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Mark Scheme (Results)

Summer 2014

Pearson Edexcel International GCSE
in Geography (4GE0) Paper 1

Or

Pearson Edexcel Certificate
in Geography (KGE0) Paper 1

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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, ie 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
1(a)(i) **Type 4 item**	A. runoff	**1**

Question Number	Answer	Mark
1(a)(ii) **Type 3 item**	Accept one of: • cloud/s(1) • lake(1) • ground water(1) • soil(1); • sea or equivalent(1)	**1**

Question Number	Answer	Mark
1(a)(iii) **Type 2 Item**	Credit **either** water flows between stores(1) without leaving system or equivalent(1) **or** the concept of water circulation (2)	**(1+1) or 2**

Question Number	Answer	Mark
1(b)(i) **Type 2 Item**	For max mark expect **either** full definition (eg seasonal flow pattern for a river; a river's month-by-month average discharge) **or** statement such as the variations (accept difference) in discharge of a river (1) throughout the year (1) Award 1 mark for part definition eg river's normal flow (ie avoiding reference to pattern/average).	**2(1+1)**

Question Number	Answer	Mark
1(b)(ii) **Type 1** **Item**	Award initial mark for valid identification up to 2 factors with a 2nd mark in each case for extension (i.e. how factor affects discharge) e.g. • rainfall (1) ;discharge drops with low rainfall (1) • rock type (1); higher discharge on impermeable rocks (1) • temperature (1); melting spring snow raises discharge (1) • river management (1); flood barriers lower discharge (1) Expect distinctiveness for both identification marks.	**4(2+2)**

Question Number	Answer	Mark
1(c) **Type 1** **Item**	Award 1 mark for each valid feature identified up to max. of 2. Physical features accepted include: • watershed/network/confluence • landforms e.g. waterfall, meander … • valley characteristics e.g. V-shaped … Further marks require explanation either why feature exists and/or how feature operates. There are three understandings of "feature" as above. Accept responses offering a combination. Sound explanation of formation of, for example, why a waterfall exists or of how, for example, a channel network works, may be worthy of 3-4 marks. Allow up to max marks for fully annotated/explanatory diagram. Max of 4 per feature. Features can be either generic or case study referenced.	**6** **(2x3) or (4+2)**

Question Number	Indicative content
1 (d) **Type 1 item**	The sources of pollution expected are: • domestic/urban • sewage • industrial waste • agriculture Candidates are asked to examine these causes/reasons for polluted rivers. They should explain these sources of pollutants and appreciate the ideas of water quality and clean water. Better responses may refer to examples of variations in water quality along a river and/or between rivers, including the use of appropriate evidence and examples of poor water quality. These examples may be taken from students' fieldwork experience in identifying water quality levels. An assessment of the relative importance of the various sources may be offered in this spatial context. If fieldwork offered, reference may be to species indicators, Trent biotic index…

Level	Mark	Descriptor
Level 1	1-3	Expect a limited response to the question. Basic reasons for varying river quality will be evident.
Level 2	4-6	Expect a reasonable attempt to discuss the subject. Some development of a few sources of pollution. Ideas of water quality and clean water may be self-evident at top of level. There may be some use of appropriate examples, perhaps fieldwork.
Level 3	7-9	Expect a sound and balanced discussion which deals with at least 2 of the main sources. The response should put forward an argument about how natural/clean rivers become polluted rivers at top of level. Reasons will be detailed and supported by evidence, perhaps fieldwork examples.

Question 2 : Coastal environments

Question Number	Answer	Mark
2(a)(i)	Expect **either** build up of material on north side of groynes(1) **or** build up of material north of most northerly groyne/spit-like feature formed on north beach(1)	**1**

Question Number	Answer	Mark
2 (a)(ii)	C. to slow down beach removal	**1**

Question Number	Answer	Mark
2(a)(iii)	Credit valid outline conflict eg • development v. conservation (1) • eyesore on natural coastline (1) … with 1 mark 2nd mark requires a brief argument about nature of conflict of interest eg hotel attract tourists who will disturb natural environment/disrupt bird-watchers … (2)	**2(1+1)**

Question Number	Answer	Mark
2(b)(i)	Full definition for max mark eg general re-shaping of land by normal atmospheric processes/wind and rain. Part definition= 1 mark eg • wind and rain (1) • normal weathering and erosion (1) …	**2(1+1)**

Question Number	Answer	Mark
2(b)(ii)	Expect two cliff retreat processes with 1-2 marks allocated to each distinctive sub-aerial process leading to erosion of cliff face eg • loose material slippage down cliff face (1) under influence of gravity (1) • after heavy rainfall (1) lubrication causes cliff collapse (1) • weathering of cliff face rock (1) by freeze-thaw (1) … Adopt a process for 1st mark with development for 2nd mark strategy. Diagram-only answers can access max mark.	**4 (1+1)+ (1+1)**

Question Number	Answer	Mark
2(c)	Look to award 1 mark for the first identified coastal landform eg • bay (1) • headland (1) • cave (1) • beach (1) • cliffs (1) • stacks (1)… …with further 2-3 marks available for explanation. • hard rock/upland coastline v. soft rock/lowland coastline (e.g. headlands and bays) • different geological structure e.g. concordant (strata parallel to shore) v. discordant (strata at right angles to shore)… Explanation needs to focus on the nature of the role of geology and its role in the process of landform formation ie its shape, height … Landforms can be generic or be named in terms of two geologically-contrasting stretches of coastline. Fully annotated diagrams can receive max credit.	**6 (2x3) OR (4+2)**

Question Number		Indicative content
2 (d)		The sources of threat to coastal ecosystems come from the various uses made of coastlines by people eg
		- tourism - industrialisation - agricultural practices - deforestation and other relevant human developments
		Candidates should examine these main sources of threat, especially to identified ecosystems either generically or in a spatial context.
		Top level answers may examine the significance of developments for specified ecosystems such as:
		- sand dune - salt marsh - coral reef - mangrove ...
Level	Mark	Descriptor
Level 1	1-3	Expect a limited response to the question. Candidates will consider the topic and state relevant threatening uses and developments generally or those which impinge on a certain specified ecosystem.
Level 2	4-6	Expect a reasonable attempt to discuss the subject. The main sources of threat ie coastal uses and developments will be outlined. There may be some use of appropriate examples, perhaps fieldwork which will include specific developments along named coastlines with their identified ecosystems at the top of the level.
Level 3	7-9	Expect a sound and balanced discussion in which the various threats of the main uses and developments are addressed. The response may put forward an argument about the fully developed causes of a named threatened coastal ecosystem at the top of the level. Answers will offer evidence, and/or exemplification, perhaps from fieldwork experience.

