GCSE

GEOGRAPHY B

Unit 2H: Hostile world and investigating the shrinking world
Mark scheme

9035
June 2014

Version/Stage: 1.0 Final

Mark schemes are prepared by the Lead Assessment Writer and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation events which all associates participate in and is the scheme which was used by them in this examination. The standardisation process ensures that the mark scheme covers the students' responses to questions and that every associate understands and applies it in the same correct way. As preparation for standardisation each associate analyses a number of students' scripts: alternative answers not already covered by the mark scheme are discussed and legislated for. If, after the standardisation process, associates encounter unusual answers which have not been raised they are required to refer these to the Lead Assessment Writer.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of students' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

Further copies of this Mark Scheme are available from aqa.org.uk

GENERAL GUIDANCE FOR GCSE GEOGRAPHY EXAMINERS

Quality of Written Communication

Where candidates are required to produce extended written material in English, they will be assessed on the quality of written communication.

Candidates will be required to:

present relevant information in a form and style that suits its purpose;
ensure that text is legible and that spelling, punctuation and grammar are accurate;
use specialist vocabulary where appropriate.

Levels Marking - General Criteria

Where answers are assessed using a level of response marking system the following general criteria should be used.

Level 1: Basic

Knowledge of basic information
Simple understanding
Little organisation; few links; little or no detail; uses a limited range of specialist terms
Reasonable accuracy in the use of spelling, punctuation and grammar
Text is legible.

Level 2: Clear

Knowledge of accurate information
Clear understanding
Organised answers, with some linkages; occasional detail/exemplar; uses a good range of specialist terms where appropriate
Considerable accuracy in spelling, punctuation and grammar
Text is legible.

Level 3: Detailed

Knowledge of accurate information appropriately contextualised and/or at correct scale
Detailed understanding, supported by relevant evidence and exemplars
Well organised, demonstrating detailed linkages and the inter-relationships between factors
Clear and fluent expression of ideas in a logical form; uses a wide range of specialist terms where appropriate
Accurate use of spelling, punctuation and grammar
Text is legible
Level 3 does not always equate to full marks, a perfect answer is not usually expected, even for full marks.

Annotation of Scripts

One tick equals 1 mark, except where answers are levels marked (where no ticks should be used). Each tick should be positioned in the part of the answer which is thought to be credit worthy.

Where an answer is levels marked the examiner should provide evidence of the level achieved by means of annotating 'L1', 'L2' or 'L3' in the left hand margin.

Ticks must not be used where an answer is levels marked.

Examiners should add their own brief justification for the mark awarded e.g. *Just L3, detail and balance here*.

Where an answer fails to achieve Level 1, zero marks should be given.

General Advice

Marks for each sub-section should be added in the right-hand margin next to the maximum mark available which is shown in brackets. All marks should then be totaled in the 'egg' at the end of each question in the right-hand margin. The totals should then be transferred to the boxes on the front cover of the question paper. These should be totaled. The grand total should be added to the top right-hand corner of the front cover. No half marks should be used.

It is important to recognize that many of the answers shown within this mark scheme are only exemplars. Where possible, the range of accepted responses is indicated, but because many questions are open-ended in their nature, alternative answers may be equally creditworthy. The degree of acceptability is clarified through the Standardization Meeting and subsequently by telephone with the Team Leader as necessary.

Diagrams are legitimate responses to many questions and should be credited as appropriate. However, contents which duplicate written material or vice versa should not be credited.

Quality of Written Communication (QWC) is part of the award of marks in levels marked answers only. In levels marked answers the quality of the geography is assessed and a level and mark awarded according to the geography. As is sometimes the case, the geography may be sound at a particular level but the examiner may not be sure as to whether there is quite enough to raise the mark within that level. In this case the examiner should consider the QWC of the answer. QWC that fulfils the criteria for the level should lead to the rise in the mark but where the QWC does not fulfil the criteria, the answer should remain at the mark first thought appropriate. In cases where QWC has been used in the award of marks, the examiner should indicate this with QWC and arrows that indicate either an upward or downward trend according to its impact on the final award of the mark.

1 (a)	**3 x 1** Credit correct distance / direction/named location The earthquake epicentre was 400km (1) to the north-east of Tokyo (1). The earthquake epicentre was to the east of Japan (1). Approximately 120km (accept 100 -140km) west of plate boundary (1) in the Pacific Ocean (1)	3 marks AO3
1 (b) **Common**	**Levels of response** Possible ideas might include observations about planning and preparation. Full mark range available to candidates to offer a range of ideas or development of a single idea. **Level 1 (Basic) 1-3 marks** Simple statements without any real development. Largely descriptive observations which do not clearly reference the idea of 'how' the effects of earthquakes can be reduced. Ideas might include: *'not building in high risk areas, having emergency kits, earthquake proof building, earthquake drills.'* **Level 2 (Clear) 4-5 marks** Clear description with some linked/developed ideas which reference the idea of 'how' the effects of earthquakes can be reduced. Ideas might include: *'earthquake drills such as taught in schools enable people to protect themselves.'* *'making sure that everyone has an emergency earthquake kit will mean that there will be less injuries because it will contain first aid supplies etc.'* *'retrofitting buildings will make them stronger so that they will not collapse and cause injury.'*	5 marks AO1

