

Mark Scheme (Results)

June 2011

International GCSE

Geography 4GE0 01

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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.

## Section A: The natural environment and people

### Question 1 – River environments

Question Number	Answer	Mark
<b>1(a)(i)</b>	Bar must touch 10mm. line (e.g. 9.9-10.1 mm high bar) and cover 1-2 hour period	<b>1</b>

Question Number	Answer	Mark
<b>1(a)(ii)</b>	Award 1 mark per correct label as follows : 1. lag-time (1) 2. peak discharge(1) 3. wooded rural area hydrograph(1)	<b>3(3x1)</b>

Question Number	Answer	Mark
<b>1(a)(iii)</b>	Award 1 mark to each valid and distinctive difference e.g. longer lag-time in A (1); lower peak discharge in A (1); more even discharge (1) .. Avoid rural/urban responses that repeat (a)(ii). Expect for credit some interpretative geography so no taller, shorter, wider etc.. and features (i.e. lag-time, discharge ..) qualified	<b>2(2x1)</b>

Question Number	Answer	Mark
<b>1(a)(iv)</b>	Expect full and accurate definition (e.g. volume of water passing ... during a time-period) for max. marks. Partial meanings (e.g. amount of water). Accept cumecs or velocity x CSA worthy for 2nd mark.	<b>2</b>

Question Number	Indicative content	
<b>1(a)(v)</b>	The specification requires candidates to have undertaken actual or virtual channel measurements as a practical skill and as the early stages of a fieldwork investigation – planning and data collection. Expect traditional techniques i.e. tape measures; stop watches ... but accept modern digital/electronic measurement. Planning considerations e.g. site selection .. relevant as are valid diagrams.	
Level	Mark	Descriptor
<b>Level 1</b>	1-2	Expect either sketchy outline procedures or statement identifying equipment. Accept identification of key parameters (e.g. CSA ..) appropriate to primary data collection. Accept sketchy reference to hi-tech discharge reading.
<b>Level 2</b>	3-4	Expect some description of either relevant equipment (e.g. electronic flow meters ..) and procedures appropriate to key parameters (e.g. width x depth; velocity)
<b>Level 3</b>	5-6	Expect accurate description of both relevant equipment and its use in data collection. Procedures to be clear and precise. Recording of measurements needed for max marks, especially where e-equipment used. Makes reference to sampling/site selection.

Question Number	Answer	Mark
<b>1(b)(i)</b>	Credit any valid physical change e.g. surface water on floodplain (1); new channels appear (1); silt deposition (1); ponding (1) Reject references to channel e.g. water depth rises ..	<b>1</b>

Question Number		Indicative content
<b>1(b)(ii)</b>		The expectation is that candidates will apply hydrological cycle processes to the Figure 1 hydrographs and use the appropriate terms i.e. interception; run-off ... The contrasting processes in the two types of area are sought : interception, high infiltration and low & slow water supply to river v. high rainfall capture and rapid delivery to urban rivers.
Level	Mark	Descriptor
<b>Level 1</b>	1-2	Expect a sketchy and partial answer in terms of either one type of area only referred to e.g. high urban run-off or a very limited attention to relevant key ideas e.g. run-offs differ; concrete & tarmac stated ..
<b>Level 2</b>	3-4	Expect either reasonable account of urban flooding i.e. impermeable surfaces/high run-off/urban drainage/high discharge or relevant outline process related to both types of area (urban & wooded rural)
<b>Level 3</b>	5-6	Expect thorough account of urban flooding and some comparative process in wooded rural areas where run-off/immediate discharge less (i.e. interception/infiltration..)

Question Number	Indicative content
<b>1 (c)</b>	Max. impossible without named river though no direct credit for naming. Question seeks both explanation and case-study knowledge e.g. how the dams, levees, spillways ... work so as to reduce the flood-risk. Name not obvious = L2 max.

Level	Mark	Descriptor
<b>Level 1</b>	1-3	Expect either generic listing of prevention measures or descriptive statements about one or two such measures or one located measure on a named river described.
<b>Level 2</b>	4-6	Expect process explanation. Context may be loose (e.g. how spillways lower discharge ..) and range of prevention measures limited (e.g. how the Rhone dams mitigate flooding ..). Credit a case study-style answer lacking process of how it helps with this level.
<b>Level 3</b>	7-9	Expect a case study-style response with both details of a named river flood management scheme (e.g. the Mississippi ..) and how it actually limits the flood-risk i.e. process explanation. Could be thorough explanation of dam and reservoir project and its workings.

