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Mark Scheme (Results)

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Section A: The natural environment and people

Question 1 – River environments

Question Number	Answer	Mark
1(a)(i) **Type 4** **item**	A - HIC	**1**

Question Number	Answer	Mark
1(a)(ii) **Type 3** **item**	Accept drinking, cooking, bathing, hygiene, cleaning, washing, swimming pool, watering plants (irrigation), toilet	**1**

Question Number	Answer	Mark
1(a)(iii) **Type 2** **item**	Expect reasons to be distinctive, valid and sufficiently explicit for credit e.g. rising living standards (1); industrialisation in emerging economies (1); population increase (1); more irrigation (1); electricity power station use risen (1); increased standards of hygiene (1); popularity of dishwashers/washing machines (1)	**3(3x1)**

Question Number	Answer	Mark
1(b)(i) **Type 3** **item**	X = interlocking spur Y = watershed /ridge / arete	**2 (1+1)**

Question Number	Answer	Mark
1(b)(ii) **Type 1** **Item**	Good answers will refer to vertical erosion (e.g. corrosion ..) and to unequal resistance of rocks / speed of weathering in an explanatory fashion and relate these factors to the nature of the physical features e.g. deep/steep-sided/narrow .. Credit valid diagrams; fully annotated explanatory diagram can achieve full marks. Award 2 marks for purely descriptive answers. Answers making some attempt to offer explanation can be worth 3 marks. Max marks require a fully developed explanation.	**4**

Question Number	Answer	Mark
1(b)(iii) Type 1 item	Expect cap-rock waterfall but accept others. Allocate max of 2 for geological features e.g. cap-rock/hard (1) soft rock (1) or examples of such rock types. Each mark for distinctive feature e.g. plunge pool (1); undercutting of hard rock(1); waterfall recession (1) gorge (1) overhang(1)	**4(4x1)**

Question Number	Indicative content
1(c) Type 1 item	This fieldwork item calls for knowledge, hopefully from direct practical experience of conducting measurements in a river channel. Reference should be to equipment preparation and its use e.g. metre ruler, tape measure .., sampling procedures at the identified site, data recording and the accuracy of measurement and recording. Evaluative comments especially applying to fieldwork techniques and responses relating to calculation i.e. mean depth; cross-sectional area from width x depth are relevant. Credit annotated diagrams that illustrate technique and procedure.

Level	Mark	Descriptor
Level 1	1-2	Expect some reference to equipment and its use sketchily e.g. ruler to measure depth and tape measure for width … Measurement of at least one aspect of depth i.e. channel or water must be clear.
Level 2	3-4	Expect some description of both depth and width measurement e.g. water depth using metre ruler at intervals across bed up to where ruler wetted; peg and line distance measured by tape measure ..
Level 3	5-6	Expect thorough description of both width, channel depth and water depth measurement. May refer to derivation of CSA and/or mean depths. Good answers will refer to use of equipment and recording of measurements. Expect detailed and comprehensive account of fieldwork conducted. Perhaps supported by labelled diagram(s) and/or reference to evaluation e.g. weaknesses in technique, sampling, safety issues.

Question Number		Indicative content
1 (d) **Type 1 item**		This is a case study item and requires a named operational flood defence scheme for Level 3 (7 marks) and beyond e.g. Mississippi, Rhone … or a smaller river with a recognisable scheme e.g. Tees or smaller. Credit dam-only responses provided associated river explicit e.g. Three Gorges and Yangtze. Expect good answers to address how the method(s) employed (e.g. dredging; spillways; embankments; culverts …) by the scheme actually work to control flooding/lower water level i.e. mechanism/process. Accept soft engineering (e.g. aforestation ..) and flood plain release (e.g. building restrictions ..) schemes.
Level	Mark	Descriptor
Level 1	1-3	Expect either generic (i.e. general methods such as dams, overflows ..) response or a sketchy case-specific answer addressing method(s) employed rather than mechanism.
Level 2	4-6	Allow either generic or case-specific responses. Needs to deal with mechanism if dam-only or detail of any scheme where various methods adopted e.g. dam built to regulate heavy seasonal rainfall; culverts in urban area; trees planted in upper catchment area. Evidence of explanation at top of level.
Level 3	7-9	Expect a balanced and detailed case study-style answer dealing with both the method(s), their location detail/ place specificity and how they work to lower water levels and reduce the flood risk. Top answers may address the effectiveness of the scheme as a controller of floods.