Question 3 : Hazardous environments

Question Number	Answer	Mark
3 (a)(i)	A. the point on the Earth's surface directly above the earthquake's origin.	1

Question Number	Answer	Mark
3 (a)(ii)	Tectonic plates (1) Accept plates only	1

Question Number	Answer	Mark
3 (a)(iii)	Expect an answer based on Japan's location as per Figure 3 ie • plate boundary location (1) • various or four (or equivalent) plates meet (1) • evidence of plate movement/destructive or colliding margins (1)	2(1+1)

Question Number	Answer	Mark
3(b)(i)	Full definition addressing both "natural" (eg earthquake; flood; not human!) and "disaster" (eg damage/destruction/death) for max marks eg deaths, injuries and destruction of property as a result of a natural hazard event. Award 1 mark for part definitions, including those addressing only disaster or natural.	2(1+1)

Question Number	Answer	Mark
3(b)(ii)	Award 1 mark for each valid and distinctive factor/statement with 2nd mark available for development into a full explanatory reason eg • birth place (1) so emotionally attached (1) • lack of income (1) so too poor to afford costs (1) • traditional to cope (1) older generations have stayed put (1) • worthwhile risk (1) because farming productive (1) Accept attractions as well as negative factors eg minerals/geothermal…	4 (1+1)+ (1+1)

Question Number	Answer	Mark
3(c)	Expect characteristics to be meteorological eg: • cloud bank • eye • up- and down-draughts • vortex • heavy rainfall • strong winds … Award 1 mark to each valid and distinctive characteristic up to max of 2. Accept key consequences such as damage, need to evacuate … but if no meteorological context, limit to 1 mark each. Credit explanation of either why they exist or of how they work (eg resultant weather), with up to a further 2-3 marks each. A well-annotated and comprehensive of the weather system eg a cross-section worthy of max marks.	**6 (2x3) OR (4+2)**

Question Number		Indicative content
3(d)		Candidates are being asked about the nature and effects of hazard management, especially its varying quality. Better quality hazard management tends to be associated with countries having higher levels of economic development eg • earthquake-proofing in Japan • hurricane-mitigation in the USA … Responses should deal with prediction and preparation (eg • education • early warning systems • risk assessment • shelters • defences … …and with coping during and after the event, eg • evacuation • emergency aid • mitigation • rebuilding … Accept reference to any type of natural hazard events (ie tropical storm, tectonic, river or coastal (inc. tsunami) flooding) either specifically or generically. Credit-worthy examples should refer to location and might include fieldwork experience (eg hazard management survey). This can be answered with the help of a case study (eg HIC-LIC comparative tropical storm impact).
Level	Mark	Descriptor
Level 1	1-3	Expect a limited response which considers basic aspects of the topic. Simple and relevant points stated eg HIC prediction; little or no disaster relief in some LICs…
Level 2	4-6	Expect a reasonable attempt to discuss the subject in which concept of differences in quality of hazard management according to level of economic development clear. Presents some of the actions to mitigate hazard consequences and some outlining of reasons.
Level 3	7-9	Expect a sound discussion of the importance of management and strategy and its impact on consequences. Case study material, (proactive or reactive) management and both short-term and long-term impacts may be offered. Use of appropriate evidence, perhaps fieldwork.

Section B - People and their environments

Question 4 : Economic activity and energy

Question Number	Answer	Mark
4(a)(i)	B. solar radiation	**1**

Question Number	Answer	Mark
4(a)(ii)	Credit any reasonable photographic observation eg • clear or blue sky (1) • space for panels (1) • flat ground (1) • fairly open site (1) …. Accept valid interpretations such as • south-facing (1) • near energy users (1) …	**1**

Question Number	Answer	Mark
4(a)(iii)	* Credit any valid advantage eg • inexhaustible (1) • low environmental stress (1) • accessible (1) … • * Credit any valid disadvantage eg • inefficiency (1) • high generation costs (1) • visually obtrusive (1) … N.B. allow provided they clearly apply to one or more of solar, wind, HEP and wave/tidal.	**2(1+1)**

Question Number	Answer	Mark
4(b)(i)	Full definition (eg a group of jobs producing similar types of product) = max marks. Part definitions eg • classes of employment (1) • primary, secondary or service jobs (1) …	**2**

Question Number	Answer	Mark
4(b)(ii)	Award 1 mark to each valid factor identified with 2nd mark in each case for extension e.g. • prosperity (1) enough goods so demand turns to services (1) • new technology (1) IT ideal with services to people (1) • government policy (1) encouraged in response to deindustrialisation (1) Factors suitably outlined so that their role in promoting T & Q activities evident to be awarded 2nd mark in each case.	**4(2+2)**

Question Number	Indicative content
4(b)(iii)	This item requires understanding of the standard Clarke-Fisher model of sectoral shifts as countries develop economically over time. Case study knowledge of how the relative importance of the four sectors differs between a named HIC and a named LIC may be a feature of better answers. All HICs and LICs are valid as examples. Credit valid diagrammatic representations of the standard sectoral shifts model ie large primary sector (stage 1) > expanding secondary sector (stage 2) > tertiarisation (stage 3) > rise of quaternary activities (stage 4). This is an explanation question ie of how sectors change in importance/size. Good candidates may also address why these changes occur alongside economic development.

Level	Mark	Descriptor
Level 1	1-2	Expect some brief points about the standard model ie from large primary sector through to large T & Q sectors as countries develop. Key sectors will be named and some broad changes identified.
Level 2	3-4	Expect some attempt to explain most of the key sectoral shifts, including reference to sector size/importance. May be some reference to named countries at different stages of economic development.
Level 3	5-6	Expect explanation of all the main changes from primary to secondary and secondary to services with reference to changing size/importance. Responses may include supporting case study knowledge from a named HIC and named LIC. Explanation needs to be of how (eg labour transfer between sectors) but may include why (eg labour-saving agricultural equipment).