## Question 2 – Coastal environments

Question Number	Answer	Mark
<b>2 (a)(i)</b>	Award 1 mark per correct box completion as follows : 1. cliffs (1) 2. groynes (1) 3. sheltered from prevailing sea wind (1)	<b>3(3x1)</b>

Question Number	Answer	Mark
<b>2(a)(ii)</b>	Accept only photographic evidence. Expect : 1. cliff(1); bay (1); headland (1); headland & bay (1) 2. beach(1)	<b>2(2x1)</b>

Question Number	Answer	Mark
<b>2(b)(i)</b>	Expect full and accurate definition for max marks (e.g. the movement of material (1) parallel to coast (1) by/because of ...(1)). Partial statements conveying idea of material moving of sediment worthy of 1 mark.	<b>2</b>

Question Number	Answer	Mark
<b>2(b)(ii)</b>	Direction – accept eastwards, easterly, east, north-east or west-to-east (1). Accept - in direction of prevailing wind (1). Reason – credit any valid Figure 2a/b observation e.g. build-up of deposition on west side of Cobb(1); more beach on west side of groynes(1)... Accept likely fieldwork finding that beach height lower on east side of groynes(1); prevailing wind (if not offered previously unless qualified/developed)	<b>2(1+1)</b>

Question Number	Answer	Mark
<b>2(c)(i)</b>	Expect up to two of the following : groynes or beach preservation(1); breakwater(1); sea wall(1); The Cobb(1); harbour wall (1). Accept none of the following (no direct evidence) : beach replenishment/nourishment; rip-rap; cliff drainage/vegetation; harbour.	<b>2(2x1)</b>

Question Number	Indicative content	
<b>2(c)(ii)</b>	The explanation sought can relate to one of either the direct evidence list e.g. groyne. This is a process question i.e. how erosion actually slowed down. Max of 2 if response relates to implied method not evidenced on Figure 2b (e.g. rip-rap ..)	
		<b>Answer</b>
	4	Adopt point marking. Look to credit linked sequence starting with description of method (e.g. what is it ?) and finishing with erosion reduction e.g. sea walls are ..... (1); stop waves (1) reduce wave power (1); reduce erosion (1) or groynes are wooden ... (1); hold up longshore drift (1); series of them (1); sand lodges behind them (1) ..

Question Number	Indicative content	
<b>2(c)(iii).</b>	This question explores candidate's understanding of how a survey of people's views on coastal management strategies can be conducted in the field and before. Candidates are expected to be familiar with questionnaire design and the practicalities of questionnaire use in the field, esp. sampling. Credit generic and resource-specific responses equally.	
Level	Mark	Descriptor
<b>Level 1</b>	1-2	Expect a simplistic and outline account relating to design and/or use (e.g. wrote a questionnaire; asked people in street ...) or a response dealing with opinions about methods shown i.e. groynes make beach ugly; sea walls good for walking along.
<b>Level 2</b>	3-4	Expect some development of the mechanics of either design (e.g. type of questions; number of questions ..) or use i.e. sampling or other practicalities (e.g. getting returns; knocking on doors etc..)
<b>Level 3</b>	5-6	Expect description of both design issues (e.g. unambiguous; few questions ..) and use issues i.e. sampling techniques (e.g. enough ? all age groups ..) and other practicalities. Max requires some range i.e. design, sampling & other pragmatic issues to be addressed.

Question Number		Indicative content
<b>2 (d)</b>		A good answer will cover both the erosion and retreat process and include description of new features (landforms) formed in the process. Up to Level 3 marks available to candidates who offer one or more fully annotated diagrams and little or no text. It is expected that many will refer to the classic headland erosion sequence. Better candidates are likely to offer more than cliff-foot marine erosion. Cliff-face/cliff-top sub-aerial processes could be evident in better answers.
Level	Mark	Descriptor
<b>Level 1</b>	1-3	Expect a limited response in terms of either scope (e.g. focus on resultant landform description : caves > platform ..) or depth (e.g. outline treatment of cliff-foot retreat and identification of resultant landforms). Listing of features e.g. arches, stacks .. may be typical.
<b>Level 2</b>	4-6	Expect either some scope with both erosion/retreat process and resultant landforms addressed OR a strong response on one of these two aspects (e.g. an account of cliff-foot and cliff-face erosion processes and subsequent retreat either with or without a diagram). Sequencing of landforms likely to be evident. Good description with limited reasons.
<b>Level 3</b>	7-9	Expect a comprehensive and balanced response which addresses both cliff erosion processes leading to retreat and explains how a range of landforms e.g. notches/arches/platforms develop as the cliff-line recedes. Expect to see one or more annotated diagrams e.g. cliff attack agents; retreating headland diagram, especially at this level. Expect the "how" (i.e. process) and reasons to be well answered at the top of the level.

### Question 3 – Hazardous environments

Question Number	Answer	Mark
<b>3 (a)(i)</b>	28-32 mbs/millibars.	<b>1</b>

Question Number	Answer	Mark
<b>3 (a)(ii)</b>	Low (expect x in Low box)	<b>1</b>

Question Number	Answer	Mark
<b>3(a)(iii)</b>	hurricane (1); eye (1) in that order	<b>2 (1+1)</b>

