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**Edexcel**

# **Mark Scheme (Standardisation)**

**Summer 2018**

**Pearson Edexcel GCE  
In Geography (6GE01)  
Unit 1: Global Challenges**

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Publications Code 6GE01\_01\_1806\_MS

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## General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

Question Number	Answer	Mark
1(a)(i)	<b>C</b> Economic costs, deaths and numbers affected show no clear trend over time.	<b>(1)</b>

Question Number	Answer	Mark
1(a)(ii)	<ul style="list-style-type: none"> <li>• Technology/scientific/geological knowledge has improved ❶ so awareness of likely impacts of eruptions/likely locations to be affected mean people can be warned❶.</li> <li>• If powerful eruptions are predicted ❶ there may be time to evacuate vulnerable populations❶.</li> <li>• Higher incomes/overseas aid are available ❶ providing disaster relief for those affected, reducing death toll❶.</li> <li>• Eruption occurs in an area with low population ❶ so help can be targeted to those who need it❶.</li> </ul> <p>Award ❶ for each basic idea and ❶ for a point that is extended or usefully exemplified. Do not allow same extension point twice. Allow other reasonable ideas.</p>	<b>(4)</b>

Question Number	Answer	Mark
1(b)	<p>'Numbers affected' is a very general term, and there are multiple ways in which people are affected by tectonic disasters, for example, by losing their homes, business losses, loss of farm land to ash/lahar coverage, loss of access due to landslides, etc.</p> <p>Reasons for the increase include:</p> <ul style="list-style-type: none"> <li>• Global population growth ❶ and reasons for this. ❶</li> <li>• Increased urbanisation ❶ means density has grown and a hazard affecting an urban area immediately increases numbers affected ❶.</li> <li>• Many of the poor in cities live in vulnerable shanty towns unprotected from hazards (e.g. inadequate flood walls, no seismic technology ❶).</li> <li>• Improved communication including social media ❶ mean that more people are aware of disasters and may feel trauma/give financially ❶.</li> <li>• Increased incomes mean more travel for leisure/business, taking people into risky locations ❶.</li> <li>• Increased economic development has enabled governments and cities to invest in adaptation strategies ❶ so people may live in vulnerable locations which may be damaged ❶.</li> </ul> <p>Examples may be used and links between these factors explained. May have other valid suggestions. ❶ May have examples of disasters with contrasts drawn ❶ with extension points. ❶</p> <p><i>Only award ❶ for a short list of simple statements that lack any explanation or examples.</i></p>	<b>(5)</b>

Question Number	Answer	Mark
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2(a)(i)	<b>D</b> Temperatures in the Arctic have increased more than anywhere else.	<b>(1)</b>
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Question Number	Answer	Mark
2a(ii)	<ul style="list-style-type: none"> <li>• Warmer temperatures will increase evaporation ❶ so less water available from lakes/ivers ❶.</li> <li>• Waterholes/ivers may dry up so people have to travel further for water supplies ❶ which increases costs/time and reduces amount of water available for family use ❶.</li> <li>• Water tables may fall ❶ so deeper wells are required and water quality may decrease ❶.</li> <li>• Warmer temperatures may lead to increased rainfall ❶ so more water is available, though this may be intense resulting in flooding and contamination of supplies ❶.</li> </ul> <p>Award ❶ mark for each basic idea and ❶ mark for a point that is extended or usefully exemplified. Allow other reasonable ideas.</p>	<b>(2)</b>

Question Number	Answer	Mark
2(b)	<p><b>Drought:</b></p> <ul style="list-style-type: none"> <li>• Education on farming practices to reduce water use❶ such as drip irrigation❶</li> <li>• Low technology water saving devices❶ such as use of magic stones to reduce evaporation ❶</li> <li>• Grow drought resistant crops❶ so that limited water resources can be used for people and animals❶</li> <li>• Change crops from those that demand high water use e.g. grapes❶ to those that require less water e.g. olives❶</li> <li>• GM crops❶ adapted to cope with limited water supply or saline soil❶</li> </ul> <p><b>Flood:</b></p> <ul style="list-style-type: none"> <li>• Flood walls❶ protect valuable land and property and divert water elsewhere❶</li> <li>• Houses on stilts❶ prevent water and sewage from entering property❶</li> <li>• Move away from coast❶ leaving space for flood water to disperse❶</li> <li>• Planting trees ❶ so that water may be trapped on leaves (interception) or transpire through roots❶</li> </ul> <p>Award ❶ mark for each basic idea and ❶ mark for a point that is extended or usefully exemplified. Do not allow same point for both flood and drought (e.g. GM crops) Credit other realistic adaptations for a developing country.</p>	<b>(2+2)</b>

