Mark Scheme (Results)

Summer 2017

Pearson Edexcel International GCSE/
Certificate in Geography
(4GE0/KGE0)

Edexcel and BTEC Qualifications

Edexcel and BTEC qualifications are awarded by Pearson, the UK's largest awarding body. We provide a wide range of qualifications including academic, vocational, occupational and specific programmes for employers. For further information visit our qualifications websites at www.edexcel.com or www.btec.co.uk. Alternatively, you can get in touch with us using the details on our contact us page at www.edexcel.com/contactus.

Pearson: helping people progress, everywhere

Pearson aspires to be the world's leading learning company. Our aim is to help everyone progress in their lives through education. We believe in every kind of learning, for all kinds of people, wherever they are in the world. We've been involved in education for over 150 years, and by working across 70 countries, in 100 languages, we have built an international reputation for our commitment to high standards and raising achievement through innovation in education. Find out more about how we can help you and your students at: www.pearson.com/uk

Summer 2017
Publications Code 4GE0_01_1706_MS

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
1(a)(i)	Accept any three correct, observable and distinctive features e.g. rocky (1); rough (1); narrow (1); steep (1); angular (1); winding (1); waterfall (1); fast flowing (1) v-shaped valleys (1) interlocking spurs (1) … Max 1 mark for vegetational answer e.g. few trees (1)... Avoid double crediting same feature. Expect distinctiveness.	**3(1+1+1)**

Question Number	Answer	Mark
1(a)(ii)	Answer: **D** vertical erosion *Distractors:* A – erosion more important than deposition upper course B – headward erosion is an upper course process but less important than vertical erosion C – vertical downcutting towards base level more important than lateral and headward erosion	**1**

Question Number	Answer	Mark
1(b)(i)	Full and accurate definition = 2 marks e.g. it is a diagram showing/it shows how rainfall affects the discharge of a river Statement with some hint of definition = 1 mark e.g. river discharge graph (1); shows how streamflow changes (1)... Credit hydrograph sketches; fully labelled and realistic outlines = max. with 1 mark for broad "sembalances"	**2(1+1)**

Question Number	Answer	Mark
1(b)(ii)	1 mark per valid and distinctive factor stated e.g. type of rainfall (1); soil (1); vegetation (1); rock type (1); slope angle (1); dams (1); tarmac/concrete ground (1); afforestation (1) …. 2nd mark for development as to how it affects hydrograph shape e.g. • type of rainfall (1) > intense rainfall gives spikey graph (1) • soil (1) > impermeable soil leads to steep limbs (1) • afforestation (1) > results in a flatter graph (1) • urbanisation/tarmac/concrete increase (1) > raise peak/steepens limbs (1)	**4** **(1+1)+** **(1+1)**

Question Number		Indicative content
1(c)		Expect candidates to refer to methods that fit into one or both of the following approaches: • hard engineering defence (built structures) e.g. dams; channel straightening; levees; diversion spillways … • soft engineering defence (working with natural processes) e.g. smarter land use management; wetlands; alteration of urban surfaces; afforestation … The question is one of how some of these methods work to control flooding e.g. dams hold back heavy rainfall so reduce flooding; rapid surface run-off in urban areas can be reduced and so flash flooding by creating more green spaces ...
Level	Mark	Descriptor
Level 1	1-2	Expect basic statements identifying one or more relevant methods with little or no development/explanation of how they work.
Level 2	3-4	Expect some reference to how a flood control method works. May focus on limited range of control methods address them superficially or deal with one method in an explanatory fashion.
Level 3	5-6	Expect answer extension and explanation of at least two valid and different control methods or a specific defence scheme, and their processes. Good answers at top of level may refer to both hard and soft engineering approaches though good use of either strategy worthy of this level.

Question Number		Indicative content
1 (d)		This item is a case study item and looks to draw out valid consequences of water demand rising in one named country. Expect answers to relate to countries where demand stresses supply, either generally e.g. Saudi Arabia with its overall water shortage or locally e.g. Spain with its regional shortages. Valid consequences are likely to be: • shortages for some users e.g. farmers …. • need for careful water management e.g. rationing; water efficiency and wastage initiatives …. • production impacts for some users e.g. falling farm yields; car wash outlets …. • supply increase measures e.g. construction of reservoirs; water transfer schemes ….. • other regions and users where priority given one user e.g. Spanish tourist industry
Level	Mark	Descriptor
Level 1	1-3	Expect a sketchy presentation of simple points relating to the effects of water shortage. Answers may be focussed on either one effect outlined or a number of effects little more than stated and be generic rather than case-specific. Award this level for answers on causes of rising demand only.
Level 2	4-6	Expect an attempt to develop a partial consideration of valid effects of rising demand in named country. Will be some development of ways such as a new storage project or water movement scheme.
Level 3	7-9	Expect a balanced and detailed presentation of salient material about at least two effects/consequences e.g. reservoir scheme … well-developed. Expect case study material related to one named country. Must be some evaluative comment for top of level e.g. consequences positive and negative; significance of shortage assessed ...

Question 2 – Coastal environments

Question Number	Answer	Mark
2(a)(i)	Answer: **A** coral reef *Distractors:* B – mangroves are wetland forest C – saltmarsh is vegetated, estuarine or land-based mudflat D – sand dune are land-based small sand hills The image shows no evidence of any of these latter three features.	**1**

Question Number	Answer	Mark
2 (a)(ii)	Credit any two observable features stated e.g. beach (1); cliffed coastline (1); bay (1); undulating (1); headland (1); forest (1); upland/highland coastline (1) Reject: mountain/hill/stump Reject: coral reef/mangrove/salt marsh/sand dune	**2(1+1)**

Question Number	Answer	Mark
2(a)(iii)	Credit any reasonable way e.g. reduces mass movement (1); minimises human access (1); roots bind soil (1) …	**1**

Question Number	Answer	Mark
2(b)(i)	Expect the two following elements for 2 marks: e.g. level of sea in relation to land changes (1) over a longer time period (1). Award 1 mark for relevant points e.g. normal/average sea level higher/lower (1); global sea level rises/falls (1) isostatic/eustatic change (1) ... No credit for rearranging the wording i.e. changes in sea level.	**2(1+1)**

Question Number	Answer	Mark
2(b)(ii)	Award 1 mark for each valid effect identified e.g. coastal flooding (1); submergence of low lying land (1); landforms such as rias/fiords (1); raised beaches (1); coral reefs (1); relict cliffs (1) … 2nd mark in each case for outlining the effect in terms of either the physical process e.g. river valleys flooded by rising sea level (1) to form ria (1)… or an extended example e.g. low lying Maldive islands (1) disappear with rising sea level (1) or a human impact e.g. coastal flooding (1) > loss of homes/damaged infrastructure (1) increased erosion (1)… 2nd marks will generally need an indication as to whether sea level rising or falling. Valid impacts without direction of movement = 1 mark. Do not double-credit any overlap with bi	**4** **(1 +1) + (1+1)**

Question Number		Indicative content
2(c)		The key processes include wave erosion; transportation; deposition; longshore drift; sub-aerial weathering; river sediment transport … The question asks candidates to explain how processes as above work to constantly change a stretch of coastline. They operate in both isolation e.g. • erosion breaking down coastal rocks leading to retreat • waves depositing to grow beaches and together as a natural system e.g. longshore drift depositing in one place and eroding in another; mass movement providing material for beaches; erosion of cliffs producing material for building beaches; how wave action may bring sediments shorewards to form offshore bars and beaches … The focus is on a multi-process approach with "different" being a key word. The natural operations of coastal and marine processes are sought either generically or in the context of a known stretch of coastline with its own sediment system and coastal processes.
Level	Mark	Descriptor
Level 1	1-2	Expect key processes identified and some basic points about processes and their workings stated only.
Level 2	3-4	Expect an attempt to explain the nature at least one coastal process. Some answers will be partly developed processes. Only range or depth well done.
Level 3	5-6	Expect a well-developed consideration of a range of processes (at least two) set in context of a system. Must deal with the idea of difference i.e. coastal characteristic formation is multi- not mono-causal. May offer specific locational coastal system knowledge.