1 (c)	**Levels of response** **Level 1 (Basic) 1-2 marks** Largely descriptive observations which give an idea about movements at plate boundaries and rising magma creating volcanoes. *Volcanoes occur at plate boundaries because the earth is unstable and magma rises from deep in the earth, creating a volcano.* **Level 2 (Clear) 3-4 marks** Shows some awareness of process which can be linked to different types of plate boundary. *At some destructive plate boundaries where plates move together one plate is forced into the earth. This creates friction and heat. The edge of the plate melts, forming liquid rock or magma. This rises to the surface of the earth through cracks, forming a volcano.*	4 marks AO1
1 (d) **Common**	**Levels of response** Possible ideas will include points about fertile soils/farming: possibility of geothermal energy, mineral extraction, links to tourism AND/OR observations about perception (it may not happen, the general advantages are greater than the risks, planning and preparation reduces risks, no real choice, can't afford to move). **Level 1 (Basic) 1-3 marks** Simple statements without and real development or clear 'cause-effect' links. Largely descriptive references which identify advantages without developing the socio-economic points. *'In volcanic areas the soil is very good for farming and the area attracts lots of tourists. Also if you have lived there a long time you may not want to move.'* Do not accept cheaper housing. **Level 2 (Clear) 4-5 marks** Clear description with some development of ideas/reasoning. *'Volcanic soil is very fertile because of all the minerals. This means that it is good for growing crops so farmers can earn a good income. These areas attract lots of tourists which brings money in and creates a lot of jobs for local people. In rich countries people feel safe in these areas because they are well-prepared.'*	5 marks AO1

1 (e) (i)	**3 x 1** Credit: A start point (1 mark) (not just Atlantic Ocean) Possible examples: - Started at latitude 15 N and longitude 66 W - To the south of Puerto Rico Route description (1 mark) Possible examples: - Direction (NW / WNW) - Passes over Jamaica - Passes through Caribbean - Moves NW into Gulf of Mexico End point (1 mark) Possible examples: - Makes landfall in Mexico - Reaches Mexico	3 marks AO3
1 (e) (ii)	**3 x 1** Made landfall / no longer over water (1). Lose energy over land (1). Lost source of fuel / warm water (1).	3 marks AO2 – 2 marks AO3 – 1 mark

1 (e) (iii)	**Levels of response** Possible arguments include: **Yes:** Speed/track cannot be accurately predicted/inaccuracy of forecast, better safe than sorry, references to cone of uncertainty/possible track are, even 'storm-proof' houses can be damaged, the threats posed by strong winds/heavy rain/flooding/storm surges, look for references to named storms and real flooding events. **No:** not going to affect all of Texas (use of direction, location). It is possible to prepare/there is increased awareness of how to prepare (lessons, posters, internet, leaflets), many now have emergency kits, waterproof tiles, strengthened buildings, stilts, **Level 1 (Basic) 1-4 marks** Simple statements without development of ideas. Lifts from resource. **Yes:** Simple ideas about advantages of evacuation or dangers posed by tropical storms. *E.g. Tropical storms often get stronger as they approach land, you can't wait until the last minute to evacuate, better safe than sorry, tropical storms cause massive destruction/death, there could be a storm surge, the storm could suddenly change direction.* Accept simple ideas about never being able to beat the forces of nature. **No:** Simple ideas about disadvantages of evacuation/forecasts. *E.g. forecasts can be inaccurate, the strongest winds will not affect all areas, some areas inside the 3/5 day cone of uncertainty will only be affected a little, people should judge for themselves whether they need to evacuate, houses are looted, rods get congested, evacuation is expensive, can make houses storm-proof.*	8 marks AO1 – 2 marks AO2 – 4 marks AO3 – 2 marks SPaG – 3 marks

1 (e) (iii) cont'd	**Level 2 (Clear) 5-6 marks** Clear reasons with development of ideas. Development from resource. **Yes:** Clear ideas about advantages of evacuation or dangers posed by tropical storms. *E.g. It is impossible to forecast with 100% accuracy and the storm could hit unexpectedly; in 2010 forecasts were 346km out on average.* Accept clear ideas about never being able to beat the forces of nature. Development may be case study examples. *E.g. Hurricanes are unpredictable and can change track suddenly, people didn't expect Hurricane Hanna to hit Haiti, but it did and caused many deaths.* **No:** Clear ideas about disadvantages of evacuation/forecasts *E.g. The area of strongest winds will only affect an area of 150km; just the people in the south of Texas should consider evacuating.* *Evacuation could cause panic and lead to congested evacuation routes; people would be in danger if they were stuck in a traffic jam when the tropical storm hit.*	