Question Number	Answer	Mark
2(c)	<p>Global warming may be considered in terms of changes in temperature, rainfall or sea level rise. Economic activity is likely to focus on farming (subsistence and/or commercial), but expect to see discussion about poverty, famine, food security, loss of land, damage to buildings and infrastructure, tourism and other ideas.</p> <p>May have other valid suggestions. ❶</p> <p>Award ❶ for each basic idea and ❶ for a point that is extended or usefully exemplified.</p>	<b>(5)</b>

Question Number	Answer	Mark						
3(a)	<table border="1"> <thead> <tr> <th>Plants more common 10,000 years ago</th> <th>Plants more common 1,000 years ago</th> </tr> </thead> <tbody> <tr> <td>Birch trees</td> <td>Flowering plants</td> </tr> <tr> <td>Pine trees <b>or</b> shrubs</td> <td>Grasses <b>or</b> oak trees</td> </tr> </tbody> </table> <p>Award 1 + 1 for 2 answers in the correct box.</p>	Plants more common 10,000 years ago	Plants more common 1,000 years ago	Birch trees	Flowering plants	Pine trees <b>or</b> shrubs	Grasses <b>or</b> oak trees	(1,1)
Plants more common 10,000 years ago	Plants more common 1,000 years ago							
Birch trees	Flowering plants							
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Question Number	Answer	Mark
3(b)	<p>Answers may categorise ideas as 'unreliable' and 'incomplete' but this is not required.</p> <p><b>Unreliable because:</b></p> <ul style="list-style-type: none"> <li>• Links between proxy records and temperature change/rainfall patterns are not direct 1.</li> <li>• Pollen records tend to lag behind changes in climate 1</li> <li>• Other factors may influence the presence or absence of a species (e.g. disease, pests, isolation) 1.</li> <li>• Paintings and diaries etc. may exaggerate weather for multiple reasons 1.</li> <li>• Dendrochronology patterns from tropical areas do not show clear annual rings 1.</li> </ul> <p><b>Incomplete because:</b></p> <ul style="list-style-type: none"> <li>• Pollen records from lake/peat beds may have been disturbed/ploughed up 1.</li> </ul> <p>Not enough data for scientifically accurate conclusions 1</p> <ul style="list-style-type: none"> <li>• Fire/war may have destroyed records/trees 1.</li> <li>• Absence of a species may have other explanations. Trees etc. do not grow in all locations 1</li> </ul> <p>Extended e.g. by specific reference to example/s 1.</p> <p>May have other valid suggestions 1.</p>	(4)

Question Number	Answer	Mark
3(c)	<ul style="list-style-type: none"> <li>• Methane increased due to more agriculture/cows 1, changed diets in Asia 1, and large/growing populations mean this is on a large scale 1, warming oceans release methane hydrates 1.</li> <li>• CO<sub>2</sub> increased because of burning fossil fuels 1 due to industrialisation in 18<sup>th</sup> century/rising economic development 1 and middle classes increasing car ownership 1 in Europe and also in Asia 1. Reduction of carbon sinks through deforestation 1</li> <li>• Nitrous oxide: as car ownership increases 1 due to population growth 1 and wealth globally 1. Also from fertilised agricultural fields and manure from livestock 1, growing because of increased populations and industrialisation of agriculture. 1.</li> <li>• Also CFCs and water vapour.</li> </ul> <p>1 for a list. Award 1 for each basic idea and 1 for a point that is extended or usefully exemplified.</p> <p>No mark for simply naming a gas. All points must be about the same gas. For full marks, answer must discuss 'increase'.</p>	(4)

Question Number	Answer	Mark
4(a)	<ul style="list-style-type: none"> <li>• Low national income/GDP or high levels of poverty ❶.</li> <li>• Low life expectancy ❶.</li> <li>• High infant/child mortality rate ❶.</li> <li>• Low literacy levels/low attendance at secondary school ❶.</li> <li>• High rates of malnutrition ❶.</li> <li>• High percentage of informal jobs in urban areas ❶.</li> <li>• Subsistence farming dominates in rural areas ❶.</li> <li>• High birth rates ❶.</li> </ul> <p>Allow other reasonable answers or equivalents to the above ideas.</p>	(1,1)

Question Number	Answer	Mark												
4(b)(i)	<table border="1"> <thead> <tr> <th>Date</th> <th>% Agriculture</th> <th>% Non-Agriculture</th> </tr> </thead> <tbody> <tr> <td>1980</td> <td>64</td> <td>36</td> </tr> <tr> <td>1998</td> <td>50</td> <td>50</td> </tr> <tr> <td>2010</td> <td>38</td> <td>62</td> </tr> </tbody> </table>	Date	% Agriculture	% Non-Agriculture	1980	64	36	1998	50	50	2010	38	62	(1+1)
Date	% Agriculture	% Non-Agriculture												
1980	64	36												
1998	50	50												
2010	38	62												