Question Number		Indicative content
2 (d)		Coastal management is necessitated by human pressures on coast environments. Natural threats e.g. rising sea levels; increasing storm activity … and continuing coastal development are increasing the need for coastal management. Successful management of the coastal zone not just the shoreline involves planning which integrates all coastal zone activities and seeks to minimise conflicting activities. Good answers will refer to issues such as cost, population, lives and property at risk, extent of coastal erosion and flooding by the sea, landscape attractiveness ...The best answers may refer to values and cost-benefit analysis. The answer can be about whether hard or soft engineering methods are adopted e.g. hard engineering to control natural processes may involve unattractive and expensive built structures. The best answers will offer more than coastal protection. Coastal management involves a wide range of issues, including sustainable management of coastal ecosystems/activities and the range of views held by people, local or otherwise about the nature of management policy.
Level	Mark	Descriptor
Level 1	1-3	Expect a basic awareness of the need for managing coasts with a few simple points stated. Answer likely to be skewed, perhaps towards coastal defence.
Level 2	4-6	Expect some consideration/development of key factors e.g. protection from coastal flooding. Reference to planning with a hint of conflicting views. Clear but restricted and unbalanced in terms of depth and/or breadth.
Level 3	7-9	Expect coverage in reasonable depth and breadth. Shows good understanding of the case for a coastal management approach with developed issues and clear recognition that chosen approach has both proponents and opponents. May offer place examples/case study material. Coastal conflicts need to be evident with managers needing to consider conflicting views. Offers some attempt to evaluate at top of level e.g. relative importance of factors; sustainable management; best option.

Question 3 – Hazardous environments

Question Number	Answer	Mark
3 (a)(i)	Credit any short-term impact observed/implied by contrasting before and after images e.g. building collapse (1); homelessness (1); personal injury (1); communications damage (1); disruption to services (1) … N.B. short-term and observed/implied	**1**

Question Number	Answer	Mark
3 (a)(ii)	Answer: **A** earthquake *Distractors:* B – no evidence of coastline C – rainfall alone incapable of such damage D – eruption unlikely cause as no signs of burying or of ejected material. Volcanic gas explosions less common than earthquake vibration as a cause	**1**

Question Number	Answer	Mark
3 (a)(iii)	Reserve initial mark for identifying extent of scale i.e. large scale; major ... (1). Credit with 2nd mark where long-term implications indicated e.g. severe consequences for long time (1); financial loss (1); economic slowdown (1); loss of tourism affects GDP (1).	**2(1+1)**

Question Number	Answer	Mark
3(b)(i)	Award 2 marks for full accurate definition e.g. atmospheric conditions (1) for a short period of time (1). Part definitions e.g. lists of weather elements (1); what the air is like/doing (1)	**2 (1+1)**

Question Number	Answer	Mark
3(b)(ii)	Credit each valid instrument identified with 1 mark e.g. rain gauge (1); radar readings (1); meteorological sensors (1); satellite detectors (1); hand-held electronic devices (1); visual judgements (1) ... 2nd mark in each case for an outline of the method stated e.g. reading instruments (1) amount of rainfall in collecting jar in gauge measured daily (1); meteorological sensors (1) detect pressure changes and send value to computer (1) .. Expect variety of methods and monitoring outlines. Max marks requires distinctiveness. If mention meteorological forecasts, max 1 mark.	**4** **(1+1)+ (1+1)**

Question Number		Indicative content
3 (c)		Candidates will either directly or indirectly need to indicate that tropical storms are huge spinning areas of low pressure (cyclones) bringing strong winds and torrential rain and commonly known as hurricanes, typhoons … The question seeks the conditions needed for their formation and passage i.e. • warm sea water (26.5 degrees C. at surface) around tropics (0-5 degrees of latitude) • high levels of evaporation and condensation of water vapour from warm water provides energy for strong winds • strong Coriolis Force close to Equator make winds spin but Force does drag them away from equator • a sea surface disturbance triggers formation • move westwards due to east-west winds in tropics and strengthen as they move over warm waters • dissipate with landfall or outside tropics as supply of warm, moist air cut off
Level	Mark	Descriptor
Level 1	1-2	Expect some simple, basic statements about conditions for formation e.g. warm seas. Likely to be descriptive.
Level 2	3-4	Expect an attempt to explain their formation, especially role of energy from tropical seas and their key characteristics indicated e.g. strong winds, torrential rain. Reference to key steps in formation and passage e.g. westwards passage ... but partial and unbalanced.
Level 3	5-6	Expect some explanation of the key steps in formation and passage present. Reference to process e.g. evaporation, condensation, Coriolis Force…

Question Number		Indicative content
3(d)		Candidates should have case study knowledge of tectonic event management. They should consider and, at Level 3, evaluate the challenge of managing one such event. Successful management mitigates the consequences and impact; it enables people to learn to live with the hazard by knowing how to act before, during and after a hazard event. Good answers should refer to the difficulties of doing this i.e. of risk assessment, prediction, preparation/adjustment, recovery... A key part of many answers will be to look at the difficulties of preparing and adjusting to the event e.g. earthquake preparation involves designing non-collapsible buildings; strengthening railways and roads; stocks of emergency supplies … volcanic eruption preparation involves evacuation plans, lava diversion channels, planning controls on building location …. Difficulties may be less in HICs with their higher levels of development, more and better quality management, better technology and infrastructure, greater governance.
Level	Mark	Descriptor
Level 1	1-3	Expect simple statements about how the identified hazard event is managed, especially prediction and preparation. Likely to be generic and stated only.
Level 2	4-6	Expect some development of the management difficulties employed in case study example or generically. Needs to be some range of difficulties.
Level 3	7-9	Expect case-study style material offered and used to address management difficulties and the command word i.e. the need to assess the extent of the challenge. Candidates offer responses evaluating whether management is successful in mitigating outcomes in view of difficulties.