Question Number	Indicative content
4(c)	This item calls on knowledge and understanding of a required case study of a de-industrialised area.
	Candidates are expected to name an area (eg Corby, Sheffield …) and refer to principally the consequences of their de-industrialisation which has led to the need for redevelopment. Some reference to the causes (e.g. foreign competition; exposure to market forces; old technologies …) has relevance but the crux of the answer should relate to consequences (e.g. derelict land; mass male unemployment; multiple social deprivation; government initiatives to build on brownfield sites …). These consequences should constitute the key reasons sought. Some legitimate reference to the nature of subsequent and recent developments after the de-industrialising phase e.g. tertiary and quaternary activities on brownfield sites is to be expected.
	Credit any other reasons of a more positive nature i.e. locational advantages for the new industries e.g. close to motorway; large open spaces of cheap land …

Level	Mark	Descriptor
Level 1	1-3	Expect a limited response which considers the topic in a broad and generic manner, either identifying in outline the subsequent developments with some inference as to need for redevelopment eg sports facilities on old factory sites, or some reference to factors behind the recent developments.
Level 2	4-6	Expect some attempt to discuss the subject. The nature of the subsequent developments in a named area should be made with some examination of the reasoning behind the recent developments. A number of clear developed reasons, especially "negative" factors based on need to redevelop the area.
Level 3	7-9	Expect a sound discussion based on case study material which has both the causes/consequences (reasons) of de-industrialisation and subsequent developments presented, perhaps in terms of appropriateness ie "positive" reasons based on the suitability of the area for the recent developments. Expect detail and evidence related to the named area.

Question 5 : Ecosystems and rural environments

Question Number	Answer	Mark
5(a)(i)	A. arable	**1**

Question Number	Answer	Mark
5(a)(ii)	• irrigation (1) • or equivalent eg spraying with water (1) • watering crops (1) …	**1**

Question Number	Answer	Mark
5(a)(iii)	Credit any two valid and distinctive ways other than irrigation eg • glasshouses (1) • genetic engineering (1) • HYVs (1) • using fertilisers (1) …	**2(1+1)**

Question Number	Answer	Mark
5(b)(i)	Full and accurate definition eg • how easily countryside dwellers can use services of a modern society • whether village people can use services of towns/cities • access to good range of services .. Part definitions with some merit are worth 1 mark, eg • how far away village is from town/city (1) • access to services (1)	**2(1+1)**

Question Number	Answer	Mark
5(b)(ii)	Award 1 mark for each valid rural criteria identified other than limited access to service provision with 2nd mark for extension into a rural characteristic i.e. : • population size (1) small or low density (1) • population structure (1) aged (1) • farming/recreation/tourism (1) dominate land use (1) • Conservation activities(1) very important(1) • employment opportunities (1) very limited (1) or equivalent 2nd mark available for developing characteristic so that it adequately describes a rural environment.	**4 (1+1)+ (1+1)**

Question Number	Indicative content

5(b)(iii)	The HIC rural settlement changes sought by the question include:
	
	 • new economic activities eg
	  o warehouses
	  o food processing plants
	  o education centres
	  o road haulage firms …
	 • rural depopulation in remote villages
	 • counter-urbanisation in accessible villages
	 • changed service provision (greater or less).
	
	 Accept other changes related to the wider rural environment, rather than intra-settlement provided settlement implications at least implicit eg
	
	 • the rise of rural tourism and new village building
	 • agricultural diversification and changed roles and income for farmers
	 • rural conservation projects and new jobs for villagers.
	
	 This is an explanation question, so the reasons behind the identified changes explained must be given in better answers.
	
	 Settlements likely to be villages/hamlets but accept changes that relate to market towns in rural areas.
	
	 Limit changes on farmsteads only to Level 1.
	
	 LIC settlements are not acceptable.

Level	Mark	Descriptor
Level 1	1-2	Expect some indication as to how some HIC rural settlements have changed eg farming struggling; people left area; new jobs in tourism …. and/or minimal attempt to explain these changes.
Level 2	3-4	Expect a range of valid rural changes ie employment, services and population outlined with some genuine attempt to explain the changes eg agricultural mechanisation; motorways improving accessibility of some villages … or good range of changes well-developed in terms of their nature.
Level 3	5-6	Expect a clear and detailed explanation of a number of explicit HIC rural settlement changes with reasons relevant and well-developed. Top responses may refer to named settlements and may refer to those in a named national park/protected area.

Question Number		Indicative content
5(c)		This item requires knowledge and understanding of a required case study.
		Candidates are asked to name an ecosystem from small-scale eg pond to biome eg temperate grassland, and examine its living (eg natural vegetation or farmed vegetation; fauna ..) and non-living components (eg soils; climate ..) and the interactions between these two sets of components.
		Expect a biome or a coastal ecosystem such as a sand dune or coral reef/mangrove stand.
		Please note that the question asks for only the one-way relationship ie abiotic influences the biotic eg low rainfall and grass rather than trees on the Steppes; aridity or wind and sand dune vegetation … and does not seek intra-abiotic relationships eg soil and climate …
Level	Mark	Descriptor
Level 1	1-3	Expect a limited response either around the nature of ecosystems ie community of plants and animals .. or offering an indication of ecosystem components or outlining the type of abiotic-biotic interrelationships sought, perhaps in generic terms.
Level 2	4-6	Expect a reasonable attempt to discuss the abiotic-biotic interrelatedness of ecosystem components in the context of a named ecosystem. Some examination of components and interrelationships presented with the support of appropriate exemplification. A number of specific interrelationships made.
Level 3	7-9	Expect a case study-style detail of the abiotic-biotic interrelatedness of ecosystem components. Responses might discuss these interrelationships in terms of such ecological processes as energy flows, nutrient recycling and circulation, and food chains.

Question 6 : Urban environments

Question Number	Answer	Mark
6(a)(i)	Accept valid feature other than new-build eg - high-rise (1) - flats (1) - estate (1) - a lot of accommodation (1 - incomplete (1) …	**1**

Question Number	Answer	Mark
6(a)(ii) Type 2 item	Accept any two valid and distinctive characteristics eg - shacks (1) - poor quality building materials (1) - built close together (1) - low-rise/single-storey (1) - unplanned (1) - crammed in on difficult building land (1) …	**2(1+1)**

Question Number	Answer	Mark
6(a)(iii)	B. self-help	**1**

Question Number	Answer	Mark
6(b)(i)	Full and accurate definition (eg increasing proportion of population living in urban environments) = max marks. Part definitions with some credit (eg more people living in towns/cities) worthy of 1 mark.	**2(+1)**