1 (e) (iii) cont'd	**Level 3 (Detailed) 7-8 marks** Detailed reasons with continued development of ideas. Continued development may be case study examples. **Yes:** Detailed ideas about advantages of evacuation or dangers posed by tropical storms. *E.g. It is impossible to forecast with 100% accuracy and the storm could hit unexpectedly. It is difficult to pinpoint where a tropical storm will make landfall. Even a 1 day forecast can have an error of 100km and the error can increase to 500km for a 5-day forecast. It is better to take precautions than trust the forecast entirely.* **No:** Detailed ideas about disadvantages of evacuation/forecasts. *E.g. It is impossible to forecast with 100% accuracy and people could be evacuated unnecessarily if a forecast is inaccurate. Even a 1 day forecast can have an error of 100km and the error can increase to 500km for a 5 day forecast. This would mean that millions of dollars could be spent on the evacuation and the area would not bear the full force of the tropical storm and that people's homes are at risk from looters.* **Spelling, Punctuation and Grammar (SPaG)** **Threshold Performance – 1 mark (1 mark)** Candidates spell, punctuate and use the rules of grammar with reasonable accuracy in the context of the demands of the question. Any errors do not hinder meaning in the response. Where required, they use a limited range of specialist terms appropriately. **Intermediate Performance – 2 mark (2 marks)** Candidates spell, punctuate and use the rules of grammar with considerable accuracy and general control of meaning in the context of the demands of the question. Where required, they use a good range of specialist terms with facility. **High Performance – 3 marks (3 marks)** Candidates spell, punctuate and use the rules of grammar with consistent accuracy and effective control of meaning in the context of the demands of the question. Where required, they use a wide range of specialist terms adeptly and with precision.	

1 (f)	**Levels of response** Possible human causes and natural causes are indicated in the Level 1 descriptor. Causes could be quasi-natural. **Level 1 (Basic) 1-2 marks** Simple statements without development of ideas. *E.g. period of hot/dry weather, (accept strong winds), lightning strikes, spontaneous, volcanic eruptions people being careless (campfires/cigarettes), arson, downed power lines, sunlight reflecting off broken glass, sparks from machinery/vehicles.* **Level 2 (Clear) 3-4 marks** Clear reasons with some development of ideas. Clearly links statements. *E.g. They are mainly caused by people being careless as they discard cigarette ends which are still smouldering.* Links together natural and/or human factors *e.g. They are mainly caused by people being careless but will spread quickly if the grass is dry after a period of hot dry weather.* (Responses that focus on why the fire spreads rapidly are acceptable, but the link must be clear. Accept references to the effect of topography, lack of windbreaks, fuelling from built up areas etc.) Development could be case study examples. *E.g. An arsonist started a wildfire in Victoria, Australia in 2009, the wildfire spread quickly as vegetation was very dry.* **Level 3 (Detailed) 5-6 marks** Detailed explanation with continued development of ideas with well linked statements. To access Level 3, there **must** be some reference to a named area where a wildfire has taken place along with a clear reference to its cause(s). *E.g. An arsonist started one of the Black Saturday wildfires in Victoria, Australia in 2009. Most were caused by falling power lines that blew over in the hot, north-westerly winds blowing in excess of 100 kilometres per hour, or by lightning strikes. The wildfire spread quickly as a prolonged drought in the months preceding February and record temperatures over 45°C dried out the vegetation and once alight were fanned by the strong winds.*	6 marks AO1 – 3 marks AO2 – 2 marks AO3 – 1 mark

1 (g) **Common**	**3 x 1** Possible reasons include: Loss of crops/income – vineyards/farmland, destruction of holiday facilities and subsequent economic impacts and job losses, damage to other infrastructure (roads, etc), destruction of woodland and impacts on the ecosystem. Destruction of homes etc. in small settlements and/or cities and consequences of this. No credit will be given for merely listing features from the figure; there must be some simple indication of an effect. *E.g. Forest - destroys animal habitat, loss of beautiful scenery. City - destroys homes. Farmland – crops destroyed. Holiday park – fewer tourists.* Allow 1+1 for clear suggestions with development of ideas. *E.g. destroy homes* (1) *which increases insurance claims and raises premiums* (1)*, destroy businesses* (1) *which causes unemployment and damages the economy of the area* (1)*, pollute the air* (1) *and cause breathing problems* (1)*, changes the local ecosystems* (1) *as animal habitat destroyed* (1) *, destroys forests/tourist facilities* (1) *which stops tourists visiting and causes job losses* (1)*, fewer trees* (1) *can lead to soil erosion and flooding/mudslides* (1)*.*	3 marks AO2 – 2 marks AO3 – 1 mark

