structure. A partial answer describing some recent migration flows. Limited/generalised details/examples. Some geographical terminology used. Some written language errors.
Level 3	9-12	Structured account that examines different migration flows. Examples and explanation are more specific. Geographical terms show understanding. Written language errors are minor.
Level 4	13-15	Well-structured, detailed examination of a range of changing migration flows with some reference to patterns. Uses appropriate geographical terms and exemplification to show understanding. Written language errors are rare.

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