Section B: People and their environments

Question 4 – Economic activity and energy

Question Number	Answer	Mark
4(a)(i)	Answer: **B** 0.9 km *Rationale:* 0.9 km is the only accurate measurement. Using scale line it is clearly less than 1 km so ruling out distractors C & D and closer to 1 km than 0.7 km (i.e. distractor A).	**1**

Question Number	Answer	Mark
4(a)(ii)	Expect to point mark with 1 mark per valid and distinctive locational advantage identified e.g. road access for transport of car parts (1); easy access for labour force (1); road transport of finished vehicles to market (1); flat/level building ground (1); large, open area (1) …	**3(1+1+1)**

Question Number	Answer	Mark
4(b)(i)	Max mark calls for full accurate definition e.g. making the most of energy sources (1) in order to cut down on waste/reduce consumption (1). Award 1 mark for partial answers along right lines e.g. use less energy(1); more economic fuel consumption (1).	**2(1+1)**

Question Number	Answer	Mark
4(b)(ii)	Award 1 mark to each valid and distinctive factor identified e.g. rising global demand (1); traditional energy sources non-renewable (1); energy precious (1); burning non-renewables polluting (1) ... 2nd mark available in each case if factor developed into a full reason/cause e.g. • rising global demand (1) puts strain on global energy supply (1) • traditional energy sources non-renewable (1) limited in supply and will run out one day (1)	**4** **(1+1) + (1+1)**

Question Number		Indicative content
4(c)		The four economic sectors – primary, secondary, tertiary and quaternary (which, where defined by candidates, will benefit their response) – vary in size and importance between countries, largely according to their level of development. There is a specification case study on the comparative sectoral shifts in one HIC and one LIC along the lines of the Clarke-Fisher model which should inform the inter-country variations e.g. LICs (pre-industrial society) with their large primary sector e.g. 70% of workforce, modest secondary sector e.g. 20% and small tertiary sector e.g. 10% contrasts with HICs (post-industrial society) with their large tertiary sector e.g. 50%, modest secondary sector e.g. 30%, small primary sector e.g. 10% and emerging quaternary sector e.g. 10%. In an LIC with the following national profile of 25% primary, 30% secondary, 40% tertiary and 5% quaternary one region might have a 10-40-40-10 split whilst another 50-15-33-2 breakdown. For max marks answers should deal with explaining how they differ rather than why differ. Use of data necessary for max marks.
Level	Mark	Descriptor
Level 1	1-2	Expect a few basic, generic points about comparative sectoral size, probably between countries. Sectors identified though response sketchy and unbalanced.
Level 2	3-4	Expect a range of statements with likely reference to LICs and HICs and inter-country contrasts. Response will be unbalanced and partial but have some development and attempt to explain how they differ.
Level 3	5-6	Expect a coherent and well-developed explanation that there are major sectoral contrasts both between countries. Named examples of countries and their sectoral importance may be offered. Nature of the sectors to be clear.

Question Number		Indicative content
4(d)		This item is based on a required specification case study of the development and location of one high-tech industry. The question does not seek locational factors as such though the two aspects of the case study are linked. Purely locational factor answers may well be Level 1 only. Named industries may include pharmaceuticals, biotechnology, electronic goods, motor vehicles ... with no named location necessary. The question is evaluative in nature seeking a consideration of factors affecting its development i.e. growth of output; more employees; new locations as business expands ... and an evaluation of the relative importance of such factors as: availability of highly-skilled labour; R & D and university-business links; transport advances both national and transnational; clustering and external economies; government policies; economic development and changing demand; globalisation, supply chains and TNCs ...
Level	Mark	Descriptor
Level 1	1-3	Expect either a limited range of broad, generic factors identified and with focus on general development of high-tech industry.
Level 2	4-6	Expect some development of a number of key factors pertinent to named industry. May be unbalanced with focus on one factor and the growth of high-tech. Some reference to factor significance.
Level 3	7-9	Expect a range of well-developed relevant factors addressing the evaluative crux of the question. At top of level 3, a coherent argument which evaluates the relative importance of factors and reaches a conclusion. Expect case-study style detail.

Question 5 – Ecosystems and rural environments

Question Number	Answer	Mark
5(a)(i)	Answer: **B** 40 km *Rationale:* only one accurate measurement of the distance. Using scale line it is clearly less than half way to the 100 km mark so ruling out distractors C & D, but more than distractor A i.e. 20 km.	**1**

Question Number	Answer	Mark
5(a)(ii)	Population drop from 400 > 55 1900-2015	**1**

Question Number	Answer	Mark
5(a)(iii)	Credit any valid factor either observable or deducible from Fig 5 e.g. remote/ low accessibility (1); poor service provision (1); limited employment opportunity (1); high/rising unemployment (1); farming difficulties/mechanisation (1); limited facilities (1); harsh weather (1) cheap imports (1)…	**2(1+1)**

Question Number	Answer	Mark
5(b)(i)	Max marks calls for full and accurate definition e.g. protection of rare/threatened features … (1) for future use (1) or improvement (1). 1 mark answers will be partial e.g. looking after fine scenery/landscape (1); sustainability (1); keeping things as they are (1)….	**2(1+1)**

Question Number	Answer	Mark
5(b)(ii)	Award initial marks for basic but distinctive reason e.g. rare habitats (1); attractive landscape (1); threats from commercial interests (1) 2nd marks available for developing it into full reason e.g. • rare habitats (1) at risk of survival from visitor numbers (1) • attractive landscape (1) to encourage tourism (1) in danger of being spoiled by quarrying (1)	**4** **(1+1)+ (1+1)**

Question Number		Indicative content
5(c)		Food shortage is more common in LICs. Expect the causes to be associated with : • food production not meeting demand • food supply affected by limited and uneven global distribution systems (distribution barriers) • fast population increase pushing up demand • rising incomes in LICs raising demand • rural-to-urban migration in LICs leaving fewer farmers • food supply disrupted by conflicts • globalised food industry with some farming in LICs for export rather than local consumption • over-consumption in HICs • production damaged by weather events • poor storage
Level	Mark	Descriptor
Level 1	1-2	Expect a few simple, generic points about causation e.g. population increase... Relevant factors and points merely listed.
Level 2	3-4	Expect a partial, unbalanced account containing an attempt to explain some key causes. Some depth/development or some range of causes.
Level 3	5-6	Expect clear understanding of the issue. At least two causes well explained with both the mismatch between demand-side and supply-side present. Expect idea that is much more than a farming and food production issue at top of level.

Question Number		Indicative content
5(d)		This is a case study item and can be based on any rural or coastal ecosystem but might expect to see temperate grassland; mangrove; coral reef; sand dunes … The ecological processes identified need to be linked to the ecosystem's biodiversity i.e. the number and variety of living species found in the ecosystem. Good answers will appreciate the interaction of the ecosystem's living e.g. plants … and non-living e.g. soil … components and the series of links in the ecosystem which depend on each other known as its food chain. Processes may refer to: • photosynthesis and the carbon cycle • food chains, primary producers, primary consumers, secondary consumers .. and nutrient recycling esp. nitrogen. • adaptation and succession. Ecosystems break down with loss of biodiversity if one component or link changes.
Level	Mark	Descriptor
Level 1	1-3	Expect basic, generic points about ecological processes or biodiversity either generically or within an identified ecosystem.
Level 2	4-6	Expect some development of at least one key process and an appreciation of biodiversity in one named ecosystem at top of level. Answer will have limited range but will address the central point of how key ecological processes work.
Level 3	7-9	Expect a well-developed consideration of at least two key processes operating in a named ecosystem. Expect extent of ecosystem's biodiversity to be evident and at top of level the role of key processes in supporting/maintaining this level of biodiversity made clear (element of evaluation based on the word, "main.").