2 (a)	**3 x 1** All of the areas with a very high risk of desertification are within 400km/on fringes of an area of hot desert (1). Five of the states of Australia have areas with a very high risk of desertification (1). More in north and east (1). Accept near to desert. Reject 'around Tropic of Capricorn'	3 marks AO3
2 (b) **Common**	**Levels of response** Possible reasons include: Low rainfall, orographic rainfall over mountains, rain shadow, dry winds inland. References to latitude (Tropic of Capricorn) and the effects of this: High pressure, concentration of solar energy. Prevailing winds offshore in the west, cold currents offshore in the west. PHYSICAL LINKS TO DESERTIFICATION – MAX 2 MARKS. **Level 1 (Basic) 1-3 marks** Refers to Figure 4 and/or own knowledge. Simple reference to reasons for low rainfall; dry winds, rain shadow, etc. Accept simple statements about high pressure or descending air or little condensation or few clouds i.e. not linked. Accept simple references to effects of climate on vegetation. *E.g. very few plants are able to grow.* And/or some simple reference to the effect of latitude, *e.g. sun's rays passing through less of the atmosphere. A smaller area of the Earth's surface has to be heated.* **Level 2 (Clear) 4-5 marks** Refers to Figure 4 and/or own knowledge. Gives clear indication of process, linking statements. Clear reasons for the formation with development of ideas. Accept clear statements about high pressure or descending air leading to little condensation and few clouds, i.e. linked. And/or some clear reference to reasons for low rainfall; dry winds, rain shadow continentally, etc. *E.g.* it is in a rain shadow area, *as moist winds off the sea rise over highland and condense/cool and precipitation occurs in the mountains the wind will be dry when they reach place A and it receives little rainfall. High temperatures mean that any moisture that reaches inland areas is quickly evaporated.* Accept clear references to effects of climate on vegetation. *E.g. very few plants are able to grow except those that are adapted to the dry conditions.* Clear reference to the effect of latitude, *e.g. sun's rays passing through less of the atmosphere and therefore lose less heat. A smaller area of the earth's surface has to be heated due to the lesser curvature of the earth.*	5 marks AO1 – 2 marks AO2 – 2 marks AO3 – 1 mark

2 (c)	**3 x 1 (1+1 for developed point)** Increased temperatures/climate change (global warming) (1) and changing rainfall patterns/lack of rainfall/increasing drought (1), make it difficult for plants to survive (1) and heavy rainfall/flash floods (1) or strong winds (1) can erode the unprotected soil (1) and plants cannot grow back (1).	3 marks AO1 – 3 marks
2 (d) **Common**	**Levels of response** Possible schemes are indicated in the Level 1 descriptor. **Level 1 (Basic) 1-3 mark** Simple statements without development of ideas. Names schemes. Accept any prevention/soil or water management scheme/training or education scheme. E.g. Coppicing, reforestation, reseeding, terracing, earth bunds, magic stones, earth dams, animal husbandry, crop rotation, wind breaks/shelter belts, irrigation, rainwater harvesting and storage. Accept schemes designed to tackle the causes of desertification e.g. efficient stoves. **Level 2 (Clear) 4-5 marks** Clear description with development of ideas. Accept any prevention/soil or water management scheme/training or education scheme with an indication of how desertification might be reduced. E.g. *Coppicing means that branches are removed and the entire tree is not cut down. The stone lines trap rain water which reduces surface run-off across the land. Animal husbandry means fewer animals can be kept on the land as those which are kept will be healthy and produce more meat. Planting trees means more rainwater is intercepted and overland flow is reduced. Earth bunds catch soil flowing down the hill and stop the soil from drying out so less is blown away*. Accept schemes designed to tackle the causes of desertification with clear links to cause. e.g. *efficient stoves reduce demand for firewood and means that fewer trees have to be removed for fuelwood.*	5 marks AO1 – 5 marks

2 (e) (i)	**2 x 1** Many areas of tropical rainforest are on the Equator. All areas of tropical rainforest are between the Tropics. Largest in South America/Amazon.	2 marks AO3
2(e) (ii)	**4 x 1 (Allow 1+1 for developed point)** Due to climate change/changing rainfall patterns. Continued deforestation caused by logging, commercial farming, dam building, mining, OR decrease due to conservation, planting, etc.	4 marks AO1 – 2 marks AO2 – 2 marks
2 (f)	**Levels of response** Possible arguments include: **Yes –** references to economic advantages and social advantages for both local people and the wider economy/country and the ability to use technology to minimise the destructive effects on the natural environment/local communities. Only a very small area affected. **No –** references to effects on the natural environment at local, regional and global scale. The case for using renewables as opposed to fossil fuels. Alternative forms of income e.g. carbon credits. **Level 1 (Basic) 1-4 marks** Simple statements without development of ideas. Lifts from resource. **Yes:** Simple ideas about advantages of exploiting oil. *E.g. brings in money/jobs for local people, oil companies build facilities for local people, raises GNI/wealth, only a very small area of rainforest will be affected.* **No:** Simple ideas about advantages of not exploiting oil. *E.g. conservation of trees/animals, indigenous people do not lose homes/land/livelihoods, less carbon dioxide going into the atmosphere, tourists will still visit, compensation money raised would be invested in renewable energy projects, water courses not polluted.*	8 marks AO1 – 2 marks AO2 – 4 marks AO3 – 2 marks SPaG – 3 marks