Question Number	Answer	Mark
4(b)(ii)	<ul style="list-style-type: none"> <li>• Mechanisation of farming so fewer jobs available as tractors are more efficient ❶ so farm labourers have found other types of work, e.g. factory work/services ❶.</li> <li>• Commercial farming on a small or large scale may not employ as many as subsistence farming ❶.</li> <li>• TNC investment in agriculture/manufacturing/tourism ❶ has created other higher paid opportunities ❶ which have more prospects for promotion ❶ and are less dependent on weather/harvests ❶.</li> <li>• Subsistence farming is hard so many seek alternatives ❶.</li> <li>• Education has provided skills needed for other work ❶.</li> <li>• Industrialisation of China and other east Asian countries has led to demand for factory workers ❶.</li> <li>• Globalisation/shrinking world with communication and transport changes has opened up other opportunities ❶.</li> <li>• However, Indonesia has specialised in palm-oil plantations, so drop in agricultural jobs has not been as marked as in some other countries ❶ (and also economic crises in 21<sup>st</sup> century have forced people back to farm work when other unemployment grows) ❶.</li> </ul> <p>May have other valid suggestions. Award ❶ for each basic idea and ❶ for a point that is extended or usefully exemplified.</p>	(4)

Question Number	Answer	Mark
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4(c)	<ul style="list-style-type: none"> <li>Attempts to maximise profits ❶ by finding new markets ❶.</li> <li>Spatial division of labour ❶ with factory workers in Asia/Mexico ❶ with lower pay/long working hours/ short holidays ❶ but management and R&amp;D in developed countries ❶ where higher education and business skills are utilised ❶.</li> <li>Glocalisation: adapting products to suit the local market ❶ with examples and detail ❶.</li> <li>Vertical integration: operating as primary/secondary and tertiary business ❶, e.g. Shell or BP with detail ❶.</li> <li>Horizontal integration through mergers and acquisitions ❶.</li> <li>Working through trade bloc rules to open up new markets ❶ (e.g. Nissan with detail) ❶.</li> <li>Negotiating tax breaks/low rent with government ❶.</li> </ul> <p>May have other valid suggestions❶ Award ❶ for each basic idea and ❶ for a point that is extended or usefully exemplified..</p>	<b>(4)</b>
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Question Number	Answer	Mark
5(a)(i)	New Delhi	<b>(1)</b>

Question Number	Answer	Mark
5a(ii)	<ul style="list-style-type: none"> <li>High rural-urban migration of young ❶.</li> <li>Industrialisation increases demand for labour ❶.</li> <li>Education opportunities higher in cities ❶.</li> <li>High natural increase ❶ because many migrants are in fertile age-group.</li> <li>Improved sanitation/vaccination programmes increases life expectancy❶.</li> </ul> <p>May have other valid suggestions ❶. Award ❶ for each basic idea and ❶ for a point that is extended or usefully exemplified.</p>	<b>(4)</b>

Question Number	Answer	Mark
5(b)	<p>Social consequences include:</p> <ul style="list-style-type: none"> <li>Housing shortages ❶ so poor and recent arrivals live in shanty type housing ❶ in dangerous locations ❶.</li> <li>Inadequate water and sewerage supplies ❶ lead to high levels of water-borne disease ❶.</li> <li>Lack of security ❶ so crime rates high ❶ .</li> <li>Housing built of scrap materials ❶ so risk of fire ❶.</li> </ul> <p>May have other valid suggestions. Credit examples with a detail. Award ❶ for each basic idea and ❶ for a point that is extended or usefully exemplified.</p>	<b>(5)</b>

Question Number	Answer	Mark
6(a)(i)	<ul style="list-style-type: none"> <li>Wind turbines❶.</li> <li>Growing vegetables in gardens❶.</li> <li>Cutting use of fossil fuels❶.</li> <li>Buying local produce❶.</li> <li>Cycling❶.</li> </ul>	<b>(1,1)</b>



	<ul style="list-style-type: none"> <li>Greenhouses❶.</li> </ul> <p>May have other valid suggestions, linked to Figure 6.</p>	
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Question Number	Answer	Mark
6(a)(ii)	<ul style="list-style-type: none"> <li>Locally grown vegetables may be grown in heated greenhouses for much of the year❶ so fossil fuel emissions are high ❶. Less choice if all is grown locally❶. Likely that customers and supermarkets will continue to demand non-seasonal produce❶.</li> <li>Elderly/disabled/young children may not be able to cycle/use public transport ❶.</li> <li>Rural locations have poor and expensive public transport facilities ❶ leading to isolation particularly for young/old❶.</li> <li>Wind turbines (and other renewable energies) have limitations ❶, such as intermittent production of energy ❶ and they may be unpopular with some house owners ❶. Many parts of the world are likely to continue to rely on fossil fuels for the foreseeable future❶,</li> </ul> <p>Allow other reasonable suggestions. Award ❶ for each basic idea and ❶ for a point that is extended or usefully exemplified.</p>	(4)