Question 6 – Urban environments

Question Number	Answer	Mark
6(a)(i)	Answer: **B** 1.8 km *Rationale:* only one option is the correct distance accurately using the scale line. From any point in the 4 and 8 boxes it is clearly not over 2 km so ruling out distractors C & D, but more than 1.3 km i.e. distractor A.	**1**

Question Number	Answer	Mark
6(a)(ii)	Site 4 = railway and bus station gateway. Gateways are entrances … important in creating mental images (1); first impressions … (1); accessible to large numbers of people (1) … Credit any valid reason based on idea of a gateway.	**1**

Question Number	Answer	Mark
6(a)(iii)	Max marks for identifying a distinctive pair: 1. one city centre core type i.e. retail (1); entertainment (1); public buildings (1) 2. one city centre edge type i.e. housing (1); offices (1);e-business (1); transport (1) Hotels and leisure in both locations so not valid answer. There is a broad pattern of central retail/entertainment and peripheral transport/housing/settlements ...	**2(1+1)**

Question Number	Answer	Mark
6(b)(i)	Max marks calls for full and accurate definition e.g. area of makeshift housing (1) occupied by squatters (1). Part definitions e.g. slum housing (1); made of poor building materials (1); on neglected ground (1)	**2(1+1)**

Question Number	Answer	Mark
6(b)(ii)	Allow 1 mark for each valid strategy identified e.g. self-help schemes (1); micro-lending initiatives (1); crime gang-busting (1); authorities build low-cost housing (1); basic services provision by authorities (1); rural development schemes (1)... 2nd marks for development of strategy so how improvement achieved evident or strategy itself clear e.g. • self-help schemes (1) > authorities provide free building materials to improve homes (1) • rural development schemes (1) > setting up of rural industries to slow down migration to cities (1)	**4 (1+1)+ (1+1)**

Question Number		Indicative content
6(c)		The question seeks the nature of the changes on the rural-urban fringe of HIC cities. Greenfield sites on the fringe have proved very attractive in recent times to house builders, retail complexes, superstores, business parks/science parks/industrial estates, recreation facilities such as golf courses, sports grounds …, new roads, park-and-ride schemes, new hospitals, new universities ..... This has led to urban sprawl and pressures on green belts, traditional edge-of-city land users such as smallholdings, stables … and attractive countryside face issues around cities/towns in areas of economic growth e.g. congestion, pollution, litter, degraded land, ecosystem damage, demand for motorway access, car parking space, bus links to the city centre …
Level	Mark	Descriptor
Level 1	1-2	Expect basic points of change e.g. new land users listed… or generalised comments about more built-up, busier … Brief and unbalanced.
Level 2	3-4	Expect some development of identified changes with a partial attempt to explain. There will some depth or some range but answer will lack balance. Expect some reference to key concepts such as urban sprawl, use of greenfield sites ….
Level 3	5-6	Expect an expanded answer with a range of land use changes and key concepts raised. May refer to pressures on greenfield land. Examples and reasons for changes may be offered.

Question Number		Indicative content
6(d)		Cities are characterised by the segregation of people of different socio-economic status and ethnic background. Reference to the required case study of the distribution of social/ethnic groups in a named city is expected. Similar groups of people do concentrate in particular parts of cities e.g. newcomers, perhaps immigrants in poorer housing areas; higher quality land occupied by wealthier people … Segregation by wealth/income, race and ethnicity is very evident. Wealth inequalities are the key driver. Good answers will not only offer some description of the distribution of different groups but also examine some reasons why social, economic and ethnic considerations have a role in the distribution and segregation e.g. • socially divisive e.g. wealthy residential areas in western suburbs and east end social housing (council estates) in UK cities … • ethnicity (common culture) encourages clustering • ethnic neighbourhoods, some ghetto-like develop • polluting industry and smart residential areas separate (the upwind idea). Candidates might legitimately refer to the degree of racial integration/interaction and state-sponsorship of such; house prices and housing affordability; the level of immigration/in-migration; educational backgrounds and cultural differences; transport provision (public and private) and the location and accessibility of services; the extent of gentrification ...
Level	Mark	Descriptor
Level 1	1-3	Expect a basic awareness of the segregation that occurs in cities with some simple, perhaps random points related to the distribution of population groups.
Level 2	4-6	Expect a clear but partial consideration of the distributional pattern, either generically or place-specific in which there is some reference to the forces driving segregation. Expect some range or depth but imbalance. Examples may be offered.
Level 3	7-9	Expect a sound and fairly comprehensive use of case study material about population segregation with the key forces segregating people made clear. Expect some depth and range, and explanation and examination of distributional pattern in one named city with attention to both ethnicity and socio-economic characteristics.

Section C: Practical Geographical Enquiry

Question 7 - River Environments Fieldwork

Question Number	Answer	Mark
7(a)(i)	Answer: **C** one person can record while others use the equipment *Distractors:* A - irrelevant to the question and not a point of distinction between individual and group B - too non-geographical to be serious answer D - some geographical truth but there is a better fieldwork reason.	**1**

Question Number	Answer	Mark
7(a)(ii)	Credit any valid factor stated with 1 mark e.g. access to water (1); water depth (1); river velocity (1); level river bank (1); similarly suitable sites up- or downstream (1) … 2nd marks can be awarded for some description which illustrates suitability e.g. • access to water (1) no measurements unless can reach water's edge (1) • water depth (1) needs to be suitable for walking into river (1) • trespass (1); traffic (1) Do not credit two separate points in one section.	**6** **(1+1)+** **(1+1)+** **(1+1)**

Question Number	Answer	Mark
7(a)(iii)	Award 1 mark for each relevant secondary source identified e.g. NRA (National Rivers Authority) discharge data (1); Met Office rainfall data (1); geology map (1); Ordnance Survey map (1) … 2nd marks can be given where the purpose of the information made clear e.g. • NRA discharge data (1) > gives idea of normal flow (1) • Geology map (1) > rock type information re river bed and tributaries (1) For max marks at least one named source needed (e.g. Met Office, Ordnance Survey, Environment Agency, Severn Trent Water, Google Maps)	**4** **(1+1)+** **(1+1)**

Question Number	Answer	Mark
7(b)(i)	Accept for up to max marks answers defining each of the three methods. Systematic sampling = sample taken in regular way (1) e.g. every tenth person; every 100 metres (1)... Random sampling = sample taken based on equal chance of inclusion for all (1) e.g. using random numbers table; drawn from a hat (1) …. Stratified sampling = samples are selected according to a known characteristic (1) e.g. age-distribution of population in an opinions survey; sites reflecting rock type in vegetation survey (1)…. For responses focussing directly on differences mark on a similar points basis.	**6** **(1+1)+** **(1+1)+** **(1+1)**

Question Number	Answer	Mark
7(b)(ii)	Accept answers based on all three methods awarding marks per point of justification with a developed point worth 2 and possibly 3 marks e.g. • systematic – no bias (1) by measuring at regular intervals (1) avoiding need for any personal judgement (1) • stratified – good way to achieve representativeness (1) by basing sampling site on OS map (1) and pre-fieldwork visits (1) • random – avoids site selection difficulties (1) by impersonalising sampling decision (1) no bias (1) No mark for naming sampling procedure.	**3(1+1+1)**