	Level 2 (Clear) 5-6 marks Clear reasons with development of ideas. Development from resource. **No:** Clear ideas about advantages of not exploiting oil. *E.g. conservation of trees/plants some of which could be used as medicines, conservation of animal habitats which means some rare species of animals are at lesser risk of extinction, indigenous people do not lose homes/land/livelihoods as they are still able to hunt and gather and continue with their traditional lifestyle, less carbon dioxide going into the atmosphere which reduces the threat of global warming, tourists will still visit and this can have a multiplier effect on the local economy, compensation money raised would be invested in renewable energy projects which will make Ecuador less dependent on oil.* Development may be case study examples. **Yes:** Clear ideas about advantages of exploiting oil. *E.g. brings in money/jobs for local people which they desperately need as there are few other opportunities to make a living, oil companies build facilities for local people which improves their quality of life and which otherwise they would not have as the government cannot afford to provide them, oil companies pay taxes which raises money for the government and increases GNI/wealth, only a very small area of rainforest will be affected and they could conserve other areas where there is no oil.* Development may be case study examples. Knowledge of accurate information. Clear understanding. Answers have some linkages; occasional detail/exemplar; uses some specialist terms where appropriate.	

	Level 3 (Detailed) 7-8 marks Detailed reasons with continued development of ideas. **Yes:** Detailed ideas about advantages of exploiting oil. *E.g. Ecuador is a poor country with a low GNI, they need to cut down the forest to exploit the oil as they are reliant on selling primary products. The governments of less developed countries have other pressing problems to deal with apart from conservation and are not going to cut off a source of income when they are trying to improve their economy and invest in infrastructure and on improving the lives of citizens– they might say to developed countries 'you chopped down your forests, why shouldn't we do the same?'* **No:** Detailed ideas about advantages of not exploiting oil. *E.g. Developing the rainforest for ecotourism would be more effective than drilling for oil as ecotourism is the responsible development and management of tourism, which helps to preserve the environment as ecotourism provides funds for conservation projects /provides jobs for local people (crafts, guides, etc). If they get carbon credits this would be more effective as it means that the forests have more value if they are left to grow, this will bring in income for the country and persuade the government to actively protect what is then a valuable asset if it is left standing.* Consideration of development schemes that might be more effective than oil exploitation is acceptable. Continued development may be case study examples. Knowledge of accurate information appropriately contextualised and/or at correct scale. Detailed understanding, supported by relevant evidence and exemplars. Well organised, demonstrating detailed linkages and the inter-relationships between factors. Range of ideas in a logical form; uses a range of specialist terms where appropriate.	

	Spelling, Punctuation and Grammar (SPaG) **Threshold Performance – 1 mark (1 mark)** Candidates spell, punctuate and use the rules of grammar with reasonable accuracy in the context of the demands of the question. Any errors do not hinder meaning in the response. Where required, they use a limited range of specialist terms appropriately. **Intermediate Performance – 2 mark (2 marks)** Candidates spell, punctuate and use the rules of grammar with considerable accuracy and general control of meaning in the context of the demands of the question. Where required, they use a good range of specialist terms with facility. **High Performance – 3 marks (3 marks)** Candidates spell, punctuate and use the rules of grammar with consistent accuracy and effective control of meaning in the context of the demands of the question. Where required, they use a wide range of specialist terms adeptly and with precision.	

2 (g)	**Levels of response** Possible opportunities include: Fishing/krill/whaling, tourism – (passive and non-passive), mineral exploitation, scientific research and associated road building and other infrastructure. **Level 1 (Basic) 1-2 marks** Simple statements without development of ideas. *E.g. Take fish and whales from the sea, exploit minerals, to discover if minerals lay beneath the ice and whether these could be mined, accommodate tourists, to be used as a place for scientific research.* **Level 2 (Clear) 3-4 marks** Clear reasons with development of ideas. Clearly links statements. *E.g. Research bases were developed to enable the study of our world and the effects that human activity can have on it.* Development of ideas may be case study examples. *E.g. the Northstar oil platform was built offshore in the Beaufort Sea to exploit new oil reserves. The US developed oilfields in Alaska so they did not have to depend on foreign oil supplies.* **Level 3 (Detailed) 5-6 marks** Detailed description with continued development of ideas with well linked statements. To access Level 3, there **must** be some reference to a named area with opportunities for development e.g. Antarctica, Alaska or to a named scheme. *The unspoilt wilderness of Antarctica is a great attraction for ecotourists. The spectacular scenery and wildlife mean that cruise ships visit the Antarctic Peninsula under carefully regulated conditions so that minimal environmental damage is caused. There are many opportunities for kayaking and ice walks and new landing stages have been constructed to accommodate these tourists.* *The US developed oilfields in Alaska so they did not have to depend on foreign oil supplies. This was done by drilling in the tundra area around Prudhoe Bay in the far north of the region and transporting the oil through the Trans-Alaska Pipeline to Valdez in the south of Alaska. More oil is thought to be under the coastal plain to the east of Prudhoe Bay and exploration is under way in this area. With seasonal ice retreating, there are more opportunities for offshore drilling. The Northstar oil platform was built offshore in the Beaufort Sea to exploit new oil reserves.*	6 marks AO1 – 4 marks AO2 – 2 marks