Question Number	Answer	Mark
6(b)	<p><b>Agreement difficult to achieve because:</b></p> <ul style="list-style-type: none"> <li>Countries have many agendas, e.g. economic development, security issues, education so do not see change as a priority.</li> <li>Costs may be high (e.g. transition away from fossil fuels)</li> <li>Developing world countries feel others caused the problems so it is not their responsibility to cut their emissions.</li> </ul> <p><b>Global approaches</b> to reducing impacts of human effects on the environment problems include:</p> <ul style="list-style-type: none"> <li>Montreal Protocol: protection for ozone layer</li> <li>Kyoto Treaty and Paris Agreement: to reduce CO<sub>2</sub> emissions</li> <li>carbon trading, fishing regulations, Antarctic Treaty, Green Palm agreement, 'Debt for nature' agreements, also Ramsar, CITES and many others.</li> </ul> <p>For any reason, ❶ for identifying it, and further ❶ for detail. No marks for naming a treaty without explanation.</p>	(5)

Question Number	Answer
	Explain how the factors shown influence disaster risk in the Philippines.
7(a)	<p><b>Indicative content</b></p> <p>Question could be tackled by hazard type, or by reference to the factors shown in Figure 7, which might involve discussion of vulnerability and capacity to cope. Either approach, or a combination of both, are acceptable. Expect detailed knowledge of hazard types and/or past disasters in the Philippines. Another good approach would be to consider future risks (linked to the data from Figure 7).</p> <p><b>Factors shown include:</b></p> <p><b>Deforestation:</b></p> <ul style="list-style-type: none"> <li>Major issue in past, resulting in increased risk of floods and landslides, and possibly secondary hazards like lahars from volcanic eruption. <ul style="list-style-type: none"> <li>Current rates have slowed but forests are still being lost so increased risks are likely from hydro-meteorological hazards.</li> </ul> </li> </ul> <p><b>Population growth and urban growth:</b></p>

	<ul style="list-style-type: none"> <li>• Continues to be rapid, as does urbanisation. Both increases lead to more people being at risk if a disaster hits densely populated areas.</li> <li>• This may mean disaster relief may be focused where most needed, but equally it may be hard to reach all, especially in densely populated slum areas lacking infrastructure, e.g. Baseko in Manila.</li> </ul> <p><b>Sea level rise:</b></p> <ul style="list-style-type: none"> <li>• Philippines includes over 7,000 islands and many live in coastal areas so are at great risk which will increase in future.</li> <li>• Typhoons are likely to bring storm surges, intense rain and resultant floods.</li> </ul> <p><b>Water and sanitation:</b></p> <ul style="list-style-type: none"> <li>• Access to these has increased over last 25 years, and improvements are likely, but the poorest and new migrants are likely to have inadequate supplies, and floods and storms will contaminate water further, increasing health risks for these groups.</li> </ul> <p>Credit other approaches/ideas where relevant.</p>
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Level	Mark	Descriptor
<b>Level 1</b>	1-4	<ul style="list-style-type: none"> <li>• Poorly structured.</li> <li>• Simple description of factors mentioned in Figure 7.</li> <li>• Makes simple comments about more people being at risk from hazards.</li> <li>• Geographical terminology is rarely used.</li> <li>• Frequent written language errors.</li> </ul>
<b>Level 2</b>	5-7	<ul style="list-style-type: none"> <li>• Has structure.</li> <li>• Makes descriptive comments about factors based on Figure 7. Might begin to include own knowledge about hazards experienced in Philippines.</li> <li>• Comments on how the factors affect risk of disasters.</li> <li>• Some geographical terminology is used. There are some written language errors.</li> </ul>
<b>Level 3</b>	8-10	<ul style="list-style-type: none"> <li>• Well-structured answer.</li> <li>• Use of Figure 7 to explain factors and makes links to specific types of hazards, using own knowledge of past disasters. May comment on locations on map.</li> <li>• Suggests reasons why the factors increase risk of disaster, and may differentiate between them.</li> <li>• Appropriate geographical terms show understanding. Minor language errors.</li> </ul>

Question	Explain why both the magnitude and frequency of hydro-meteorological hazards are likely to increase in the future.
7(b)	<b>Indicative Content</b>
	<p><b>Hydro-meteorological hazards:</b> storms, floods and droughts. Frequency (F) and magnitude (M) may be considered separately, though there is overlap in most cases.</p> <p>Changes are likely to be explained by <b>global warming</b> leading to climate change, and this should be explained.</p> <ul style="list-style-type: none"> <li>• Landslides / mass movement can result from slope destabilisation where heavy rain occurs, and are linked to deforestation of hillsides, or to road building. If global warming continues, then further climate changes are possible, leading to more intense rainfall. As populations grow and economic development occurs, further human activity may increase risk of landslides, and magnitude is likely to increase too.</li> <li>• Storms are likely to increase in frequency and magnitude as air and sea temperatures warm, with more of the world's oceans reaching 26°C for longer periods of the year. Therefore there is more energy, triggering and sustaining storms and rainfall. Recent examples of large storms are Typhoon Haiyan in Philippines and various named storms in the UK.</li> <li>• Droughts are also more likely to occur and last for longer in the future, particularly in parts of sub-Saharan Africa. Droughts are also triggered by deforestation and overgrazing leading to desertification.</li> <li>• ENSO cycles may become more frequent and intense in the future, increasing storms and droughts in many parts of the world.</li> </ul> <p><b>Other reasons for rise:</b></p> <ul style="list-style-type: none"> <li>• Population growth and more live in risky locations, so scale of hazard is increased.</li> <li>• Increased economic value of economies so insurance costs rise in magnitude.</li> </ul> <p>Credit examples and other approaches/ideas where relevant.</p>