Question Number	Answer	Mark
7(c)(i)	Credit any valid aim (accept objectives) for a channel investigation with expectation that it will relate to water flow or channel shape e.g. • measure stream velocity (1) and its variations across the channel (1) • map channel size (1) and bed roughness (1). Brevity = 1 mark. Full developed aim along lines of a title = 2 marks.	**2(1+1)**

Question Number	Answer	Mark
7(c)(ii)	Credit any valid and distinctive reason why an investigation might not meet its aim. These will be generic to fieldwork and amount to aspects of investigation that might form part of evaluating the process and results e.g. • accuracy of data collected (1) • sufficient data collected (1) • careful data recording (1) • accuracy of data collation (1) and data presentation (1) • reliable analysis and interpretation of findings (1) • validity of conclusions reached (1) • realism and practicality of aim (1) • suitability of sites chosen (1)	**3(1+1+1)**

Question 8 - Hazardous environments fieldwork

Question Number	Answer	Mark
8(a)(i)	Answer: **C** one person can record while others use equipment *Distractors:* A – irrelevant to question and does not distinguish between individual and group B – not geographical so not a serious reason D – some geographical truth but there is a better fieldwork option offered	**1**

Question Number	Answer	Mark
8(a)(ii)	Credit any valid factor stated with 1 mark. Must include at least two meteorological consideration for max marks e.g. different surroundings (1). 2nd mark for this to be exemplified twice e.g. south-facing aspect (1); sheltered spot (1); open space (1) … Allow 1 mark for valid access or health & safety consideration e.g. trespass (1); traffic (1) …. Each valid factor carries a 2nd mark for description re suitability e.g. • open space (1) > gives more "natural" reading for area (1) • trespass (1) > ensure permission acquired (1) Do not credit two separate points in one section.	**6** **(1+1)+** **(1+1)+** **(1+1)**

Question Number	Answer	Mark
8(a)(iii)	Award 1 mark for each relevant secondary source identified e.g. OS map (1); local Met Office station records (1); local area weather forecast (1); compass directions (1); historic weather diaries (1); newspaper reports for area (1) …. 2nd marks can be given where purpose of source made clear e.g. • OS map (1) gives altitude of site (1) • compass directions (1) gives aspect of site (1) For max marks at least one named source needed (e.g. Met Office, Ordnance Survey, Environment Agency, Severn Trent Water, Google Maps)	**4** **(1+1)+** **(1+1)**

Question Number	Answer	Mark
8(b)(i)	Accept for up to max marks answers defining each of the three methods. Systematic sampling = sample taken in regular way (1) e.g. every tenth person; every 100 metres (1)... Random sampling = sample taken based on equal chance of inclusion for all (1) e.g. using random numbers table; drawn from a hat (1) …. Stratified sampling = samples are selected according to a known characteristic (1) e.g. age-distribution of population in an opinions survey; sites reflecting rock type in vegetation survey (1)…. For responses focussing directly on differences mark on a similar points basis.	**6** **(1+1)+** **(1+1)+** **(1+1)**

Question Number	Answer	Mark
8(b)(ii)	Accept answers based on all three methods awarding marks per point of justification with a developed point worth 2 and possibly 3 marks e.g. • systematic – no bias (1) by measuring at regular intervals (1) avoiding need for any personal judgement (1) • stratified – good way to achieve representativeness (1) by basing sampling site on OS map (1) and pre-fieldwork visits (1) • random – avoids site selection difficulties (1) by impersonalising sampling decision (1) no bias (1) No mark for naming sampling procedure.	**3(1+1+1)**

Question Number	Answer	Mark
8(c)(i)	Credit any valid aim (accept objectives) for a micro-climate investigation with 1 mark for brevity/basic strategy. 2nd mark requires fully developed aim along lines of a title e.g. • measure weather conditions (1) compare with another local site (1) • measure temperature … (1) compare with Met Office station recordings for that area (1)	**2(1+1)**

Question Number	Answer	Mark
8(c)(ii)	Credit any valid and distinctive reason why an investigation might not meet its aim. These will be generic to fieldwork and amount to aspects of investigation that might form part of evaluating the process and results e.g. • accuracy of data collected (1) • sufficient data collected (1) • careful data recording (1) • accuracy of data collation (1) and data presentation (1) • reliable analysis and interpretation of findings (1) • validity of conclusions reached (1) • realism and practicality of aim (1) • suitability of sites chosen (1)	**3(1+1+1)**

Question 9 - Economic activity and energy fieldwork

Question Number	Answer	Mark
9(a)(i)	Answer: **C** stopping people in the street to complete a questionnaire *Rationale:* observation shows that A, B and D are clearly not happening. There is no sign of house interiors/doors (A), computers (B) or postal mail (D).	**1**

Question Number	Answer	Mark
9(a)(ii)	Allocate 1 mark to each valid consideration up to four e.g. how many questions (1); layout of questionnaire (1); decide on sample size (1); decide on sample composition (1) number of questions (1); open (1) closed (1); Or award max to 2 well-developed (described) factors e.g. sample composition (1) > spread of different ages (1)	**4 (1+1+1+ 1)**

Question Number	Answer	Mark
9(a)(iii)	Allocate 1 mark to each valid H & S urban risk identified e.g. traffic accidents (1); mugging/crime (1); temptations to visit non-fieldwork places (1); getting lost (1) avoid construction site (1)… …	**2(1+1)**

Question Number	Answer	Mark
9(b)(i)	For each source i.e. nuclear and onshore wind – • award 1 mark for accuracy of point plotting (of 6 plots 0 marks if 2 plots significantly out i.e. more than 5%). • award 1 mark for accuracy of line drawing and labelling e.g. key.	**4 (1+1)+ (1+1)**

Question Number	Answer	Mark
9(b)(ii)	Allocate 1 mark for naming technique i.e. line graph (1) with 2 marks for its justification for this particular data as either two distinctive advantages e.g. comparisons between age-groups observable (1); can be ICT-generated (1); good way to display multiple data sets (1) … or one developed/exemplified advantage e.g. easy to interpret (1) as trends clearly visible (1). Award up to 2 marks where a valid alternative technique is identified e.g. compound bar chart (1) better with grouped rather than continuous data (1).	**3(1+1+1)**

Question Number		Indicative content
9(b)(iii)		Figure 9c should show all Figure 9b's data. Conclusions should relate to this data and data-supported conclusions must receive good credit. Remember data relates to "against" that source. Credit equally responses that invert data into "for" source e.g. 74% of 16-24 favour nuclear, 98% favour solar …. Key conclusions can be drawn based on : 1. source overall e.g. • nuclear is generally least popular source • solar is generally most popular • fracking generally less popular than onshore wind 2. age-group e.g. • renewables i.e. onshore wind and solar far more popular among younger people (16-34) that nuclear and fracking • fracking more unpopular with older generations i.e. 35 + • apart from 45-54s, nuclear similarly unpopular across age-range • older age-groups less keen on renewables than younger. Extent of opposition expected i.e. adjectives (e.g. lot/little/some/most) or data in best answers.
Level	Mark	Descriptor
Level 1	1-3	Expect basic, generic observations from the data. Points likely not to be evidenced and be little more than "lifts." Unlikely to address source overall and age-group.
Level 2	4-6	Expect some development of basic points but answer will be partial in terms of evidence and range. Attempts to draw at least one conclusion.
Level 3	7-8	Expect an expanded answer with at least two well-developed concluding statements. Likely to support statements with data or uses adjectives to indicate extent of opposition; required at top of level. Conclusions to refer to both source and age-group.