Question Number	Answer	Mark
6(b)(ii)	Credit each valid and distinctive factor with 1 mark with 2nd mark in each case for extension e.g. - economic development (1) increases rural-to-urban migration and urbanisation (1) - transport advances (1) in urban area increases its attractiveness to newcomers and urbanisation rate (1) - birth rate (1) high urban birth rate raises urban population (1) - rural development (1) discourages rural-to-urban migration and reduces urbanisation rate Award 2nd mark where factor adequately developed so that impact on rate of urbanisation explicit.	**4 (1+1)+ (1+1)**

Question Number		Indicative content
6(b)(iii)		This item requires candidates to explain how and/or why new retail complexes, business/science parks, housing developments and industrial estates continue to be built on the greenfield land on the edge of some HIC cities.
		Good answers will explain both the nature of and the reasons for these new economic activities.
		Expect to read about the environmental attractiveness, large space for car parking and large buildings, and the ease of delivering supplies via road of these out-of-town sites.
		Better candidates may raise the greenfield-brownfield debate and/or the issue of green belt restrictions.
		Credit reference to examples of named urban developments, either the developments themselves eg activities on the Oxford Science Park or the specific factors that lie behind the decision to locate there eg ring road; M40 junction …
Level	Mark	Descriptor
Level 1	1-2	Expect how the urban-rural edges in HICs have changed generically to be outlined (eg industrial areas; hotels ..) and perhaps some basic indication as to why (eg space; roads better …). Answer simple and basic whether generic or place-specific.
Level 2	3-4	Expect either a clear explanation of the nature of urban-rural change in HICs with some outlining of reasons behind this location decision or an outlining of the nature of the change along with some reasonable explanation as to why the changes have/are taking place. Answers can be either generic or referenced to place-specific examples.
Level 3	5-6	Expect a balanced response in which the nature of change is well explained and in some detail (perhaps case-study style or named city edges with urban edge developments) and the reasons for these developments are well made. Expect some place-specificity but accept strong generic explanations.

Question Number	Indicative content
6(c)	This calls on part of a required case study of the distribution of land use types (and social/ethnic groups) in one named city.

Similar land uses tend to concentrate in particular parts of cities as a result of their locational needs, accessibility, land values .. Urban models are relevant.

Expect to read about CBDs (shops & offices) and their various sub-zones, inner cities and industrial zones, various types of residential area …

The distribution of different socio-economic and ethnic groups is a consequence of different intra-urban land uses. Reference to social and ethnic segregation ie the clustering of people with similar characteristics (eg origin, age, income, educational background …) into separate residential districts,especially contrasting housing types, is relevant. Equally relevant is reference to gentrification in regenerating districts or ghettoes or shanty communities.

The reasons behind segregation include costs, accessibility, common heritage …

Strong candidates may integrate the distributions of land use and socio-economic and ethnic housing.

Reference to a named city is sought and without it marks to be limited. |

Level	Mark	Descriptor
Level 1	1-3	Expect a limited response outlining simple land use distribution patterns either generically or specific to one city eg central shops, residential suburbs, immigrant communities in inner city … Non-place-specific responses (whether city named or not) limited to this level.
Level 2	4-6	Expect a reasonable attempt to discuss the subject based on details for one named city. Land use distribution patterns to be evident with some analysis and a line of reasoning.
Level 3	7-9	Expect a thorough analysis of the land use distribution pattern of one named city which forms a sound discussion. Named examples of different land use districts in case study form offered. Discussion should examine the distributions and offer underlying reasons explaining the distributions.

Section C – Practical Geographical Enquiry

Question 7 : River Environments Fieldwork

Question Number	Answer	Mark
7 (a)(i)	C. metre ruler	1

Question Number	Answer	Mark
7 (a)(ii)	Credit on a points basis all valid procedures re metre ruler's use in channel data collection eg in terms of Figure 7a: • place tip on bed of channel (1) • at regular intervals across channel (1); • measure water depth (1); • measure channel depth (1); • narrow edge pointing up/downstream (1)… Accept all four pieces of equipment stated in (a)(i) Exercise professional discretion and to credit fully actual (as opposed to virtual) fieldwork.	3(3x1)

Question Number	Answer	Mark
7 (a)(iii)	Award 1 mark for each valid and distinctive factor identified eg • access/egress (1) need to get in and out of channel safely(1) • weather (1) swollen river in wet weather a safety risk (1) • water depth (1) needs to be right for safety and proper working (1) • nature of channel bed (1) flat beds are less of a problem (1) • sources of water (1) polluted water may pose health risk (1) • channel history(1) natural channels may give different readings to engineered ones. Accept water velocity and clothing. 2nd mark available in each case if factor sufficiently developed (some explanation) so that site suitability made clear eg in terms of health and safety considerations; gathering of valid data …	4 (1+1)+ (1+1)

Question Number	Answer	Mark
7 (b)(i)	Award initial mark for choice of suitable diagram ie one allowing relationship between the two data sets to be shown. Scattergraph or bar chart and line graph… • axes labelled and numbered (1) • approximate plots labelled for CSA (1) • approximate plots labelled for roughness (1)… Max 2 if wrong variables plotted.	4(4x1)

Question Number	Answer	Mark
7 (b)(ii)	• Best way to display two data sets for number of sites (1) • Enables data sets to be correlated (1) • Quick and easy to draw (1) • Makes comparisons between sites observable (1) • Shows trend well (1) • Easy to interpret (1) • Can be IT-generated (1) Accept developed points up to maximum. credit can be given for comparative value of different methods.	3 (3x1) OR (1+1)+1 OR (1+1+1)

Question Number		Indicative content
7(b)(iii)		There is a clear : • increase in CSA from site A to site D/E • change in bed roughness between the sites. Trend is for channel bed to be smoother as channel area increases and vice-versa. Site A has smallest channel but roughest bed. Site D has largest channel but fairly smooth bed. Comparison of sites D and E. Width and depth data used to calculate CSA but worthy links between these and bed roughness creditable. Supporting data presented as evidence of trend. Clarification of bed roughness scale eg large boulders at site 5. Reference to simple descriptive statistics includes best-fit/trend, no anomalies/consistent trend ..
Level	Mark	Descriptor
Level 1	1-2	Expect simple statements about the variations in the data along the river channel, especially that shown in Figure 7c.
Level 2	3-4	Expect very limited conclusions with some comparison of the changes between sites, including the idea of a trend/pattern. May offer data in support.
Level 3	5-6	Expect a good conclusion revealing the overall trend and comparison of change between at least two sites. Some consideration of individual sites. Simple statistics may be referred to, including supportive data used.