Question Number	Indicative content	
<b>3(b)(i)</b>	The question is looking for both valid weather type descriptions different to non-storm conditions (e.g. strong winds; intense rainfall ...)and some sense of sequence i.e. storm > eye with calm, clear & warmer conditions ...	
	Answer	
	5	Adopt point marking. Award 1 mark per statements of associated weather e.g. strong wind speeds (1) often over 200 km. per hour (1); heavy rainfall (1) such as 40cm. in 24 hours (1); calm eye (1) .. up to max of 3. Development of weather element = 1 mark. Reserve 1 mark for sequencing and a further mark for distinguishing between parts of system weather-wise (e.g. heavy cloud v. clear (1); higher temperatures in eye .. (1)

Question Number		Indicative content
<b>3(b)(ii)</b>		This is a fieldwork question where the focus is on the practicalities and mechanics of measuring and recording. At least two weather elements should be addressed and both traditional instrumentation and modern e-measurement is acceptable.
Level	Mark	Descriptor
<b>Level 1</b>	1-2	Expect instrument/weather element naming (e.g. anemometer for wind speed) but limited reference to procedures of collection or recording. Stating e-measurement or referencing secondary data collected as such.
<b>Level 2</b>	3-4	Expect some description of procedures. For one element only, expect thorough reference to data collection procedures with max. of L2+ (4 marks) if recording covered. Outline descriptions of more than one element's collection (e.g. read the thermometer scale and wrote down ...).
<b>Level 3</b>	5-6	Expect at least two elements (e.g. rainfall; wind speed ..) with their measuring instruments and description of procedures for both accurate collection (e.g. anemometer in open; rain gauge emptied carefully for set time-period ..). Reference to recording required e.g. logging sheet. Description of process of e-measurement/secondary data collection.

Question Number	Answer	Mark
<b>3(c)(i)</b>	Allocate 1 mark to each clarification of each word i.e. natural (e.g. environmental; non-human; natural hazard name ...) and disaster (e.g. destructive event; death toll ..). Do not accept reworking of natural (e.g. made by nature) for credit.	<b>2</b>

Question Number	Indicative content
<b>3(c)(ii)</b>	The question looks for some knowledge and understanding of the human impacts of hurricanes in LICs. These will need to take account of the fact that preparation and the ability to adjust and recover may be minimal. Loss of life, damage and economic hardship may be enormous, especially where there is dependence on a narrow range of agricultural activities. Generic or case-study style responses acceptable.
	Answer
4 (3x1+1 or 2+2)	Adopt point marking. Award 1 mark to each valid stated impact e.g. property damage (1); deaths(1); crop destruction(1); flooding(1); transport standstill(1) .. up to max of 3. Award 2 <sup>nd</sup> mark(s) for development linked to the storm and people's lives (e.g. deaths from falling trees/buried by landslides..)

Question Number	Indicative content	
<b>3(d)</b>	The response should relate to either volcanoes, earthquakes and/or tropical storms and the ways in which HICs such as USA, Japan ... cope with the risks. Good answers will cover prediction, pro-active preparation to reduce the threat (e.g. earthquake-proof buildings) and preparations for effective reactive management (e.g. emergency services). Case-study or generic responses equally acceptable. Accept other valid natural hazards e.g. drought; tsunami .. but limit non-natural hazards to L1.	
Level	Mark	Descriptor
<b>Level 1</b>	1-3	Expect simple statements about how hazard predicted and/or prepared for (e.g. early warning systems; weather forecasts; building design ...)
<b>Level 2</b>	4-6	Expect both prediction and preparation addressed with some development of one aspect (e.g. schemes/procedures in Florida to predict hurricanes). Detailed description of what happened prediction & preparation-wise in past event. LIC references will restrict to L2.
<b>Level 3</b>	7-9	Expect development of both prediction and preparation with specified schemes and procedures for both. Reference to both pro-active and ability-to-react measures may indicate top level responses. Case-study style responses of Floridan hurricane-protection or Japanese earthquake-protection may fit into this level but case-study not needed. Purely generic responses for HICs acceptable.

## Section B People and their environments

### Question 4 – Economic activity and energy

Question Number	Answer	Mark
<b>4(a)(i)</b>	1. C (1) 2. E (1)	<b>2(1+1)</b>

Question Number	Answer	Mark
<b>4(a)(ii)</b>	Award 1 mark to basic, correct definition i.e. materials needed to make a product(manufacturing) or equivalent. 2nd mark available for development e.g. inputs to ...; unprocessed (e.g. raw cotton); products of other processing (e.g. car components); example such as coal for energy	<b>2</b>

Question Number	Answer	Mark
<b>4(a)(iii)</b>	Secondary (expect x in Secondary box)	<b>1</b>

Question Number	Answer	Mark
<b>4(a)(iv)</b>	Credit any valid named type ( e.g. electronics (1); pharmaceuticals (1); cars (1); biotechnology (1) ...) inc. companies/brand names associated with that product type e.g. Toyota; Apple .. N.B. High-tech industries have high scientific R&D, use micro-electronics and produce technologically-advanced products.	<b>1</b>

Question Number	Answer	Mark
<b>4(a)(v)</b>	For max marks accept either one full reason (2)(e.g. marriage of research and business with university researchers also working in industry; research translated into marketable products ..). or three relevant stated factors =1 (e.g. skilled labour; high-status town; strong collaboration; international links ..).	<b>3</b>