Question Number	Answer	Mark
9(b)(iv)	Max marks can be for three distinctive sources/pieces of information or where one of two is well developed in terms of detail or in terms of its importance to investigation. Accept primary sources e.g. opinions re other sources (1) especially coal/oil ...(1); location of home (1) in relation to electricity-generation plants …(1); or secondary sources e.g. published national surveys (1) suggesting split according to gender (1) or educational/professional level (1).	**3** **(1+1+1) or (1+1)+1**

Question 10 - Urban Environments Fieldwork

Question Number	Answer	Mark
10(a)(i)	Answer: **C** by making notes outdoors *Distractors:* Rationale is that there is no evidence of photos (A), computers (B) or phones (D). It is clearly observable that they are making notes.	**1**

Question Number	Answer	Mark
10(a)(ii)	Allocate 1 mark to each valid consideration e.g. design sheet (1); decide on location/transect (1); decide on sample composition (1); observation/judgement (1)... Or award max marks where two factors well-developed/described e.g. design sheet (1) > decide on EQ classification to be used (1)	**4 (1+1+1+1) or (1+1)+(1+1)**

Question Number	Answer	Mark
10(a)(iii)	Allocate 1 mark to each valid H & S urban risk identified e.g. traffic accidents (1); mugging/crime (1); temptations to visit non-fieldwork places (1); getting lost (1) avoid construction site (1)…	**2(1+1)**

Question Number	Answer	Mark
10(b)(i)	For each land use i.e. housing, open space and EQ, award 1 mark for accuracy of point plotting and line drawing (of 4 plots 0 marks if 1 plot significantly out i.e. more than 5%). Award 1 mark for general labelling of all 3 lines/each land use e.g. key.	**4 (1+1+1)+1**

Question Number	Answer	Mark
10(b)(ii)	Allocate 1 mark for naming technique i.e. line graph (1) with 2 marks for its justification for this particular data as either two distinctive advantages e.g. comparisons between age-groups observable (1); can be ICT-generated (1); good way to display multiple data sets (1) … or one developed/exemplified advantage e.g. easy to interpret (1) as trends clearly visible (1). **Award up to 2 marks where valid alternative technique identified e.g. compound bar chart (1) highlights transect change more vividly (1).**	**3(1+1+1)**

Question Number		Indicative content

10(b)(iii)		Figure 10c should show all the data in Fig. 10b. Conclusions should relate to this data and data-supported conclusions should receive good credit. Key conclusions that can be reached are :
		• housing dominates the inner suburbs but found everywhere though small % in CBD core (5%)
		• industry is the least common land use with none in inner suburbs and CBD core
		  • shops and offices dominate the CBD core though do occur across the urban area esp. in outer CBD
		  • most open space in CBD core though 20% of inner suburbs is open space
		  • EQ pattern clear-cut – high in inner suburbs, lower in inner city and outer CBD but rising across CBD to peak in core.
		  • EQ pattern can be related to land use variations (as below).
		Look for responses which summarise, compare and contrast patterns along the transect. Better answers will also offer data support for these conclusions, link EQ to land use e.g. EQ high in inner suburbs where housing dominates and industry non-existent … and perhaps apply general findings to their knowledge of CBD edges, shopping high streets i.e. seek to explain general pattern e.g. squares (open space) in CBD core; parks (open space) in inner suburbs …

Level	Mark	Descriptor
Level 1	1-3	Expect basic, generic observations from the data. Points unlikely to be evidenced and may be little more than "lifts".
Level 2	4-6	Expect some development of basic points but answer will be partial in terms of depth and range. Attempts to draw at least one conclusion.
Level 3	7-8	Expect an expanded answer with at least two well-developed concluding statements. May support statements with data and link EQ variations with land use changes. Evidence of links and relationships between the data reached (general pattern).

Question Number	Answer	Mark
10(b)(iv)	Max marks can be for three distinctive sources/pieces of information or where one of two is well-developed in terms of detail or in terms of its importance to investigation. Accept primary sources e.g. traffic counts(1); pedestrian counts (1); other land use types e.g. derelict land (1) ..; breakdown of land uses e.g. separate shops from offices (1)….; include other urban areas e.g. outer suburbs (1) …. or secondary sources e.g. land values from local authority (1); official land utilisation survey extracts (1); Goad Plan (1); historical land use maps (1) to assess land use change over time (1).	**3 (1+1+1) or (1+1)+1**

Section D: Global issues

Question 11 – Fragile environments

Question Number	Answer	Mark
11(a)(i)	Answer: **C** Mato Grosso *Distractors:* A – Rondonia: relatively small division throughout B – Para: ditto in relation to C D – Amazonas: declining division but always smaller than C	**1**

Question Number	Answer	Mark
11(a)(ii)	Award 1 mark for basic trend i.e. decreasing rate (1) with 2nd mark for either quantification e.g. 28000 sq. km. in 2004 to around 5000 sq. km. at end of period (1) or qualification e.g. almost continuous (1); continuous downward trend (1) except anomalies - 2008 and 2012 (1).	**2 (1+1)**

Question Number	Answer	Mark
11(a)(iii)	Expect to credit 1 mark for each of two following ideas: • if trees cut down faster than replaced (1) then • no forest for future generations (1) which together constitute one issue/developed point. Accept other valid issues on a (1+1) mark basis e.g. enhancing greenhouse gas effect (1); loss of livelihood for indigenous peoples (1) ...	**2(1+1)**

Question Number	Answer	Mark
11(b)(i)	Max mark requires full and accurate definition e.g. the spread of arid/desert-like conditions (1)into semi-arid areas/areas surrounding present desert(1). Can be based on the change to cultivated/agricultural land due to people/climate change ... Partial but valid statements e.g. spreading deserts (1); land degradation (1); advancing soil erosion by wind (1); farmland becoming unproductive (1) …	**2(1+1)**

Question Number	Answer	Mark
11(b)(ii)	Allocate 1 mark to each valid and distinctive cause identified e.g. drought (1); population growth (1); deforestation (1); poor soil management (1); forest fires (1)… Factors need to be specific not just human activity or climate! 2nd marks for outlining/expanding linked to 1st mark so that cause clear e.g. • poor soil management (1) due to overgrazing so soil lacks binding from vegetation (1) • drought (1) > vegetation to die so soil vulnerable to erosion (1) • deforestation (1) for fuel supply leaves soil exposed to erosion (1)	**4 (1+1)+ (1+1)**

Question Number	Answer	Mark
11(b)(iii)	This is a specification case study item. Max of 3 marks for generic responses lacking reference to any specific area e.g. increased mobility of people and animals (1); windbreaks to reduce wind erosion of bare soil (1); planting of drought-tolerant species e.g. marram to stabilise soils(1); leaving land fallow to allow soil recovery (1) ; planting nitrogen-fixing legumes to improve soil fertility (1) …. Well-developed strategies can earn 2 marks in context of named area (2+2). Max marks also where a mini-case study provided. e.g. In Mali the plant jatropha curcas is grown as hedges around food crops. It's able to grow in poor quality soil and its roots bind soil together (1). It protects soil from wind and water erosion (1). Oil produced from the plant can be sold providing a valuable source of income reducing the need to over-cultivate (1). The plant can also be burnt as fuel reducing the need for deforestation (1).	**4 (1+1+1+ 1)**