Question Number	Answer	Mark
7(b)(iv)	Need to ensure channel width measured carefully (1) eg tape measure pulled tight/held level re accuracy (1); measure lip of channel to opposite lip (1). Need to ensure channel depth measured carefully (1) eg enough readings for representative average ie appropriate sampling technique re reliability (1); measure from bed to peg and line at bankfull level (1). Need to ensure bed roughness index typical of whole site (1) eg repeated across channel ie appropriate sampling technique re reliability (1); second opinion (1). Max marks requires reference to at least two of above three data sets and refers to both accuracy (ie precise reading) and reliability (ie representative/consistency …). Accept previous studies/repeated investigations.	**4**

Question 8 : Coastal Environments Fieldwork

Question Number	Answer	Mark
8(a)(i)	C. tape measure	1

Question Number	Answer	Mark
8(a)(ii)	Credit on a points basis all valid procedures re tape measure's use re beach data collection eg in terms of Figure 8a : • place on beach (1) • from water's edge to cliff foot/sea wall etc.. (1) • measure length of profile (1) • measure lengths between changes of beach angle/beach segments (1)… Exercise professional discretion and to credit fully actual (as opposed to virtual) fieldwork.	3 (3x1)

Question Number	Answer	Mark
8(a)(iii)	Award 1 mark for each valid and distinctive factor identified eg • access (1) note high and low tide times (1) • weather (1) strong winds and waves a safety issue(1) • beach width (1) the wider the beach the more data (1) • beach variety (1) different types of surface and sediment give more contrasting data (1) Accept all four pieces of equipment stated in (a)(i) 2nd mark in each case if factor sufficiently developed (some explanation) so that site suitability made clear eg weather and health and safety considerations; gathering of valid data …	4 (1+1)+ (1+1)

Question Number	Answer	Mark
8(b)(i)	Award initial mark for suitable choice of diagram ie one allowing relationship between two data sets to be shown eg • line graph or bar chart (1)... • axes labelled and roughly numbered (1) • approximate line plots (1) • accurate bar heights (1); • labelled curve/profile (1) ... • Max. 2 if wrong data plotted.	**4 (4x1)**

Question Number	Answer	Mark
8(b)(ii)	• Best way to display two data sets for number of sites (1) • Quick and easy to draw (1) • Makes comparisons between sites observable (1) • Shows trend well (1) • Easy to interpret (1) • Can be IT-generated (1) • Max of 3 for one justification done well.	**3(3x1)**

Question Number		Indicative content
8(b)(iii)		There is a clear irregular profile over the 20 metres from shoreline to cliff foot ie steep gradient flattening slightly followed by steepening then low angle to cliff foot. This profile associated with changes in sediment size : • pebbles and gravel where angle steeper • smaller material eg coarse sand where slope gentler Largest material ie cobbles at back of beach. Clarification of sediment size scale. Limited range of sediment sizes eg sites B and D. Supporting data as evidence of association. Reference to simple descriptive statistics includes best-fit/trend and correlation.
Level	Mark	Descriptor
Level 1	1-2	Expect some reference to concluding but mainly an outline description of some of the basic variations in beach transect shown by the data, especially in Figure 8c.
Level 2	3-4	Expect limited conclusions which compare changes between sites, and refer to the irregular profile. May use data in support of observations.
Level 3	5-6	Expect a good conclusion revealing the overall profile, comparison of change between at least two sites, and some consideration of all individual sites. Needs to examine profile and sediment size associations. Simple statistics may be referred to, including supportive data used.

Question Number	Answer	Mark
8(b)(iv)	Need to ensure distance across beach measured carefully (1) eg tape measure held taut and level re accuracy (1); intervals marked carefully (1). Need to ensure slope angle measured carefully (1) eg clinometer held still/read accurately (1); clinometer pointed precisely (1); readings recorded accurately (1). Need to ensure sediment size index typical of whole site (1) ie appropriate sampling technique re reliability. Re accuracy ensure eg careful counting/estimation (1); use of quadrat (1); second opinion (1). Max marks requires reference to at least two of above three data sets and refers to both accuracy ie precision and reliability ie representativeness/consistency. Accept reference to previous studies and repeating investigations.	**4**

Question 9 : Economic Activity and Energy Fieldwork

Question Number	Answer	Mark
9(a)(i)	Accept any plausible aim as long as it relates to the idea of researching energy sources eg investigating views on renewable versus non-renewable sources ...	**1**

Question Number	Answer	Mark
9(a)(ii)	Look for either three valid actions stated or a developed or well-developed action for max marks. 1 mark can be awarded for a clarification/definition of bias (ie one-sided/prejudiced/partial view/not neutral..) or technical accuracy (ie precise measurement/actual/true value ...). Accuracy in question to subsume bias. Valid actions might be : • Bias eg questionnaire design(1); • unloaded questions (1); • enough time to understand question (1); ensure answer themselves (1); • representative sample eg under- & over-30s balanced (1); enough respondents (1).... Technical accuracy eg • enough time given to respondents (1); • considered responses (1); • careful recording of responses(1); • careful counting of answers (1); • checking responses (1) ... Look to credit evidence of real fieldwork.	**3** **(1+1+1)**

Question Number	Answer	Mark
9(a)(iii)	Credit each valid and distinctive questionnaire health and safety risk identified with 1 mark up to max of 2 eg: • working alone (1) increase chance of exposure to personal danger (1) • traffic re street interviews (1) avoid excessively busy road crossings(1) • knocking on the right door (1) beware of some dogs(1) Accept others eg working in safe environments... Elaboration of risk either as an example or details may warrant a 2nd mark in each case. Look to credit evidence of real fieldwork.	**4** **(1+1)+** **(1+1)**

Question Number	Answer	Mark
9(b)(i)	Award initial mark for suitable choice of diagram eg • bar chart (1) • line graph (1) • … axes labelled/approximately numbered (1) • accuracy of plotting (1) • completed bars or line (1) Do not accept scattergraph or kite diagram	**4 (4x1)**

Question Number	Answer	Mark
9(b)(ii)	• Best way to display data for five different sources (1) • Straightforward to draw (1) • Easy to interpret (1) • Shows comparisons/contrasts between sources clearly (1) • Easily IT-generated (1)…	**3 (3x1)**

Question Number		Indicative content
9(b)(iii)		There is a significant undecided vote (25%-43%), especially among the under-30s re the use of the five energy sources. Greater use of renewable sources (solar and wind) is favoured; 68% and 52% respectively. The exact opposite applies to non-renewable sources; 49% oil & gas and 47% coal favour less use. The use of nuclear split fairly equally between more, less and undecided. The analysis of breakdown into age-groups is more challenging eg under-30s heavily favour more wind use; over-30s favour more use of nuclear. Vast majority favour a balanced energy supply mix and encouragement of renewable energy.
Level	Mark	Descriptor
Level 1	1-2	Expect some reference to concluding conducted on a piece of data by piece of data basis eg most people want more solar; most want more renewable … Resembles more an outline description of data offered.
Level 2	3-4	Expect an attempt to conclude. Comparisons/contrasts very evident. May use data in support.
Level 3	5-6	Expect more than one valid conclusion in which there is some awareness of an overall pattern of an energy mix with renewable popularity. Simple descriptive statistics, including supportive data may be used.