Level	Mark	Descriptor
<b>Level 1</b>	1-4	<ul style="list-style-type: none"> <li>• Lacks structure.</li> <li>• Description of a few hazard types.</li> <li>• Lacks explanation of likely changes in the future.</li> <li>• Lack of geographical terminology is rarely used. Frequent written language errors.</li> </ul>
<b>Level 2</b>	5-8	<ul style="list-style-type: none"> <li>• Some structure.</li> <li>• Basic explanation of changes to frequency and/or magnitude for one or two hazards.</li> <li>• Likely to comment about role of climate change in influencing future hazards.</li> <li>• Geographical terminology is used. There are some written language errors.</li> </ul>
<b>Level 3</b>	9-12	<ul style="list-style-type: none"> <li>• Structured account.</li> <li>• Explains likely changes in magnitude and/or frequency for a range of hazards</li> <li>• Explains reasons for these changes, likely to focus on climate change but maybe mention other factors.</li> <li>• Geographical terms show understanding. Written language errors are minor.</li> </ul>
<b>Level 4</b>	13-15	<ul style="list-style-type: none"> <li>• Well-structured account.</li> <li>• Detailed explanation of reasons for changes in magnitude and frequency for a range of hazards.</li> <li>• Explanations are likely to include an in depth focus on climate change as well as other factors .</li> <li>• Uses appropriate geographical terms and exemplification to show understanding. Written language errors are rare.</li> </ul>

Question Number	Explain how the 2015-2016 El Niño event led to the changes shown in Figure 8.
8(a)	<b>Indicative Content</b>
	<p>El Niño causes short-term weather changes over a 9-month to 2-year period, sometimes followed by la Niña.</p> <p><b>Consequences shown include:</b></p> <ul style="list-style-type: none"> <li>• <b>Warm water</b> 'sloshes' over to south America, resulting in rising air, evaporation and heavy rain in Peru, also in California.</li> <li>• <b>Colder sea temperatures</b> are seen in east Australia, south-east Asia (and to a lesser extent in the Philippines), along with higher pressure and sinking air and drought, resulting in bush fires.</li> <li>• <b>Bush fires in Australia</b> could be worsened by low evaporation and fewer clouds.</li> <li>• <b>Fewer Atlantic</b> hurricanes as there is increased wind shear, which prevents minor tropical storms from developing into hurricanes (because heat is dispersed over a wider area and the storm loses energy).</li> <li>• <b>Colder sea temperatures</b> in Fiji/Samoa linked to drought, caused by sinking air, high pressure and low evaporation and condensation levels.</li> </ul> <p><b>Reasons linked to El Niño</b></p> <ul style="list-style-type: none"> <li>• <b>Reverse of Walker cell</b> alters wind direction (linked to high pressure in western Pacific and low pressure in eastern Pacific).</li> <li>• Leading to low pressure and more evaporation and <b>intense rainfall</b> in coastal areas of Peru and California.</li> <li>• <b>Warmer Pacific temperatures and sea level rise</b> occur due to reversal of wind direction leading to 'sloshing' of warm water eastwards across the Pacific. Also low pressure leads to rise in sea level (1mb drop leads to 1cm rise). Warmer water due to thermal expansion.</li> </ul> <p>Credit other approaches/ideas where relevant.</p>

Level	Mark	Descriptor
<b>Level 1</b>	1-4	<ul style="list-style-type: none"> <li>• Poorly structured.</li> <li>• Simple description of Figure 8 about hotter parts of the Pacific.</li> <li>• Simple comments about changes to weather that have occurred.</li> <li>• Geographical terminology is rarely used. Frequent written language errors.</li> </ul>
<b>Level 2</b>	5-7	<ul style="list-style-type: none"> <li>• Has structure.</li> <li>• Makes descriptive comments about effects on weather based on Figure 8. Might begin to include own knowledge about reasons for the effects.</li> <li>• Comments about role of El Nino.</li> <li>• Some geographical terminology is used. There are some written language errors.</li> </ul>
<b>Level 3</b>	8-10	<ul style="list-style-type: none"> <li>• Well-structured answer.</li> <li>• Use of Figure 8 to explain impacts on weather.</li> <li>• Detailed reasons for why impacts occur, linked to own knowledge of El Nino processes.</li> <li>• Appropriate geographical terms show understanding. Minor language errors.</li> </ul>