Question Number	Answer	Mark
<b>4(b)(i)</b>	<p>1 mark for both factor scores correct :  39 for nearness to raw materials  33 for personal reasons</p> <p>1 mark for entirely correct ranking according to the student's factor score :  1. Available road transport 2. Closeness to markets  2. Personal reasons 4. Nearness to raw materials  5. Suitable labour ... 6. Suitable buildings &amp; site  i.e. 1-2-5-6-4-3 down the page !</p>	<b>2 (1+1)</b>

Question Number	Indicative content	
<b>4(b)(ii)</b>	The question is assessing data analysis and evaluation skills and is expecting better candidates to be able to go beyond the aggregate ranking of factors and delve into the different patterns for the three types of factory. Max of L1 for those mis-reading meaning of factor scores.	
Level	Mark	Descriptor
<b>Level 1</b>	1-2	Expect comments to focus on the aggregate rankings e.g. buildings and site less important than road transport; suitable labour not that important; transport and markets key ... Credit good geography based on mis-reading of factor scores.
<b>Level 2</b>	3-4	Expect some reference to key features of factory types alone e.g. road transport vital to car component factories; buildings & site quite unimportant to food processing factories ...
<b>Level 3</b>	5-6	Expect genuine attempt to draw factory type comparison conclusions e.g. raw material nearness important to food factories but of low importance to car component factories; buildings & site relatively unimportant to all three types of factory ... Involvement of at least two factory types will suffice. Numerical support for conclusions may be given.

Question Number	Indicative content
<b>4(c)</b>	The factors such as manufacturing decline, global shift, rising incomes, more leisure time, new services available .. that lie behind the "swing to services" are sought by this question.
	<b>Answer</b>
4 (3x1+1 or 2+2)	Adopt points marking. Award 1 factor per valid and distinctive factor up to max of 3. Expect one or two of the above factors to be developed for max marks e.g. as people more prosperous demand for goods stops rising; demand switches to services ... Accept definition of tertiary/quaternary activities for 1 mark

Question Number		Indicative content
<b>4(d)</b>		This question asks candidates to explore the case for greater efficiency in energy use i.e. using less per activity; wasting less .. Ideas such as "precious energy" (non-renewable-dependence), rising energy demand, the energy gap (demand > supply) and sustainability (of supplies and environmentally) sought. Good answers may refer to cutting greenhouse gas emissions and managing the known energy sources better.
Level	Mark	Descriptor
<b>Level 1</b>	1-3	Expect simple statements about fossil fuels running out and/or environmental pollution and/or rising energy use and need for economy (e.g. cuts household energy bills)
<b>Level 2</b>	4-6	Expect energy efficiency to be at least implicitly understood and reference to significance of rising energy demand and its impact on supply pressures (energy gap). Ideas of precious/scarce and renewable/non-renewables to be present. Rising energy demand alone = L2- max
<b>Level 3</b>	7-9	Expect energy efficiency(i.e. existing quantities to go further ..) and sustainability (i.e. lasting, non-polluting, home-sourced re national security) to be explicit. Thorough explanation of why non-renewable efficiency inc. exemplification sought. Renewable projects e.g. wind, nuclear .. may be offered to illustrate issue of energy inefficiency.

### Question 5 – Ecosystems and rural environments

Question Number	Answer	Mark
<b>5(a)(i)</b>	Small-scale (expect x in small-scale box)	<b>1</b>

Question Number	Answer	Mark
<b>5(a)(ii)</b>	Credit all valid responses but data-response item e.g. 1. for input : organic fertiliser (1); ash (1); straw (1); manure (1); compost (1). Accept water (1). 2. for output : rice (1). Accept algae (1) Not oxygen or nitrogen !	<b>2 (1+1)</b>

Question Number	Answer	Mark
<b>5(a)(iii)</b>	Award full marks for a comprehensive and accurate definition e.g. the artificial watering of farm land (2). Partial definitions leaving out, for instance, reference to humans or farming ... but offering key point about watering/adding water where short worthy of 1 mark.	<b>2</b>

Question Number	Answer	Mark
<b>5(a)(iv)</b>	Allocate 1 mark to each valid movement with answer coming from diagram or from own knowledge, and specifying nutrient and/or direction of movement/source/destination e.g. taken up from soil by rice roots (1); dead organic matter releases nutrients(1); nutrients to water (1); nitrates from fertilisers to soil (1) ..	<b>2 (1+1)</b>

Question Number	Answer	Mark
<b>5(b)(i)</b>	Allocate 1 mark to each valid and distinctive biotic or abiotic component e.g. soil (1); vegetation (1); fauna (1);water(1);rock (1); sunlight (1); air (1) .. Expect wide range of acceptable responses.	<b>2 (1+1)</b>

Question Number	Indicative content	
<b>5(b)(ii)</b>	This question seeks some knowledge and understanding of the workings of the temperate grassland (Prairies, Steppes, Pampas ..) biome. The link between two of the following – aspects of its continental climate, its chernozem soils, its types of treeless grassland .. – needs to be made. Some may develop the climate-chernozem relationship i.e. high temperatures/aridity/evaporation/black earths/A-horizon illuviation ..	
		Answer
	4	Reserve up to 2 marks for qualified components e.g. black soil (1); low rainfall (1). Award 1-3 marks for describing link between two valid components e.g. too dry for trees & shrubs; grass dies in harsh winter. Sound description of generic process relating to any biome = 2 mark max.