Question Number	Answer	Mark
9(b)(iv)	Expect response to focus on: • secondary sources (1) • of information eg statistics on current energy mix (1) • idea of current government energy policy (1) • energy projects being developed (1) • pros and cons of each possible future source, inc. costs and efficiencies (1)… Credit all valid suggestions including reference to other such surveys and useful other questions for questionnaire eg encouragement of energy mix ? Max of 3 marks if point marked according to information sources offered. Max mark requires a comment eg how important other information source to whole investigation.	**4 (1+1+ 1+1)**

Question 10 : Urban Environments Fieldwork

Question Number	Answer	Mark
10(a)(i)	Accept any plausible aim as long as it relates to investigating change in urban land use eg show land use changes along an urban transect; research urban land use patterns …	**1**

Question Number	Answer	Mark
10(a)(ii)	Look for **either** three valid actions stated **or** a well-developed action for max marks. 1 mark can be awarded for a clarification/definition of bias (ie one-sided/prejudiced/partial view/not neutral..) or technical accuracy (ie precise measurement/actual/true value …). Accuracy in question to subsume bias. Valid actions might be : Bias e.g. • choice of sampling sites (1) • key appropriately applied (1) • standardised procedure eg identical site interval (1) … Technical accuracy eg • careful recording of types (1) • multi-use multi-storey buildings fully recorded (1) • not ignoring gaps between buildings (1) … Look to credit evidence of real fieldwork.	**3** **(1+1+1)**

Question Number	Answer	Mark
10(a)(iii)	Credit each valid and distinctive questionnaire health and safety risk identified with 1 mark up to max of 2, eg: • working alone (1) increases chance of exposure to personal danger (1) • traffic re street work (1) avoid busy road crossings (1) • bad weather (1) avoid slipping on icy pavements (1) Accept others eg working in safe environments… Elaboration of risk may be an example or details and warrant a 2nd mark in each case. 2nd mark for elaborating what might happen if the risk is ignored. Look to credit evidence of real fieldwork.	**4** **(1+1)+** **(1+1)**

Question Number	Answer	Mark
10(b)(i)	Award initial mark for suitable choice of diagram eg: • bar chart(1) or line graph (1) or scattergraph (1) • axes labelled/numbered approximately (1) • accurate plotting (1) • completed bars or curve if line graph (1)	**4 (4x1)**

Question Number	Answer	Mark
10(b)(ii)	• Best way to display transect data (1) • Easy to interpret (1) • Quick/easy to draw (1) • Can be IT-generated (1) • Shows patterns/changes/trends visually well (1)	**3 (3x1)**

Question Number		Indicative content
10(b)(iii)		The data reveals the following trends : • the number of storeys greater near town centre • the oldest buildings close to town centre • residential use away from town centre • lot of shops and offices but most quite central • open space tends to be away from centre Various patterns might be deduced from analysing the three variables together eg shops & offices multi-storey; modern residential use towards the urban edge …
Level	Mark	Descriptor
Level 1	1-2	Expect some reference to concluding that tend to describe the data, set by set eg building heights vary with peak at 300 m.
Level 2	3-4	Expect attempts to conclude, likely to be partial, with main trends identified and perhaps some attempt to look for inter-variable patterns
Level 3	5-6	Expect a set of strong conclusions in which there is some awareness of broad patterns from the three variables. Simple descriptive statistics, including supportive data.

Question Number	Answer	Mark
10(b)(iv) **Type 1** **item**	Expect response to focus on: • secondary sources (1) of information eg Ordnance Survey and Land Use maps (1) • Goad Plans (1) • local newspaper (1) • Google Earth (1) • photograph libraries (1) • Town Hall Planning Department records (1)… Credit all valid suggestions including reference to other such surveys and geography textbooks. Max of 3 marks if point marked according to information sources offered. Max mark requires a comment eg how important other information source to whole investigation.	**4** **(1+1+** **1+1)**

Question Number	Answer	Mark
10(b)(iv)	Expect response to focus on:	

Section D - Global issues

Question 11: Fragile environments

Question Number	Answer	Mark
11(a)(i)	B. at the southern edge of the Sahara desert	1

Question Number	Answer	Mark
11(a)(ii)	Accept one of: • Mali • Niger • Burkina Faso • Chad • Mauritania	1

Question Number	Answer	Mark
11(a)(iii)	Decreases or equivalent	1

Question Number	Answer	Mark
11(a)(iv)	Credit following likely relationship : • food production increases as rainfall increases or vice-versa (1) with 2nd mark for either locational examples (eg tropical grassland-Sahara desert) (1) or • some reference to process (eg moisture and plant growth or animal health suffers for pastoralists) (1)	2(1+1)

Question Number	Answer	Mark
11(b)(i)	Full and accurate definition eg removal of soil (1) by wind, water and gravity .. (1). Part definitions with some credit (eg soil washed away ..) worthy of 1 mark.	2(1+1)

Question Number	Answer	Mark
11(b)(ii)	Award 1 mark for each valid factor identified up to max of 2 eg: • drought (1) dry dust blown away easily (1) • population pressure (1) overcultivation to meet rising food demand (1) • fuel supply (1) tree removal exposes ground to erosion (1) • overgrazing(1) bare ground leads to soil being removed (1) Award 2nd mark in each case where factor sufficiently developed to indicate mechanism triggering soil erosion/desertification.	**4 (1+1)+ (1+1)**

Question Number	Answer	Mark
11(b)(iii)	A max mark description can be of one way in some detail (where reference to named area most apt eg "magic stones," Burkina Faso) of alleviating soil erosion or two ways outlined and marked 2+2. Ways include: • crop rotation • reduce overgrazing • afforestation • terracing • contour ploughing • fertilisers … Where no description but a comprehensive list of ways offered: max = 3.	**4 (2+2)**