Question 2 – Coastal environments

Question Number	Answer	Mark
2 (a)(i) **Type 3** **item**	Credit cheaper/lower cost; less money; not as expensive; only £0.5 million	**1**

Question Number	Answer	Mark
2(a)(ii) **Type 3** **item**	1. beach nourishment (1) 2. accept one of sea wall; breakwater; revetment; gabion; groynes (1) 3.	**2(1+1)**

Question Number	Answer	Mark
2(a)(iii) **Type 2** **item**	Credit each valid and distinctive point with 1 mark e.g. cheaper (1); less environmentally destructive (1); offers degree of protection to other coastal areas(1); encourages creation of new habitats (1); accommodates sea level rise (1); less obtrusive than hard defences (1); more coastal threat (1); popular with low value land (1); un-sustainability of hard defences (1)	**2 (1+1)**

Question Number	Answer	Mark
2(b)(i) **Type 2** **item**	X = Headland; cliff top; plateau Y = Cliff or Cliff face; headland	**2 (1+1)**

Question Number	Answer	Mark
2(b)(ii). **Type 1** **item**	Full explanation worthy of max marks to refer to both geology/landscape i.e. land higher than sea level; hard rock … and process i.e. cliff foot erosion; cliff face mass movement … For geological/landscape-only responses max of 2. For process-only responses max of 3 i.e. marine erosion at cliff-foot and cliff-face sub-aerial processes. Max possible for annotated and comprehensive diagrams.	**4**

Question Number	Answer	Mark
2(b)(iii). Type 1 item	For each valid and distinctive source of conflict identified award 1 mark i.e. hotel-building versus not building (1); development on the headland versus no building (1); high-rise building versus low-rise (1); four-lane highways versus smaller roads (1) … 2nd mark in each case where nature of conflict developed so that what developers do (i.e. create jobs, wealth .. motivated by economic reasons …) and what conservationists stand for (i.e. conserve areas for plants and animals; ensure access to natural landscape ..) explicit and conflicting.	**4 (2+2)**

Question Number	Indicative content		
2(c) Type 1 item	This is a fieldwork item calling for candidates to have knowledge, hopefully direct and practical of a beach sediment investigation. Good candidates will refer to both data collection procedures i.e. transect/profile selection, sampling points; measuring techniques, recording .. and to the equipment involved e.g. quadrats, callipers, rulers, identification charts … Better answers may deal with the characteristics of sediment differentiation i.e. shape, size, composition … The transect investigated could be either up and down a beach profile from the sea to the land or along the beach parallel to the sea. In the latter case, the investigation would be into the effects of longshore drift.		
Level	Mark	Descriptor	
Level 1	1-2	Expect some basic points about aspects of the investigation, perhaps the data collection process e.g. compared sediment size to chart; measured pebbles with ruler … An outline and part-account of fieldwork.	
Level 2	3-4	Expect some reference to sediment characteristics investigated especially size of sediment and to key features and procedures of investigation process esp. the transect/profile idea. Response may be unbalanced in terms of description of equipment and of procedures/techniques.	
Level 3	5-6	Expect some detailed reference to use of equipment and procedures e.g. take typical size within quadrat; systematic sampling. Fairly comprehensive account of investigation expected e.g. sediment shape; drawings of different sediments; reference to textbook sediment indexes. Expect a balanced response in terms of description of equipment and of procedures/techniques.	

Question Number	Indicative content
2 (d) **Type 1 item**	This item can be answered at either the global or local scale. Relevant factors include such general ones as configuration of coast, location, climate, human activities … Better answers will focus on more specific factors, for instance, sea temperature, light, salinity, water depth …. Where the local scale is taken this specificity may be presented with candidates more ecosystem-specific factors.

Level	Mark	Descriptor
Level 1	1-3	Expect listing and/or identifying of valid factors affecting ecosystems. Local distributions may be addressed in terms of a very limited range of factors. Some simple statements as to their role e.g. coral likes warm water; dunes need sand supply
Level 2	4-6	Expect a number of relevant factors for either global or local distributions with some development of their role e.g. coral requires water temperatures of at least …
Level 3	7-9	Expect sound explanation of a range of relevant factors either globally or locally. Examples of ecosystems e.g. coral, mangrove and their key determinants should be referred to. Expect comprehensive and coherent account for ecosystems generally or at least two specific ecosystems.