Question Number	Examine why the impacts of sea-level rise will be worse in some places compared to others.
8(b)	<b>Indicative content</b>
	<p>Sea level rise (eustatic change) occurs everywhere, but the scale of rise varies, and the level of preparation varies too.</p> <p><b>Varied impacts:</b></p> <ul style="list-style-type: none"> <li>• Some coastal areas are at risk of inundation, salt water incursion leading to loss of farm land, water supplies and settlements, or to increased exposure to storms.</li> <li>• Out-migration elsewhere in the country or internationally may be the long-term impact.</li> </ul> <p><b>Possible reasons include:</b></p> <ul style="list-style-type: none"> <li>• <b>Physical factors:</b> height of land, geomorphology, geology, location (coastal, island, % of coast land). Also temperature of water, and whether in “typhoon belt” or at risk from winter depressions in northern Europe. Also effects of isostatic change, e.g. in Venice or London.</li> <li>• <b>Human factors:</b> GDP and level of economic development is likely to be seen as the main factor, as successful adaptations are costly (as seen in the Netherlands or London Thames Barrier), and technically challenging. These may hold back rising sea levels, but in the long term will need to be reinforced.</li> <li>• Whereas lower income locations rely on raising buildings on stilts or simple sea walls, which are easily overwhelmed.</li> <li>• Sustainable solutions, possibly with low costs could include replanting mangroves or marram grass, but these are often overwhelmed by extreme events.</li> <li>• Likely examples are Bangladesh, Pacific SIDs, Netherlands, UK.</li> </ul> <p>Credit other approaches/ideas where relevant.</p>

Level	Mark	Descriptor
<b>Level 1</b>	1-4	<ul style="list-style-type: none"> <li>• Lacks structure.</li> <li>• Description of impacts of sea level rise.</li> <li>• Lacks explanation of reasons for global variations.</li> <li>• Geographical terminology is rarely used. Frequent written language errors.</li> </ul>
<b>Level 2</b>	5-8	<ul style="list-style-type: none"> <li>• Some structure.</li> <li>• Basic explanation of a limited range of impacts.</li> <li>• Comments about reasons for the variations.</li> <li>• Geographical terminology is used. There are some written language errors.</li> </ul>
<b>Level 3</b>	9-12	<ul style="list-style-type: none"> <li>• Structured account.</li> <li>• Explains a range of impacts across several locations.</li> <li>• Explains how impacts are linked to location through physical and/or human factors.</li> <li>• Geographical terms show understanding. Written language errors are minor.</li> </ul>
<b>Level 4</b>	13-15	<ul style="list-style-type: none"> <li>• Well-structured account.</li> <li>• Detailed explanation of impacts for a global range of locations.</li> <li>• Explains physical and human reasons accurately linked to distribution.</li> <li>• Uses appropriate geographical terms and exemplification to show understanding. Written language errors are rare.</li> </ul>

Question Number	Suggest reasons for the patterns of Facebook connectivity shown.
9(a)	<b>Indicative Content</b>
	<p><b>Pattern of use</b></p> <ul style="list-style-type: none"> <li>• Map shows highest use in Europe (extending to Turkey and Israel) and USA (extending into southern Canada).</li> <li>• There is also high use in northern South America, parts of Mexico, eastern South Africa, eastern Australia, New Zealand, Indonesia, India, Sri Lanka and many others</li> <li>• Use is low in northern Canada, most of Russia, inland Australia, much of inland Africa, Amazonia and the world's oceans.</li> <li>• There is also a pattern of connectivity to be discussed, for e.g. between USA and Europe, and between Hawaii and mainland USA.</li> </ul> <p><b>Human geography reasons</b></p> <ul style="list-style-type: none"> <li>• Patterns of use are directly related to where people live. Higher use on east coast of USA for example than mid-west, higher use in England than Scotland.</li> <li>• Higher use where people are wealthier. High use in Europe, much lower in Africa.</li> <li>• Poorer countries often have regions where use is higher, for example southern Nigeria where oil reserves are exploited, TNCs invest in infrastructure and workers have enough earnings to afford electricity and IT access.</li> <li>• Also partly related to use of English language, e.g. higher in India than Japan</li> <li>• Government restriction of internet/FB use in China/North Korea leads to low use.</li> <li>• FB started in USA so likely that there are more users here.</li> </ul> <p><b>Physical geography reasons</b></p> <ul style="list-style-type: none"> <li>• Low use seen in remote, cold, dry and densely forested regions.</li> <li>• Mountainous regions e.g. Andes have low use</li> <li>• More people live on coasts so these places are better connected.</li> </ul> <p>Credit other approaches/ideas where relevant.</p>