Question Number		Indicative content
11(c)		This is an item about the global warming and climate change debate. The majority in the survey believed that warming is taking place. Less than half thought this to be due to human causes. Opinion split. Diagram 1 might elicit responses about loss of public confidence because of: • the plateau-ing of global temperatures in this century • reports of data fiddling • recent cold winters • suggestions of public mis-information… The idea that the issue is a long-term problem and one for the future may be offered. Diagram 2 should lead to an explanatory response about uncertainty and both possible human (eg fossil fuels, air pollution …) and natural (eg solar output, volcanic dust …) causes. The experts are divided and some publicity comes from those with vested interests eg oil companies … Credit responses that stray into management policies which clearly depend on the reality of global warming and on its causes, eg • anti-pollution legislation and mitigation for human causes • do-nothing if warming is fiction • adaptation strategies for natural causes … Strong answers may refer to multi-causation (largely human but some natural) and mixed management (mitigation and adaptation).
Level	Mark	Descriptor
Level 1	1-2	Expect basic observations from Figure 11b to the effect that people generally felt uncertain that global warming exists (diagram 1) and is the result of human activities (diagram 2). Identifies split in opinion or makes some brief reference as to why.
Level 2	3-4	Expect some explanation of the various human and natural causes of global warming (diagram 2) with some reference to uncertainty ie of whether it exists eg recent press articles; recent weather … May point out more uncertainty re cause (ie 43 % down to people) than existence (ie 62% believe it is fact).
Level 3	5-6	Expect a balanced account of the human and natural causes of global warming (diagram 2) and some relevant comment about the reasons for the uncertainty of global warming as a fact. Top responses will offer this mixed picture eg uncertainty about its existence and causation. Topic presented as a debate and may refer to divided opinion over management.

Question Number		Indicative content
11(d)		This is on forest management in which case-study knowledge is sought.
		Reference to the management of an area of threatened tropical rainforest in a sustainable way will help the answer.
		Candidates might refer to: • agro-forestry • selective logging • afforestation • the need for international cooperation (eg timber labelling, debt relief for deforestation deals ..)...
		Sustainable forest management involves good resource management which guarantees future supplies of forest products and conserves the forest ecosystem for future generations whilst at the same time sustaining current development.
		It is critical that better answers stress the effectiveness of the sustainability approaches adopted eg the monitoring of maximum sustainable yield targets (beyond which timber extraction rates will exceed renewal rates).
Level	Mark	Descriptor
Level 1	1-3	Expect a limited response outlining the nature of forestry management eg reduce deforestation; re-planting; forest wardens … May refer to sustainability and likely to be generic.
Level 2	4-6	Expect a reasonable attempt to discuss the subject. Expect some analytical examination of the subject with some place-specificity and a clear line of reasoning around the concept of sustainability. Presents some appropriate evidence such as examples or case study material.
Level 3	7-9	Expect a good discussion with case-study material for a named threatened TRF area. Puts forward various aspects of sustainable forest management, including an reference to sustainable practices adopted and a clear understanding of resource sustainability.

Question 12 : Globalisation and migration

Question Number	Answer	Mark
12(a)(i)	C. TNC (transnational corporation)	**1**

Question Number	Answer	Mark
12(a)(ii)	1. rest of Europe (1) 2. France (1)	**2(2x1)**

Question Number	Answer	Mark
12(a)(iii)	Expect to award 1 mark for basic factor e.g. • emerging economies • NICs/BRICS • developing economically • global shift… 1 of above with 2nd mark for elaboration of valid suggestion (e.g. growth potential …)	**2(1+1)**

Question Number	Answer	Mark
12(b)(i)	Full and accurate definition eg the movement of manufacturing industry (1) from high- to low-cost locations/from HICs to MICs (1). Part definitions with some validity eg shift of industry to Asia (1)	**2(1+1)**

Question Number	Answer	Mark
12(b)(ii)	Credit each valid factor identified eg • labour costs (1) lower/greater profits (1) • government policy (1) TNCs encouraged by tax breaks etc.. (1) • profiteering (1) cheaper to do business and divert profits abroad (1) • growing markets (1) desire to be part of future demand(1) up to max of 2 with 1 mark each. Accept others eg regulation, transport costs… 2nd mark in each case for developing factor into a full explanatory reason.	**4 (1+1)+ (1+1)**

Question Number	Answer	Mark
12(b)(iii)	Award 1 mark to a correctly identified valid benefit eg • jobs (1) • investment (1) … with a 2nd mark available for suitable description of the factor as a benefit eg • investment (1) • of foreign capital raises GDP (1) Award 1 mark to a correctly identified valid cost eg • environmental damage (1) • economic distortion (1) …with a 2nd mark available for clarifying the cost to the country eg • profits exported (1) • to TNC headquarters in HIC city (1) Strong answers on one aspect can attract 3rd mark.	**4** **(1+1)+** **(1+1)** **OR** **(3+1)**

Question Number	Indicative content
12(c)	This is an item about the case for managing international migration flows which will inevitably involve considering the causes of immigration and/or emigration. This is not a question on the pros and cons of immigration but on the need to manage migration.
	Expect most responses to concentrate on immigration, especially the issue prompted by Figure 12b of volume of arrivals or issue of refugee and asylum-seeker immigration into HICs. Candidates may offer statistical support for their argument e.g. 127 000 immigrants to a 22 million population.
	Refugees are forced migrants who flee their country to avoid persecution, death ...; where they seek permission to remain permanently in their destination country then they are classed as asylum-seekers. This type of immigration whilst an issue is modest in relation to voluntary migration, perhaps as economic migrants.
	Candidates are likely to refer to forced migration, economic migration and relevant push-pull factors. Controlling immigration and the challenges in doing so eg leaky borders ... are relevant.
	Case-study material on the consequences, both negative and positive of an international migration flow, possibly immigration eg social tensions; pressure on housing and public services; plugging job vacancies .. should be looked for.
	Answers that focus on emigration and its consequences eg • brain-drain • unbalanced population structures ... are acceptable.