Question Number	Answer	Mark
11(c)	Figure 11b shows 6 pieces of evidence related to air temperature; sea level; extreme weather …. Expect two pieces to be identified and each to be marked out of 3 on a point marking basis rather than in terms of levels of response. Allow up to 4 marks for very well-made evidence. Expect 1st mark to be qualifying the Fig 11b statement e.g. sea level rising (1); warming of air temperatures (1); more extreme weather (1) … Further marks to show how this is changing "normal" weather experienced and long-term averages e.g. storms more frequent and/or more intense (1). Some explanation of how it provides evidence needed for full marks in each case. e.g. rising sea levels (1) because rising temperatures (1) leading to greater Polar ice melt (1) with meltwater now in the oceans (1). Do not credit direct lift of 'changing rainfall patterns'.	**6** **(1+1+1)+ (1+1+1)** **or** **(1+1+1+ 1)+(1+1)**

Question Number		Indicative content
11(d)		The question is about the global warming/climate change debate over causation. The overwhelming consensus is that climate change is real and under way but the degree of human responsibility is uncertain. Most scientists believe humans are largely to blame via the use of fossil fuels, air pollution and an enhanced greenhouse effect leading to global warming. Some explanation of the relationship between rising CO2 levels and other heat-trapping gases and global warming needs to be given. UN IPCC is 95 certain that climate change is mainly man-made i.e. more than half of the 0.85 degrees C. increase since 1900 due to human activities. Natural causes including orbital changes, volcanic activity and variations in solar output may have contributed as they have in previous climate change. Good candidates will remark that the history of the Earth is one of climate change; climates changed long before any human influence on the climate system. During the current period of quite rapid warming since the 1970's, solar activity has been high and may explain a small part of global warming. There are natural long-term fluctuations in solar output but impacts are thought to be more regional than global e.g. the solar minimum 1645-1715 may have led to the 0.5 degrees C. temperature drop in western Europe known as the "Little Ice Age." Furthermore, the better air quality resulting from anti-pollution legislation may have enabled solar radiation to push air temperatures since the 1960's, by perhaps 20%. What % of global warming is natural and what % is human-induced is a matter of debate. Level 3 responses should raise this idea and introduce some evaluation of the relative contribution of factors.
Level	Mark	Descriptor
Level 1	1-3	Expect a basic awareness of the point of the question i.e. the debate. Sketchy response including a few simple remarks about human and/or natural causes.
Level 2	4-6	Expect some development of the answer with valid observations but unbalanced and restricted in range and/or depth. Expect a reasonable account of either the enhanced greenhouse effect or the role of one natural factor e.g. solar activity.
Level 3	7-9	Expect some depth of treatment, a degree of balance with regard to human and natural factors and coherent explanation. Some evidence of evaluation of people versus nature as causes at top of level. Good understanding of the causation debate.

Question 12 – Globalisation and migration

Question Number	Answer	Mark
12(a)(i)	Answer: **C** Central and South America *Distractors:* A – Europe: large not small contributor, especially up to 2003 B – Asia: large not small contributor, especially up to 1995 and since 2005 D – Africa: a growing contributor, clearly larger than C	**1**

Question Number	Answer	Mark
12(a)(ii)	Award 1 mark for basic trend i.e. decreasing rate (1) with 2nd mark for either quantification e.g. 130 000 in 1990 to around 70 000 at end of period in 2010 (1) or qualification e.g. almost continuous (1); continuous downward trend (1) except anomalies – 1992,1999 and 2002-4 (1). Allow idea of fluctuating (1) with appropriate support as above for 2nd mark. Allow trend for one identified continent e.g. fall from Europe (1)	**2 (1+1)**

Question Number	Answer	Mark
12(a)(iii)	Credit any valid issue (contentious matter) related to refugee entry into HICs identified with 1 mark. Expect negative statements but positive expressions acceptable e.g. financial cost (1); future top sportsperson (1); language barrier (1); pressure on public services (1) ... 2nd mark for illustrating why an issue e.g. • social tensions (1) as state benefits paid to refugee not available to local people (1) • general acceptance of compassion for homeless/stateless (1) but some remain only self-interested (1)	**2(1+1)**

Question Number	Answer	Mark
12(b)(i)	A full and accurate definition worthy of max marks e.g. the expansion of trade between countries (1) so that HICs and LICs are now interdependent (1). Part-definitions worthy of 1 mark e.g. countries trading all over the world (1); the world is now one big economy (1).	**2(1+1)**

Question Number	Answer	Mark
12(b)(ii)	Credit any valid factor encouraging its rise with 1 mark e.g. modern transport (1); ICT (1); labour costs (1); foreign investment (1); resource availability (1); growth of TNCs (1); global trade agreements (1) ... 2nd mark in each case for developing factor into a full reason e.g. • labour costs (1) companies driven to where labour cheapest (1) • foreign investment (1) countries more "open" giving opportunities for profiteering overseas (1) • modern transport (1) rapid air transport so supply chains encouraged (1) • global trade agreements (1) free trade deals with WTO encourage globalisation (1)	**4 (1+1)+ (1+1)**

Question Number	Answer	Mark
12(b)(iii)	China & India's role in the global economy is a specification case study so consequences might be specific though accept valid generic consequences. Consequences in one of the countries is sought. Max marks requires some description so 4 marks can involve 2 or 3 identified consequences e.g. recipients of global shift in manufacturing (1); emerging economy (1); raised global status (1); social divisions (1); changing consumer tastes (1); expansion of educational provision (1) ... Where a valid and distinctive stated consequence has been described 1-2 marks are available for credit e.g. * raised global status (1) China considered "superpower" by USA & UN (1) influence in global issue decision-making (1) *social divisions (1) tensions in Indian cities as middle class emerges (1) yet shanty towns remain (1)	**4 (1+1)+(1+1) or (1+1+1)+1) or (1+1)+1+1**

Question Number	Answer	Mark
12(c)	Figure 12b shows three features of attempts to make tourism more sustainable i.e. economic benefits; social benefits; ecological balance and culture safeguarding. Candidates should have case study knowledge of the nature of one sustainable tourism project. The request is that they apply two of the above features to their case study of a sustainable project. Named ecotourism schemes may be popular e.g. Kakum National Park, Ghana; Nepalese mountain tourism; projects in Belize, Costa Rica, Galapagos Islands …. Mark each identified feature out of 3 on a points basis up to 2 marks for specifying each well-made point rather than adopt a levels of response marking approach. Allow up to 4 marks where one of the two answers i.e. economic, social or ecological/cultural well-answered with developed points. Some explanation needed of how it actually offers benefit where 3-4 marks awarded for an answer. e.g. economic benefits : Costa Rican trail holidays attract a sustained steady flow year-by-year (1) employing local workers (1) with regular employment (1). ecological balance/cultural safeguarding : Galapagos Islands attract discriminating tourists (1) in limited numbers (1) whose intention is to preserve and safeguard nature (1)	**6** **(1+1+1)+ (1+1+1)** **or** **(1+1+1+ 1)+(1+1)**