Question Number	Answer	Mark
<b>5(c)(i)</b>	Column C. 4 Column D. 2 Expect both 4 and 2 in respective total box for 1 mark.	<b>1</b>

Question Number	Answer	Mark
<b>5(c)(ii)</b>	Allocate 1 mark to each of the following aspects of the task : <ul style="list-style-type: none"> <li>• plotting three of 0,5,4 &amp; 2 as bars or lines or dots for A,B,C &amp; D respectively</li> <li>• accuracy of plot</li> <li>• labelling both axes with at least numbers &amp; farms A, B, C &amp; D. Axis titles not needed</li> </ul> N.B. line graphs = max of 1 for top two bullets above	<b>3(3x1)</b>

Question Number	Answer	Mark
<b>5(c)(iii)</b>	<p>Award 1 mark up to max of 2 for each valid conclusion stated (e.g. rice yield per hectare highest on largest farm (1); rice yield highest where it is dominant crop (1); rice yield highest where all "influencing factors" present (1) ..</p> <p>Award a 2<sup>nd</sup> mark to each conclusion where it is developed by either data (e.g. 5.2 hectare farm with its 3.9 tonnes per hectare yield ...) or text (e.g. irrigation, fertilisers etc.. all available on highest yielding farm ....)</p>	<b>4 (2+2)</b>

Question Number		Indicative content
<b>5(d)</b>		This is a case-study question and could be a direct follow-on from Fig. 5b with the candidate offering irrigation in say, Egypt or HYVs in say, India .. The better answers need to have knowledge of more than one of these ways i.e. irrigation, GM, HYVs, glasshouses, chemicals .. in the one country. Green Revolution responses in a spatial context would be appropriate; can be used to identify two ways e.g. irrigation and new seeds. The link to greater output needs to be made, especially in top level answers. Accept animal or crop, HIC or LIC responses. L2 max for location non-specific answers.
Level	Mark	Descriptor
<b>Level 1</b>	1-3	Expect simple statements of changing agricultural practice (e.g. more irrigation; more fertilisers ..) or naming of developments with little detail (e.g. genetic engineering ..). Context may be loose.
<b>Level 2</b>	4-6	Expect some description of changes/developments. Max of 5 marks (mid-L2) if only one way e.g. HYVs described or generic use of Figure 2b factors. Some development of listing may be typical.
<b>Level 3</b>	7-9	Expect at least two ways set in an appropriate context with outcome of more food at least implicit (e.g. deforestation > more pasture land > more cattle > more meat). Expect case study detail with practices relating to named country.

## Question 6 – Urban environments

Question Number	Answer	Mark
<b>6(a)(i)</b>	Accept any one of following : Oxford Science Park (1); Blackbird Leys (1); Hinksey Hill (1); Cherwell Valley (1); Port Meadow (1); Oxford Utd. stadium (1)	<b>1</b>

Question Number	Answer	Mark
<b>6(a)(ii)</b>	Award 1 mark up to max of three to each one of the five following changes identified i.e. house-building (1); science park (1); new car parking/park-and-ride (1); sports developments/golf/stadium/sports ground (1); loss of countryside/greenfields/urban sprawl (1). For credit, changes to be distinctive (golf & sports ground not !). Description of one identified change = 2 <sup>nd</sup> mark. Max could be 2 changes with one described.	<b>3(3x1)</b>

Question Number	Answer	Mark
<b>6(a)(iii)</b>	For credit expect effect to be obviously positive or negative for periphery or explained for other areas or qualifying e.g. Positives : new houses (1); more jobs (1); more leisure opportunities (1); reduces central congestion (1)... Negatives : loss of green spaces (1); eyesores (1); busy fringe (1); doughnut effect (1) ...	<b>2 (1+1)</b>

Question Number	Answer	Mark
<b>6(a)(iv)</b>	Award 1 mark per valid factor (e.g. access to high-class roads (1); open space (1); attractive environment (1) ... ) up to max of 3. Award 2 <sup>nd</sup> mark for developing factor into full reason e.g. high-class roads enable easy deliveries of ... (2); open space enables new buildings .., car parking .. (2) Max mark for two full reasons or three factors with one developed.	<b>4</b>

Question Number	Answer	Mark
<b>6(b)</b>	Allow 1 mark for clarification of brownfield site (e.g. previously used for ...; derelict ..). Award up to 3 marks for explaining process i.e. brownfield likely to be inner city (1); saves using outer unused/greenfield land (1); much brownfield in deindustrialising HIC cities (1) .. Point mark or award max to well-developed argument leading to reduced peripheral pressures but based on one key point.	<b>3</b>