Level	Mark	Descriptor
Level 1	1-2	Expect some basic consequences of probably immigration and perhaps the refugee/asylum-seeker issue or scale of overall immigration e.g. • too many (e.g.127000) • costs (e.g. benefit claimants) • job loss • illegal immigration A range of loose but relevant points. Likely to be undeveloped points.
Level 2	3-4	Expect some attempt to explain the case for management and control, perhaps the nature of the refugee/asylum-seeker issue or scale of overall immigration and its consequences e.g. pressure on resources. Expect some level of development of point(s), albeit partial.
Level 3	5-6	Expect a series of developed reasons for management and immigration control that may include a clear understanding of the challenges facing border authorities. May offer some case-study material on consequences of mass immigration (economic migrants and refugees) and/or the consequences of unchecked large-scale emigration e.g. brain-drains.

Question Number		Indicative content
12(d)		Candidates can use their sustainable tourism project case study as a way of accessing Level 3 marks.
		Candidates should understand the nature of sustainable tourism ie supporting the well-being of local people now without having negative impacts on the environment and the future viability of local tourism.
		Ecotourism and ecotourism projects (eg the Galapagos Islands) with focus of: • visitor restrictions • educational programmes • building regulations • use of local labour and produce ... are likely to dominate answers.
		Also accept other types of sustainable tourism eg agro-tourism, and sustainable initiatives in mass tourism destinations eg the EU blue flag scheme in Spain.
Level	Mark	Descriptor
Level 1	1-3	Expect a limited response which considers sustainable tourism by outlining a relevant initiative, either economic (eg all-year visitor attractions) or environmental (eg tighter planning controls)
Level 2	4-6	Expect a reasonable attempt to discuss the subject of sustainable tourism and develops a line of reasoning around economic and environmental considerations. Expect some use of appropriate evidence, either examples or a case study. Likely to be unbalanced treatment.
Level 3	7-9	Expect a sound discussion of a least 2 aspects of sustainable projects or use of a case study. Expect the presentation of a pro-sustainability argument with maybe some consideration of initiatives/projects in terms of sustainability principles.

Question 13 : Development and human welfare

Question Number	Answer	Mark
13(a)(i)	A. Argentina	**1**

Question Number	Answer	Mark
13(a)(ii)	Peru	**1**

Question Number	Answer	Mark
13(a)(iii)	Brazil	**1**

Question Number	Answer	Mark
13(a)(iv)	Credit a clarification of the concept of a development gap ie difference in GDP p.p./in living standards (1) with 1 mark. Equally, a piece of evidence from Figure 13a worthy of 1 mark eg GDP p.p.s of Paraguay (<$4000) v. Argentina (>$13000) with 2nd mark for data support. Two stated pieces of evidence = max. Need to check evidence with Figure 13a.	**2(1+1)**

Question Number	Answer	Mark
13(b)(i)	Full and accurate clarification of process eg when HIC governments and/or banks in HICs(1) cancel some LIC debt (1). Part definitions with some truth eg writing-off debts (1)	**2(1+1)**

Question Number	Answer	Mark
13(b)(ii)	Award 1 mark for each valid strategy other than debt relief. Credit strategies (applicable at any spatial scale from local to international) with 1 mark with 2nd marks available for extensions e.g. - aid (1) appropriate to development if leads to increased production of food, goods .. (1) - infrastructure projects (1) new transport link between capital city and regions - fair/freer trade (1)enables LICs to increase export earnings (1) 2nd or 3rd mark available for developing the way into an outline/developed mechanism for reducing disparities. Credit responses with developed answers on one strategy with up to 3 marks.	**4 (1+1)+ (1+1)** **OR** **(3+1)**

Question Number	Answer	Mark
13(b)(iii)	Point mark the process as follows, reserving 1 mark for each of combining three indicators and giving overall score. The Human Development Index (HDI) calculated by combining three development indicators (1) – per capita income (1), literacy rate(1)and life expectancy (1) considering economic, education and health (1) equally weighted (1) and averaged (1) to give a score from 0 to 1 (1) the higher the score the higher the development level (1).	**4 (4x1)**

Question Number	Indicative content
13(c)	Rapid population growth from natural increase and/or migration has consequences for quality of life in a country. Candidates should recognise the rate of population growth in the five countries as rapid and show appreciation of the concept of quality of life ie.: - health - housing standards - access to services - freedom - security - safety … The consequences of rapid population growth can depend on the phase of economic development in which a country is in. Candidates are likely to plump for a fall in quality of life as expressed as: - increased poverty - greater unemployment - inadequate housing - worsening diet - deteriorating physical infrastructure - reduced healthcare - increased illness … However, equally valid is a realisation that in the early stages of economic progress ie pre- and during industrialisation, a larger population raises aggregate demand for goods and services as well as increases and cheapens the labour force. In these circumstances, quality of life consequences of population growth can be positive eg improved public services financed by rising GDP …

Level	Mark	Descriptor
Level 1	1-2	Expect some basic comments about changing quality of life, either negatively or positively though ensure mechanism for doing so at least implicit eg more workers therefore … or too many mouths to feed therefore … Brief statements thereafter eg poverty, hunger … provided context clear.
Level 2	3-4	Expect recognition that population growth in the five countries is rapid and an appreciation of the concept of quality of life. Some outlining of a range of valid quality of life consequences in context, either positive an/or negative .
Level 3	5-6	Expect a sound explanation of how rapid population growth can lead to either a deterioration and/or improvement in quality of life. At least 2 of consequences well explained. Some may recognise the role of population growth in China & India's economic ascent though appreciate the later need for population restraint in terms of quality of life considerations.

Question Number	Indicative content
13(d) **Type 1 item**	This is based on a required case study of population management. Access to Level 3 marks requires knowledge and understanding of this case study eg • Chinese one-child policy • Indonesian transmigration scheme • Japanese aging population policies … A range of population changes is acceptable eg: • low birth • high birth • rising life expectancy … Accept changes due to migration flow eg: • mass immigration • large-scale emigration • internal migration … Generic government policies related to identified population change limited to Level 2 marks. Focus should be on relevant policy measures and their implementation eg re ageing: encourage immigration and/or baby boom and how (eg government-sponsored crèches …) • raise retirement age • build more care homes • tax breaks and publicity to encourage private pension saving …

Level	Mark	Descriptor
Level 1	1-3	Expect identification of nature of change but a limited response identifying some policy actions taken to address the change eg immigration … A brief consideration of population change management, either generically or place-specific.
Level 2	4-6	Expect a reasonable attempt to discuss the subject using either a case study or generic policy for an identified population change. Some partial consideration of valid and specific management practices in a named country.
Level 3	7-9	Expect a case study style answer with sound discussion of the subject. A presentation supporting the management measures taken in a named country. Various aspects of the management measures taken to be considered ie strengths and weaknesses.