Question Number		Indicative content
12(d)		The countries in which TNCs operate can be very large in number and be because the company itself sees advantages in locating there, perhaps partly as a result of encouragement by the host country. Japanese and Korean TNCs were wowed by UK governments. Brazil's emerging economy status is partly due its government's encouragement of TNCs to operate there. The specification carries an optional case study of a TNCs' operations in an LIC; this may help answers but is not obligatory. TNCs provide a range of advantages/benefits and disadvantages/costs for the host country i.e. Advantages/benefits : development of energy resources; investment and aid; employment; improvement of educational and technical skills; development of resources and manufacturing; provision of capital equipment … Disadvantages/costs : local resources are exported; local workers are exploited; mechanisation reduces the demand for labour; cost of products beyond the pockets of most of local population; few skilled workers employed; large proportion of profits return to HQ overseas; increased imports increases national debt … Good answers will assess the total advantages against the total disadvantages i.e. evaluation. The best answers may conclude that TNCs bring some benefits to the host country but generally it is the home base country and the TNC itself that benefit most from these international operations and locations. Responses can relate to HICs, MICs or LICs.
Level	Mark	Descriptor
Level 1	1-3	Expect basic awareness of point of question. Simple, sketchy, random points of advantage and/or disadvantage, perhaps generic.
Level 2	4-6	Expect a clear but restricted consideration of some key points though response likely to be unbalanced and lacking in depth or breadth. Attempts to mount an argument by addressing both benefits and losses at top of level.
Level 3	7-9	Expect a coherent, balanced argument with a number of developed advantages and disadvantages covered. Expect some weighing up of pros and cons with concluding comment at top of level.

Question 13 – Development and human welfare

Question Number	Answer	Mark
13(a)(i)	Answer: **C** Asia *Distractors:* A – North America: with 358m less than C's 4393 m B – Africa: with 1186m less than C D – Europe: with 738m less than C	**1**

Question Number	Answer	Mark
13(a)(ii)	Award 1 mark per stated trend e.g. • global increase overall (1) • decrease in Europe/an anomaly (1) • largest increase in Africa (1) • Asia has a small increase (1) but still has largest population (1)	**2(1+1)**

Question Number	Answer	Mark
13(a)(iii)	Credit any identified valid issue (contentious matter) related to population change both size and structure with 1 mark. Accept both negative and positive statements. e.g. resource pressure (1); labour force size (1) ... 2nd mark available for illustrating why an issue e.g. • larger labour force (1) more production and wealth (1) • more competition for jobs (1) with more population (1) • pension costs higher (1) if population ages (1) • more school building (1) if more children in population (1) • global warming (1) due to increased consumption (1)	**2(1+1)**

Question Number	Answer	Mark
13(b)(i)	Max marks calls for full, accurate definition e.g. the transfer of know-how and equipment (1) suited to basic needs of receiving country (1). Partial statement along the right lines = 1 mark e.g. fits LIC conditions (1); the best form of assistance for LICs from HICs (1) … Max 1 mark if refer to emergency aid in response to hazards.	**2(1+1)**

Question Number	Answer	Mark
13(b)(ii)	Award 1 mark for identify each appropriate piece of equipment or know-how e.g. simple fishing rod or net (1); simple water pump (1); basic school building (1); donkey plough (1) ... In each case a 2nd mark available where answer developed to outline how it suits basic conditions in the receiving country i.e. is appropriate to their improvement. Examples can be both generic or place-specific. Max 1 mark if refer to emergency aid in response to hazards.	**4** **(1+1)+ (1+1)**

Question Number	Answer	Mark
13(b)(iii)	No credit for reference to aid. Question asks about ways other than aid. Award 1 mark to valid and distinctive ways identified up to 2-3 for max marks e.g. fair & freer trade (1); debt relief (1); infrastructure investment (1); agricultural revolution (1) ... Max marks requires some description so 3 ways identified with one described = 4 marks. 2nd marks for outlining/developing a valid factor so as link to economic development clear e.g. • fair and freer trade (1) > duties on imports to HICs lifted so LICs can earn from exporting (1) • debt relief (1) > international banks/HIC governments ease burden of paying back debts so more money stays in LIC (1)	**4** **(1+1)+ (1+1)** **or** **(1+1+1)+ 1** **or** **(1+1)+1+ 1**

Question Number	Answer	Mark
13(c)	Quality of life (QOL) tends to be thought of more in terms of people and their well-being rather than materialism but should be an outcome of economic development i.e. income, production …. Mark each chosen factor i.e. Health, Political Freedom and Literacy out of 3. Expect reference to: * Health – life expectancy (long life and happiness); infant mortality (role of healthy children in family life); medical provision and improved well-being ... * Political Freedom – democracy and choosing leaders; open societies, free press and happiness; freedom to do own thing and QOL ... * Literacy – read and writing and life opportunities; education and career choice; literacy and rewarding/better paid work ... 4 marks can be awarded where answer to one of factors strong and its relevance to QOL clearly identified and well explained.	**6** **(1+1+1)+ (1+1+1)** **or** **(1+1+1+ 1)+(1+1)**

<table>
<tr><td>Question Number</td><td colspan="2">Indicative content</td></tr>
<tr><td>13(d)</td><td colspan="2">Development gaps at the regional scale occur in all countries. There are core region(s) of growth and peripheral regions of decline e.g. UK, Italy, Brazil, China, USA …. The question set is about the need for and nature of the management of these disparities in one named country which is part of a specification case study. Good answers will rather than address the nature, causes and consequences of disparity give much attention to the nature of government regional policy e.g. regional policy in Brazil based on:
1. top-down methods i.e. setting growth poles in peripheral regions away from the South East core region
• build new capital city away from core region (1956)
• Polonoroeste Project (resettlement scheme for people from South East and drought-prone North East)
• HEP dams in western Brazil e.g. Itaipu; Tucurui ..
2. bottom-up methods e.g. aid-funded peasant farmers' cooperatives based on view that large-scale, export-orientated agriculture is not only way to improve living standards.
The question requires some attention only to why management/regional policy i.e. nature/causes of development gap e.g. regional unemployment; poverty in peripheral regions; national economic growth constrained ...
Credit reference to statistics for regional indicators. Some may quote the present UK government's initiative re the so-called "northern powerhouse" e.g. HS2; city-region developments; devolution; infrastructure projects; Chinese FDI … Discussion of management implies some evaluation as to the effectiveness of policy/strategy.</td></tr>
<tr><td>Level</td><td>Mark</td><td>Descriptor</td></tr>
<tr><td>Level 1</td><td>1-3</td><td>Expect a basic awareness of the regional development gaps and some simple, sketchy points about either the need to manage gaps or how they can or are managed.</td></tr>
<tr><td>Level 2</td><td>4-6</td><td>Expect some valid comments about management strategies to address disparities with some development of such and/or some consideration of the rationale behind regional policy partial and unbalanced. Where both addressed award top of level. Credit generic or place-specific references but expect some breadth or depth to the answer.</td></tr>
<tr><td>Level 3</td><td>7-9</td><td>Expect a good understanding of this case-study question set. Answer has good range and depth in terms of the need to manage disparity and the management strategies employed set in one named country. Expect an element of evaluation either of rationale behind management or more likely of the management approach/policy adopted for top of level marks.</td></tr>
</table>

Pearson Education Limited. Registered company number 872828
with its registered office at 80 Strand, London, WC2R 0RL, United Kingdom