Question Number	Answer	Mark
<b>6(c)(i)</b>	Both site totals to be correct for 1 mark i.e. Site 5 = score of 11 Site 6 = score of 14	<b>1</b>

Question Number	Answer	Mark
<b>6(c)(ii)</b>	Award 1 mark to each of following aspects of task : <ul style="list-style-type: none"> <li>• plotting of 6 total scores as bars or lines or dots. Line graph acceptable.</li> <li>• accuracy of plotting</li> <li>• labelling of both axes i.e. at least numbers for sites and scores. Axis titles not needed for credit.</li> </ul>	<b>3(3x1)</b>

Question Number	Indicative content	
<b>6(c)(iii)</b>	The candidates are required to analyse the data in Figs. 6b & 6c. Fig. 6c reveals a pattern of high central CBD environmental quality, rising to the CBD edge before falling to an inner city low and then rising again into the suburbs. Fig. 6b contains details of the actual land use and the reasons for the EQ scores e.g. attractive CBD buildings; dirty inner city streets ...	
	Answer	
	4	Award 1 mark per sketchy conclusions e.g. high EQ in CBD (1); low EQ in inner city (1) ... Developed conclusions worthy of 2 marks e.g. very low EQ with dirty streets and empty buildings in the car parks/derelict land area of inner city. Look for such points in descriptions of pattern along transect.

Question Number		Indicative content
<b>6(d)</b>		The request is for a case study of shanty town management in an LIC city. The focus should be on the strategies for managing the problems of these communities. The problems being: health, hygiene and sanitation, overcrowding, lack of facilities ... Mitigating strategies should depend on the LIC city chosen but likely to include self-help, rural development, infrastructure projects, slum clearance ..
Level	Mark	Descriptor
<b>Level 1</b>	1-3	Expect mitigating strategies outlined with loose reference to any actual city. Rather generic answers likely with reference to unspecific actions e.g. building clinics; digging drains ..
<b>Level 2</b>	4-6	Expect specific actions described e.g. self-help schemes; rural development programmes ... Max for generic responses. May refer to examples or named city(ies).
<b>Level 3</b>	7-9	Expect the thrust of the response to be on the city's strategies rather than on the one scheme. Case study to have a range of approaches e.g. self-help, local government initiatives .. Explanation needed.

## Section C Global issues

### Question 7 – Fragile environments

Question Number	Answer	Mark
<b>7(a)(i)</b>	Desertification (expect x in desertification box)	<b>1</b>

Question Number	Answer	Mark
<b>7(a)(ii)</b>	Award 1 mark per valid village change e.g. fewer villages (1); northerly villages abandoned (1); villages died as wells dried and desert spread (1); moved south (1) ..	<b>2(2x1)</b>

Question Number	Answer	Mark
<b>7(a)(iii)</b>	Credit any valid area name e.g. Sahel (1); Mali (1); China(1) savanna (1); Prairies (1) ... Accept Sahara (1)	<b>1</b>

Question Number	Indicative content	
<b>7(a)(iv)</b>	This is a question about overgrazing and monoculture/overcultivation and its impact on soil erosion leading to desertification. These activities help set up a process of land degradation. Candidates are asked to explain this process.	
	Mark	Answer
	5	Award up to 3 marks for identifying offending activities i.e. overgrazing (1); monoculture (1); wood gathering (1); overcultivation (1) ... Reserve 2 marks for explanation e.g. overgrazing > bare soil > wind erosion > desert. continuous cultivation > increased run-off > soil erosion > few plants/little farming

Question Number	Answer	Mark
<b>7(b)(i)</b>	Award max marks for full and accurate definition e.g. the deliberate clearance (1) of forested land by cutting or burning (1). Large-scale may constitute 2nd mark. Credit part-definitions e.g. chopping down trees (1); forest clearance (1) with 1 mark.	<b>2</b>

Question Number	Answer	Mark
<b>7(b)(ii)</b>	Award 1 mark up to max of 2 per valid consequence stated/identified e.g. increased surface water flow (1); binding properties of soil lost (1); loss of biodiversity (1) ... 2 <sup>nd</sup> mark available in each case for describing/developing the consequence (e.g. loss of biodiversity as rare plants lost and wildlife loses its habitat (2))	<b>4 (2+2)</b>

Question Number	Indicative content	
<b>7(c)</b>	It is expected that most candidates will not directly clarify the meaning of the term, global warming nor refer to its onset but will refer to human causes, namely an enhanced greenhouse effect induced by atmospheric pollution due to increasing emissions of gas from fossil fuel burning. The sources of these emissions i.e. industry, cars, aeroplanes, deforestation .. should form the thrust of this answer. Natural causes i.e. solar activity; less volcanic dust .. are creditworthy. Good candidates may indicate that global warming will lead to wider climate change.	
Level	Mark	Descriptor
<b>Level 1</b>	1-2	Expect the candidate to offer the sources of emissions, esp. carbon dioxide i.e. polluting cars; industrial chimneys; coal/oil/gas burning ... Accept sketchy outline of natural causes.
<b>Level 2</b>	3-4	Expect the Greenhouse Effect to be outlined and the sources of the gases that strengthen it to be clear. Reasonable responses to anthropogenic and/or natural causes.
<b>Level 3</b>	5-6	Expect the enhanced Greenhouse Effect to be well explained resulting in rising global temperatures. Impact on other aspects of climate i.e. rainfall, wind, weather extremes ..may be present. Accept strong explanation of more than one natural cause.