Level	Mark	Descriptor
<b>Level 1</b>	1-4	<ul style="list-style-type: none"> <li>• Poorly structured.</li> <li>• Simple description of Figure 9 commenting on levels of FB use.</li> <li>• Makes simple comments about poverty and wealth and access to FB.</li> <li>• Geographical terminology is rarely used. Frequent written language errors.</li> </ul>
<b>Level 2</b>	5-7	<ul style="list-style-type: none"> <li>• Has structure.</li> <li>• Makes descriptive comments about countries with high and low FB use based on Figure 9.</li> <li>• Comments on a few reasons for the patterns identified.</li> <li>• Some geographical terminology is used. There are some written language errors.</li> </ul>
<b>Level 3</b>	8-10	<ul style="list-style-type: none"> <li>• Well-structured answer.</li> <li>• Use of Figure 9 to identify patterns of high and low use</li> <li>• Suggests a range of reasons for this and is likely to structure this, e.g. by considering human and physical reasons.</li> <li>• Appropriate geographical terms show understanding. Minor language errors.</li> </ul>

Question Number	Examine the socio-economic costs and benefits of globalisation for different countries
9(b)	<b>Indicative content</b>
	<p>Globalisation involves increased connectivity across the world, linked to trade and cultural exchange. Goods, services, people, money and ideas flow between countries.</p> <p><b>Costs:</b></p> <ul style="list-style-type: none"> <li>• Exploitation of work force (low wages, poor working conditions, and few benefits).</li> <li>• Cultural loss, e.g. distinctive food, clothing, music, religion are lost as western /American culture increasingly dominates e.g. McDonalds.</li> <li>• Spread of previously unknown diseases. Health problems linked to pollution from increased manufacturing. Death/injuries caused poor H&amp;S e.g. Rana Plaza.</li> <li>• Growth of megacities and other cities to house new workers/factories with associated poor living conditions.</li> </ul> <p><b>Benefits:</b></p> <ul style="list-style-type: none"> <li>• Waged labour in former subsistence economies allows more spending on food, health, education.</li> <li>• Increased opportunities to overcome poverty through work and migration.</li> <li>• Increased government income through tax revenue, rents so more investment in social welfare programmes.</li> <li>• Increased infrastructure and ICT linkage needed and provided by TNCs.</li> <li>• Cheaper goods and increased standard of living for customers as spatial division of labour reduces costs.</li> <li>• More awareness of world, and opportunities for disadvantaged groups.</li> </ul> <p>Do not credit environmental costs and benefits unless linked to socio-economic points.</p>

Level	Mark	Descriptor
<b>Level 1</b>	1-4	<ul style="list-style-type: none"> <li>• Lacks structure.</li> <li>• Description of one or two costs/and or benefits, which may not be differentiated or linked to countries.</li> <li>• Lacks explanation of how these are linked to globalisation.</li> <li>• Geographical terminology is rarely used. Frequent written language errors.</li> </ul>
<b>Level 2</b>	5-8	<ul style="list-style-type: none"> <li>• Some structure.</li> <li>• Basic explanation of a few costs/and or benefits, which may be differentiated and linked to named countries.</li> <li>• Comments about how these are linked to globalisation.</li> <li>• Geographical terminology is used. There are some written language errors.</li> </ul>
<b>Level 3</b>	9-12	<ul style="list-style-type: none"> <li>• Structured account.</li> <li>• Explains a range of costs and benefits which are linked to countries.</li> <li>• Explains how these are linked to globalisation.</li> <li>• Geographical terms show understanding. Written language errors are minor.</li> </ul>
<b>Level 4</b>	13-15	<ul style="list-style-type: none"> <li>• Well-structured account.</li> <li>• Detailed explanation of costs and benefits for a range of countries.</li> <li>• Explains these with specific links to globalisation, relevant to the countries chosen.</li> <li>• Uses appropriate geographical terms and exemplification to show understanding. Written language errors are rare.</li> </ul>

Question Number	Suggest political and economic reasons for the pattern of migration shown.
10(a)	<b>Indicative content</b>
	<p>Map shows contrasting patterns of migration to Europe in 2015. Germany is the largest destination by far of the countries shown. Italy and UK are similar and Greece is the choice of substantially fewer migrants.</p> <p><b>Economic factors</b></p> <ul style="list-style-type: none"> <li>• There is evidence that migrants want to move to countries with higher GDP per capita (Germany, and UK to a lesser extent), and fewer moving to Greece.</li> <li>• Migrants have left countries lacking in security (Syria and Iraq) or economic development (African countries), or both, where incomes are likely to be very low</li> <li>• Reasons could be job availability, wages and provision of housing/ education and medical care.</li> <li>• But patterns are more complex as some countries have high wages but relatively few migrants (UK).</li> <li>• Travel costs to UK are higher as it is further away so maybe some cannot afford to go that far, and crossing English Channel might also be expensive.</li> </ul> <p><b>Political factors</b></p> <ul style="list-style-type: none"> <li>• Attitude of government and policies is likely to have an impact (welcomed by Germany, UK not willing to accept many migrants).</li> <li>• Most migrants came from Syria and Afghanistan due to war and violence.</li> <li>• Reputations of countries may be shaped by media reports etc. and not reflect reality.</li> <li>• Lack of government provision for migrants discourages people from staying in Greece.</li> <li>• UK has been seen as a beacon of democracy and political freedom which attracts those who have suffered persecution and government instability.</li> <li>• Migrants have come by sea because land routes have closed borders or are too dangerous, or because distances are shorter by sea.</li> <li>• Traffickers have established routes for illegal migrants (e.g. to Italy and Greece), and rely on EU navy (e.g. UK) and fishing boats to rescue people.</li> </ul> <p>Credit other approaches/ideas where relevant.</p>