2 (h) **Common**	**4 x 1** (1+1+1+1 for developed point) Possible reasons include: Effects on animal population and ecosystem (land and marine). Human dependence on the natural environment, opportunities for scientific research and 'pristine wilderness' ideas. No credit will be given for merely listing features from the figure; there must be some simple indication of an effect. *E.g. To avoid threats from shipwrecks, oil spills/pipeline rupture – pollution of sea, threats to wildlife/plants, loss of animal habitats, damage to ecosystem. To preserve an area of outstanding natural beauty/a pristine environment.* Allow 1+1 for clear suggestions with development of ideas. *E.g. to avoid loss of animal habitats* (1) *this leads to species becoming endangered or extinct/disruption of ecosystem* (1)*. Damages areas of unspoilt wilderness such as Antarctica* (1) – *if oil drilling took place here a great natural laboratory for research into our world would be lost forever* (1)*. In cold environments oil tankers are at risk from icebergs* (1) *and any oil spill would damage the ecosystem and disrupt the food chain* (1)*.* Clear development of ideas may be case study examples. *E.g. in Prudhoe Bay in 2006 oil leaked from a pipeline, it polluted an area of tundra crossed by migrating caribou.*	4 marks AO1 – 1 mark AO2 – 2 marks AO3 – 1 mark

3 (a) (i)	**Levels of response** **Level 1 (Basic) 1-2 marks** Basic understanding which makes observations about the scale of the organisation and that it exists in a number of different countries. General idea of spread across world (1 mark). Mostly in northern hemisphere. Details of distribution, e.g. clusters or sparsities. **Level 2 (Clear) 3-4 marks** Clear understanding which makes observations about scale and organisational structure. Use of Figure 9 to develop ideas. *A transnational corporation is a large organisation that exists in many different countries. The example in Figure 9 is a good example because it has factories throughout the world in both LEDCs and MEDCs. Often the headquarters is in a more developed country and production plants in other parts of the world.*	4 marks AO2 – 2 marks AO3 – 2 marks
3 (a) (ii)	**3 x 1** Possibilities include: Market size, growth in SE Asia, cheap/available labour, free trade, fewer employment laws, government incentives, cheaper land. 1 mark for a simple valid suggestion and a 2nd is available for development of a point. *E.g. Large market so profitable to open/build factory. Cheap labour, so production costs are reduced.*	3 marks AO1 – 2 marks AO2 – 1 mark

3 (b)	**Levels of response** Problems can be environmental, socio-economic or cultural. Examples of problems include pollution, consumption of scarce resources, loss of indigenous companies/jobs, risk of 'plug-pulling' by the TNC, exploiting local government aid/wasting capital infrastructure investment, imposition of/clash with foreign cultural practices, health and safety issue, conflict with local people. **Level 1 Basic (1-2 marks)** Simple statement/s of problem/s. *E.g. TNCs put local firms out of business.* **Level 2 Clear (3-4 marks)** Clear explanation of challenges. Reference to example(s). *E.g. TNCs have the power to out-compete local firms so they lose business causing higher un-employment.* **Level 3 Detailed (5-6 marks)** Detailed explanation/demonstration of broader case study knowledge. Uses examples to make/illustrate points. *E.g. Japanese TNCs established car factories in the UK at the time when the UK car industry was struggling to compete in the EU market and lost more trade due to the TNCs' more modern and efficient production.*	6 marks AO1 – 4 marks AO2 – 2 marks
3 (c) (i) **Common**	**2 x 1** 1 mark for nature of difference (e.g. more) and 1 mark for use of data. (Accept 5.5 – 6% increase or quote data 0.75% to 6.5%) (Accept – 8 to 9 times higher)	2 marks AO3
3 (c) (ii)	**2 x 2 OR 2 x 1 + 1** 1 mark per suggestion, 1 for its development Simple suggestion/s *E.g. TNC growth, cheaper production in less developed countries, more globalisation*. Developed suggestion. *E.g. more globalisation has meant an increase in trade with more exports from less developed countries to markets including the UK, which is why the share of its trade with China went up by 5.6%.*	4 marks AO1 – 2 marks AO2 – 2 marks
3 (d)	**2 x 1** 1 mark per valid use of data from **Figure 13**. *E.g. Canada has an HDI 0.22 higher than Sri Lanka (*1*), Canada has a GNI ranking 93 higher (*1*).* Accept any data linked to difference. Accept large/wide.	2 marks AO3