Question Number	Indicative content	
<b>7(d)</b>	This question is looking for candidates to describe ways in which greenhouse gas emissions can be reduced (i.e. anti-pollution legislation; international deals like Rio, Kyoto, Copenhagen and Cancun; alternative energy sources; new technologies ..). Accept responses that refer to adaptations to global warming/climate change e.g. changing crops .. and small-scale local initiatives e.g. recycling; public transport ..	
Level	Mark	Descriptor
<b>Level 1</b>	1-3	Expect either one effort/scheme outlined (e.g. nuclear power revival ..) or a number of initiatives listed
<b>Level 2</b>	4-6	Expect either one of the UN efforts described or a range of more local initiatives (e.g. renewable energy schemes; nuclear power revival; geo-engineering schemes ..) described
<b>Level 3</b>	7-9	Expect a case study-style answer on the UN initiatives and/or a range of local initiatives. Candidates, especially at top of level should indicate how these efforts slow global warming/climate change – a sense of mechanism to be present !

### Question 8 – Globalisation and migration

Question Number	Answer	Mark
<b>8(a)(i)</b>	2005	<b>1</b>

Question Number	Answer	Mark
<b>8(a)(ii)</b>	Award 1 mark to each of : <ul style="list-style-type: none"><li>• meaning of migration i.e. change of address. Accept immigration/emigration i.e. leaving/entering country (need both!) (1)</li><li>• clarification of net i.e. difference between immigration/emigration (1)</li></ul>	<b>2</b>

Question Number	Answer	Mark
<b>8(a)(iii)</b>	Increase or rise (1)	<b>1</b>

Question Number	Answer	Mark
<b>8(a)(iv)</b>	Allocate 1 mark to each of the three years shown awarding 1 mark to each of the following key points : <ul style="list-style-type: none"><li>• 2002 : more important/bigger than natural increase (1)</li><li>• 2005 : contribution had grown to very important (1)</li><li>• 2008 : fell below natural increase as contributor (1) (still big!)</li></ul> Credit comments for 2002 or 2005 such as twice as many net immigrants as natural additions (1).	<b>3(3x1)</b>

Question Number	Indicative content	
<b>8(b)</b>	This question requires candidates to describe a range of reasons, some related to negative aspects of life, principally in LICs and others to do with the attributes of life in the host countries, behind immigration into HICs. Better answers need to address both aspects i.e. push and pull in an international context e.g. LIC-to-HIC migration, and introduce terminology such as voluntary/forced, refugee and economic migrant.	
Level	Mark	Descriptor
<b>Level 1</b>	1-2	Expect a few factors stated, especially pull factors e.g. jobs; education; better living standards; welfare benefits ..
<b>Level 2</b>	3-4	Expect either a more balanced but "listing"-type of answer with both push and pull factors stated or a descriptive response focussing on one aspect i.e. pull or push (e.g. the refugee issue). Expect push and/or pull meaning to be clear.
<b>Level 3</b>	5-6	Expect a balanced and descriptive response offering a range of push and pull reasons (e.g. greater opportunities and living standards in HICs plus poverty, deprivation, persecution .. in source country). May offer a case-study answer on an international migration e.g. asylum seekers and economic migrants to UK. Terminology may be offered.

Question Number	Answer	Mark
<b>8(c)(i)</b>	Award 2 marks for a full definition e.g. the business links between countries that make them depend on each other. Accept full statements based on production chains or flows of resources 1 mark answers will be wide-ranging and include statements like goods sold all over world; production in many countries; markets worldwide; world all linked up.. Needs careful examiner discretion.	<b>2</b>

Question Number		Indicative content
<b>8(c)(ii)</b>		TNCs are key drivers in the process of economic globalisation. They operate production chains across the globe, invest in LICs, shift goods, information and workers from country to country .. Their decisions in HIC cities affect people worldwide. This question requires candidates to indicate that they play a big role and how. Credit clarification of what TNCs are i.e. large companies with worldwide operations .. – a full definition could warrant 2 marks because it suggests their global role.
Level	Mark	Descriptor
<b>Level 1</b>	1-2	Expect simple statements about the work of TNCs e.g. branches worldwide; import raw materials .. Clarifying what a TNC is could feature and be suggestive in outline as to their role.
<b>Level 2</b>	3-4	Expect some judgement as to the extent of their role i.e. key players. Comments as to their organisation and nature expected.
<b>Level 3</b>	5-6	Expect some specific comments as to the operations and organisation of TNCs indicating their key role in the rise of the global economy. Expect reference to production chains, trade, investment .. and their role in linking up countries. A case study of the global operations of a named TNC.