Level	Mark	Descriptor
<b>Level 1</b>	1-4	<ul style="list-style-type: none"> <li>• Poorly structured</li> <li>• Simple description of Figure 10, likely to omit the countries of origin.</li> <li>• Makes simple comments about where migrants chose to go.</li> <li>• Geographical terminology is rarely used. Frequent written language errors.</li> </ul>
<b>Level 2</b>	5-7	<ul style="list-style-type: none"> <li>• Has structure.</li> <li>• Makes descriptive comments about countries of origin and destination.</li> <li>• Suggests reasons for where migrants go, e.g. to countries with higher GDPs or where government allows them. Either focuses on economic OR political or superficial coverage of both.</li> <li>• Some geographical terminology is used. There are some written language errors.</li> </ul>
<b>Level 3</b>	8-10	<ul style="list-style-type: none"> <li>• Well-structured answer.</li> <li>• Use of Figure 10 to identify patterns for countries of origin and destination.</li> <li>• Suggests a range of reasons for countries involved, discussing both economic and political reasons for origin and destination.</li> <li>• Appropriate geographical terms show understanding. Minor language errors.</li> </ul>



Question Number	Examine the costs and benefits of retirement flows Mediterranean locations on host and source countries.	
10(b)	<b>Indicative content</b>	
	Retirement migration is often for social reasons, but may involve setting up a business. Consequences occur for host and source locations, and include both costs and benefits. Social migrants often move only for a limited times, and may not integrate well into community. They often prefer to return home after a period of time.	
	<p><b>Costs to hosts:</b>  Loss of land/habitat and rise in costs as demand for housing/services grows.  Demand increases for water, and if this is already in short supply, tensions result.  Resentment if communities are dominated by one migrant group, leading to loss of local social cohesion/culture.  Unrest and extreme nationalism may occur.  Also distortion of voting, leading to changes in power in some areas. This may lead to reactions against migrants, and attempts to restrict migration.  Pressure to release land for building.</p>	<p><b>Costs to source:</b>  Increased emissions from planes for journeys CO<sub>2</sub>.  Changed balance in power may occur.  Loss of particular age-group, taking their skills and experience, and need for further migration from elsewhere to make up for lost workers.  Loss of spending, and pensions still paid to those living abroad.  Loss of family links and child minding (reduced by Skype and cheap flights).  Migrants may return, e.g. for UK summer, or for doctors/care homes in later years.</p>
	<p><b>Benefits to hosts:</b>  New migrants may be willing to volunteer and bring expertise to improve wildlife reserves.  New migrants may bring energy and enthusiasm for fuller participation in local politics, challenging status quo and attitudes to women, and excluded groups.</p>	<p><b>Benefits to source:</b>  Reduced demand for land and services, freeing up space for other residents or preserving greenfield sites (maybe short lived if migrants return).  Loss of demand for more care homes and hospital beds, freeing up housing and school places etc.</p>

Level	Mark	Descriptor
<b>Level 1</b>	1-4	<ul style="list-style-type: none"> <li>Lacks structure.</li> <li>Description of some effects of retirement migration.</li> <li>Lacks any detail about Mediterranean context.</li> <li>Frequent written language errors.</li> </ul>
<b>Level 2</b>	5-8	<ul style="list-style-type: none"> <li>Some structure.</li> <li>Basic explanation of a limited range of effects including at least two of the categories (costs and benefits, host and source).</li> <li>Comments about examples of movement from Europe to Mediterranean.</li> <li>Geographical terminology is used. There are some written language errors.</li> </ul>
<b>Level 3</b>	9-12	<ul style="list-style-type: none"> <li>Structured account.</li> <li>Explains a range both costs and benefits, and likely to consider both host and source.</li> <li>Explains how these are linked to host (Mediterranean locations) and source (other European countries), and may recognise movement is circular.</li> <li>Geographical terms show understanding. Written language errors are minor.</li> </ul>
<b>Level 4</b>	13-15	<ul style="list-style-type: none"> <li>Well-structured account.</li> <li>Detailed explanation of costs and benefits with balance between them.</li> <li>Explanations are accurately linked to host and source. May note circular nature of movement and the complexity of the relationships.</li> <li>Uses appropriate geographical terms and exemplification to show understanding. Written language errors are rare.</li> </ul>