3 (e)	**Levels of response** Reasons for benefits include: employment, higher wages/increased prosperity, opportunities, social benefits from improved infrastructure/social spending enabled by, for instance, increased tax revenue. **Level 1 Basic (1-4 marks)** Simply stated reason(s) for benefit *e.g. more jobs, better wages.* **Level 2 Clear (5-6 marks)** Clear explanation of how the growth of industry can benefit an area. Refers to example(s) *e.g. growth of industry may bring jobs that weren't there before so that people can now earn a good wage like when the Nissan car factory opened in Sunderland. This means that they can afford better housing conditions and have a better lifestyle.* **Level 3 Detailed (7-8 marks)** Detailed explanation/demonstration of broader case study knowledge which brings in socio-economic observations. Uses examples to make/illustrate points *e.g. new industry may bring jobs to replace others lost when industry declined before so that some local people can now earn a higher wage than before when the Nissan car factory opened in Sunderland replacing jobs lost due to the decline of old industries such as shipbuilding. This means that people have greater economic opportunities and can afford better cars and better food. This will improve their health and social opportunities.* **Spelling, Punctuation and Grammar (SPaG)** **Threshold Performance – 1 mark** Candidates spell, punctuate and use the rules of grammar with reasonable accuracy in the context of the demands of the question. Any errors do not hinder meaning in the response. Where required, they use a limited range of specialist terms appropriately. **Intermediate Performance – 2 mark** Candidates spell, punctuate and use the rules of grammar with considerable accuracy and general control of meaning in the context of the demands of the question. Where required, they use a good range of specialist terms with facility. **High Performance – 3 marks** Candidates spell, punctuate and use the rules of grammar with consistent accuracy and effective control of meaning in the context of the demands of the question. Where required, they use a wide range of specialist terms adeptly and with precision.	8 marks AO1 SPaG – 3 marks

3 (f)	**Levels of response** Valid suggestions: demand for knowledge-based (quaternary)/ hi-tech products has been particularly great in developed countries where access to research facilities like universities is also greater. Universities such have been keen to develop parks to build their reputation/market and for income. Governments provided aid for advanced economic development. Skills/knowledge base greater in developed countries. **Level 1 Basic (1-3 marks)** Simple valid suggestions *e.g. university research facilities have helped these parks grow.* **Level 2 Clear (4-5 marks)** Clear links between suggestions and science and research park development i.e. development of points. *E.g. university research facilities have helped these parks grow because they provide advanced technological know-how to help hi-tech firms develop nearby.* *The Cambridge Science Park is a UK example. Development can be case study examples.*	5 marks AO1
3 (g)	**Levels of response** Accept broad ideas about sustainability which might include social/economic and environmental considerations. The factory in Figure 12 is an example of sustainable industrial development because it: eliminates net carbon emissions, uses 25% less energy, stays cool through local clay bricks that retain less heat, has an open airy design, uses shade from overhangs and also reduces energy use to conserve future resources. **Level 1 Basic (1-4 marks)** Simple statement(s) of sustainable industrial development, *e.g. reduces air pollution eliminating carbon emissions.* Do not accept straight lifts, there must be some simple elaboration beyond figure 12. **Level 2 Clear (5-6 marks)** Clear explanation of sustainability. Development of points *e.g. reduces air pollution by eliminating carbon emissions so there is less contribution to future global warming*. *Bricks made of local materials so this provides employment and income for local people.*	6 marks AO1 – 1 mark AO2 – 4 marks AO3 – 1 mark

4 (a) (i)	**Levels of response** **Level 1 (Basic) 1-2 marks** Basic understanding which makes observations about tourism existing in many countries and people going on holidays throughout the world. **Level 2 (Clear) 3-4 marks** Clear development of ideas which picks up on the idea of global tourism or the distribution shown in figure 13. Points might include observations about the development of travel/airports; the growth of tourism in developing areas; how tourism is an important part of economic development/industrial globalisation should be linked to a global dimension or case studies of global tourism such as hotel companies and tour operators. *50 years ago most people in the UK did not travel far, mainly going to Europe for holidays. Since then, transport has developed further. Today, people travel throughout the world, including less-developed areas. This can be seen in Figure 13, where there are hotels in nearly every continent.*	4 marks AO1 – 1 mark AO2 – 2 marks AO3 – 1 mark
4 (a) (ii)	**3 x 1 (allow 1+1 for development point)** Possibilities include: aircraft technology, awareness of locations/advertising/internet, more disposable income, longer holidays, cheaper/available labour, and land costs, less regulation, government support, demand response, higher profit margins. 1 mark for a valid suggestion and a 2nd mark is available for development of a point e.g. developments in aircraft technology (1) mean more people can be carried and journey times reduced (1)	3 marks AO2

4 (b)	**Levels of response** Problems can be social, economic or cultural. Examples of problems include consumption of scarce resources, loss of traditional society/jobs, risk of 'plug-pulling' by the gtc, growth of all-inclusives with restricted multiplier effects, economic leakage, imposition of/clash with foreign cultural practices. **Level 1 Basic (1-2 marks)** Simple statement/s of problems *e.g. tourists don't spend money outside their all-inclusive hotel.* **Level 2 Clear (3-4 marks)** Clear explanation of problems through developed points and/or r eference to example(s). *E.g. tourists spend nearly their whole holidays in their all-inclusive hotel so local people like restaurateurs do not benefit from their spending. This happened with gtcs in Jamaica.* **Level 3 Detailed (5-6 marks)** Detailed explanation/demonstration of broader case study knowledge. Uses Figure 13 and own examples to make/illustrate points. *E.g. tourists spend much of their holiday isolated in their all-inclusive hotel so they mix little with local people and local businesses like restaurants do not benefit from their spending. This happened at Negril in Jamaica where local restaurants and bars like Rick's began organising their own transport to bring tourists from the all-inclusive beach hotels that gtcs built nearby.*	6 marks AO1 – 4 marks AO2 – 2 marks