Question Number		Indicative content
<b>8(d)</b>		The growth of global tourism can be attributed to increased leisure time and demand, rising prosperity, modern advances in transport, the advent of the package holiday and D-I-Y internet holidays ... This question asks candidates to explain these factors.
Level	Mark	Descriptor
<b>Level 1</b>	1-3	Expect either a narrow answer based on one factor (e.g. jet aeroplanes ..) with some explanation or a wider range of factors listed.
<b>Level 2</b>	4-6	Expect some explanation of more than one factor but range limited (e.g. two factors)
<b>Level 3</b>	7-9	Expect sound explanation of at least two distinctive factors. Detail and exemplification likely to be a feature of this soundness.

### Question 9 – Development and human welfare

Question Number	Answer	Mark
<b>9(a)(i)</b>	HDI – Human Development Index (1)	<b>1</b>

Question Number	Answer	Mark
<b>9(a)(ii)</b>	Credit any one of the following indicators : literacy (1); life expectancy (1); income per person (accept purchasing power of country's currency) (1).	<b>1</b>

Question Number	Answer	Mark
<b>9(a)(iii)</b>	Award 2 marks for all three phrases in correct order as below : economic development ; social indicators ; quality of life. 1 or 2 in correct place = 1 mark	<b>2</b>

Question Number	Answer	Mark
<b>9(a)(iv)</b>	Adopt direct credit point marking approach. Reserve 2 marks for each part using 5 <sup>th</sup> mark as a floater wherever quality justifies its award. 1. Allocate 1 mark to identifying basic relationship i.e. low HDI & low per capita GDP and vice-versa. 2 <sup>nd</sup> or 3 <sup>rd</sup> mark(s) for numerical evidence, countries, positive correlation ... 2. Allocate 1 mark for identifying country pairs in question i.e. Singapore & Norway etc... 2 <sup>nd</sup> or 3 <sup>rd</sup> mark(s) for numerical evidence, evaluating GDP difference ...	<b>5(2x2+1)</b>

Question Number		Indicative content
<b>9(b)</b>		This is a quality of life question so it is expected that candidates will include more than economic development and materialistic differences between countries. It is hoped that they will write about jobs, income, housing, security and safety, health, happiness ... and not simply suggest that all high HDI countries are HICs with happy and prosperous people ... It is reasonable, however, to associate good quality of life with high HDI and HIC; better candidates might note the subtleties.
Level	Mark	Descriptor
<b>Level 1</b>	1-2	Expect either a list of "better thans" e.g. health care, schools ... or one aspect of QOL described in comparative terms
<b>Level 2</b>	3-4	Expect description of at least two aspects of QOL illustrating the international contrasts. Aspects can be economic/materialistic.
<b>Level 3</b>	5-6	Expect the non-materialistic aspect of QOL to be present e.g. happiness can be non-monetary for max. Expect idea that good QOL in high HDI countries and vice-versa with justification in form of a range of QOL indicators.

Question Number		Indicative content
<b>9(c)</b>		<p>The changing pattern of global development refers to the fact that :</p> <ul style="list-style-type: none"> <li>• some LICs are developing e.g. Nigeria, Botswana</li> <li>• there is strong development in some MICs i.e. NICs and RICs e.g. south-east Asia</li> </ul> <p>Candidates may correctly refer to the global shift and the rise of China and India (BRICS). Developments in the Persian Gulf are appropriate.</p>
Level	Mark	Descriptor
<b>Level 1</b>	1-2	Expect statements of relevant global change e.g. the rise of China; tiger economies/NICs ..
<b>Level 2</b>	3-4	Expect some description of a few key global changes e.g. global shift to Asia in balance of economic power from ... ; OPEC & the importance of Gulf states.
<b>Level 3</b>	5-6	Expect the changes to be put into context i.e. traditional pattern of HICs & LICs (North-South divide) being changed by new pattern. Expect a number of key changes of pattern described i.e. NICs/RICs in Asia; BRICS; emerging LICs in Africa & Central America .. Sense of global pattern to be explicit. Depth of detail to be evident.

Question Number		Indicative content
<b>9(d)</b>		<p>The expectation is that candidates will explain how appropriate aid, population policies, intermediate technology (IT), fair and free trade policies and debt relief schemes are being used to reduce development and QOL disparities within countries and internationally. Better candidates may offer case-study knowledge of managing the disparities within a named country or of Chinese/Indian population-reduction policies or of the work of a UN or NGO aid agency. Expect inter-regional disparities.</p>
Level	Mark	Descriptor
<b>Level 1</b>	1-3	Expect some basic comments about one management strategy e.g. aid agency work .. or a short-list of appropriate management strategies.
<b>Level 2</b>	4-6	Expect some explanation of how QOL being raised in region/among poor i.e. development occurring by actions of governments, UN, agencies. Expect reference to at least two strategies e.g. appropriate aid, population control ..
<b>Level 3</b>	7-9	Expect thorough explanation of at least two strategies with clear appreciation of spatial scale involved i.e. global, regional .. and at least implicit indication as to how development gap being narrowed.

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Welsh Assembly Government