4 (c) (i)	**2 x 1** 1 mark for nature of change (e.g. increase in tourist arrivals) or (e.g. % change less) and 1 for correct use of data (e.g. between 3.0% to 3.4%) – accept within this range. Allow 6.7 – 6.5 (2010), 3.5 – 3.3 (2012)	2 marks AO3
4 (c) (ii)	**2 x 1 + 1** 1 mark for a simple suggestion. Pollution must be qualified. *E.g. increased atmospheric pollution, more global warming* and 2nd mark for development. *E.g. increased atmospheric pollution (*1), *from aircraft fumes contributing to the greenhouse effect.(*1) *Ways include more greenhouse gases, more global warming, increased noise, clearance of vegetation for airports etc.*	4 marks AO1 – 4 marks AO2 – 2 marks
4 (d) (i)	**2 x 1** 1 mark per valid point drawn from Figure 15. *E.g. Canada has an HDI that is 0.27 higher than Egypt (1), GNI is $29,897 higher (1)* *and a GNI rank 91 higher* (1) *Accept the development gap is large/wide* i.e. quantity or quality data	2 marks AO3
4 (d) (ii) **Common**	**Levels of response** Advantages include: economic benefits in less developed countries such as Egypt in-destination spend, some locals are better off and so, the gap may be narrowed, tax revenues may be spent on development. **Level 1 Basic (1-3 marks)** Simply stated advantage/s of tourism as a way of reducing the development gap *e.g. money from tourism may be spent on development in less developed areas.* **Level 2 Clear (4-5 marks)** Clear explanation of advantages. Refers to example(s) from Figure 15 and own knowledge *e.g. tourists to Jamaica often stay in large hotels, spending a lot of money locally raising local incomes which can be spent improving housing conditions.*	5 marks AO1 – 3 marks AO2 – 1 mark AO3 – 1 mark

4 (e)	**Example can be place based or strategy based** **Levels of response** Possible methods include: Visitor centres/education, National Park Authorities/Park Rangers, planning permission for locals, traffic management, voluntary workers (repairs), guided/circular walks, planning restrictions. **Level 1 Basic (1-4 marks)** Simply stated methods without elaboration. *E.g. have a park and ride system, reserve houses for locals, replant eroded areas, provide litter bins, have parking restrictions, locals only parking permits.* **Level 2 Clear (5-6 marks)** Clear explanation of the methods with some indication as to how conflict can be reduced. *E.g. the Lake District National Park are planning to have a park and ride system; this takes visitors cars off the roads. In Castleton they give local people permits to park and don't allow visitors to park on the roads.* **Level 3 Detailed (7-8 marks)** Detailed explanation with detailed reference as to how it reduces conflict. *Eg. the Lake District National Park are planning to have a park and ride system where a bus takes people from the towns into the National Park. More people can sit in a bus so this reduces the number of cars on the narrow country lanes and reduces traffic congestion and makes travel for local people easier. In Castleton in the Peak District National Park they give local people permits to park on the roads and visitors are not allowed to do so, but have to pay to use car parks which raises funds. This ensures locals will always be able to park and will not resent large visitor numbers disrupting their daily routine.* *Having a visitor centre as the one in Castleton in the Peak District National Park provides education for visitors on how to behave in the countryside and respect the lives of local people.* L3 can be accessed by having a range of strategies ie. more than 2 clearly described.	8 marks AO1 SPaG – 3 marks

4 (e)	**Spelling, Punctuation and Grammar (SPaG)** **Threshold Performance – 1 mark** Candidates spell, punctuate and use the rules of grammar with reasonable accuracy in the context of the demands of the question. Any errors do not hinder meaning in the response. Where required, they use a limited range of specialist terms appropriately. **Intermediate Performance – 2 marks** Candidates spell, punctuate and use the rules of grammar with considerable accuracy and general control of meaning in the context of the demands of the question. Where required, they use a good range of specialist terms with facility. **High Performance – 3 marks** Candidates spell, punctuate and use the rules of grammar with consistent accuracy and effective control of meaning in the context of the demands of the question. Where required, they use a wide range of specialist terms adeptly and with precision.	
4 (f) **Common**	**Levels of response** The ecotourism development in Figure 16 is sustainable by employing local staff, growing vegetables on site, recycling food waste, using local building and furnishing materials, using local seawater and fish. **Level 1 Basic (1-4 marks)** Simple statement(s) of sustainable tourism *e.g. keeping money in the area by employing local staff*. Do not accept straight lifts; there must be some simple elaboration beyond figure 16. **Level 2 Clear (5-6 marks)** Clear explanation of how the development in Figure 16 is sustainable *e.g. keeping money in the area by employing local staff maintains local communities economic well-being into the future.*	6 marks AO1 – 1 mark AO2 – 4 marks AO3 – 1 mark