Question 3 – Hazardous environments

Question Number	Answer	Mark
3 (a)(i) **Type 4 item**	A. epicentre	1

Question Number	Answer	Mark

3 (a)(ii) **Type 3 item**	Credit : no deaths at night (1)
	        more deaths during day/daytime hours (1)
	        in Feb 2011 people walking around or not in bed (1)
	in Sept 2010 few trains or people at work / shopping (1)
		1

Question Number	Answer	Mark
3 (a)(iii) **Type 2 item**	Expect the three reasons offered to be : • shallower/nearer surface (1) • closer to city/Christchurch (1) • buildings weakened on 4 September 2010 (1) or equivalent Creditable reasons need to distinctive.	3(3x1)

Question Number	Answer	Mark
3(b)(i) **Type 1 item**	Award 1 mark for each valid suggestion stated e.g. flexible building structures (1); minimising glass windows (1); buildings on rollers (1); build only on solid rock (1); bird-cage building design (1) lower rise buildings (1) Developed valid suggestions may be worth 2 marks each e.g. flexible building structures (1) to prevent building collapse and people's death (1) Development to be distinctive for both development marks.	4(4x1) or (2+2)

Question Number	Answer	Mark
3(b)(ii) **Type 2 item**	Accept any two valid pro-active measures stated e.g. improve earthquake awareness/education (1); build shelters (1); develop early warning systems (1); increase emergency supplies (1)… Ensure distinctiveness and clarity for max.	2(2x1)

Question Number	Answer	Mark
3(b)(iii) **Type 1 item**	Max of 2 if valid long-term impacts merely identified e.g. homelessness; unemployment; disability; repair costs … 3-4 mark responses require development of at least one but preferably more of those impacts in terms of their long-run consequences e.g. many years to rebuild and cost takes money from other projects… Credit exemplification i.e. a named event that became a long-term disaster e.g. reference to consequences of Kobe earthquake. Accept any hazard event and positive impacts.	**4**

Question Number	Indicative content	
3 (c) **Type 1 item**	This is a fieldwork survey item asking candidates to describe their experience of designing and using a questionnaire to gather opinions. Better answers will address design issues e.g. open and/or closed questions, number of questions set, sampling procedures, access to residents in affected area, safety concerns … Specifying a hazard event e.g. earthquake, tsunami , flooding will add clarity to the response as will some reference to hazard management.	
Level	Mark	Descriptor
Level 1	1-2	Expect a sketchy description with reference to a questionnaire and outline statements about its design and/or field methodology e.g. wrote questionnaire in class; questionnaire to family and neighbours …
Level 2	3-4	Expect some description of either design or field methodology with some reference to key aspects of the survey, especially sampling.
Level 3	5-6	Expect both design and field methodology addressed with a degree of detail so techniques evident. Brief account of sampling procedures, including a justification (i.e. reasons) for the approach.

Question Number		Indicative content
3(d) **Type 1 item**		This item requires understanding of plate tectonics and their movement at plate boundaries. The processes occurring at the two boundary types i.e. constructive and destructive are expected. Well annotated diagrams can be Level 3. Answers need to explain the mechanisms that lead to vulcanicity. Extrusive vulcanicity i.e. cones, geysers .. expected but if offered, intrusive features i.e. batholiths … acceptable. The mechanisms leading to lava, ash, heat etc… release upwards either on to the surface or into crustal rocks sought.
Level	Mark	Descriptor
Level 1	1-3	Expect simple statements about plates and boundary movement, perhaps relating to one type of boundary movement e.g. lava fills gap when plates separate …
Level 2	4-6	Expect a good account of process at one boundary type that leads to lava, gas … release on or near surface or both types addressed in outline but accurate fashion.
Level 3	7-9	Expect a full explanation covering both boundary movement types and their key processes that lead to vulcanicity addressed thoroughly and comprehensively. Fully annotated accurate diagram(s) worthy of this level. Credit mention of hotspots/plumes.

Section B People and their environments

Question 4 – Economic activity and energy

Question Number	Answer	Mark
4(a)(i) Type 3 item	Western Europe	**1**

Question Number	Answer	Mark
4(a)(ii) Type 3 item	Asia-Pacific (1); Middle East/Africa (1)	**2(2x1)**

Question Number	Answer	Mark
4(a)(iii) Type 4 item	B. secondary	**1**

Question Number	Answer	Mark
4(a)(iv) Type 3 item	Tertiary (Accept quinary)	**1**

Question Number	Indicative content	
4(b)(i) Type 1 item	A range of location decision-making factors are evident from Figure 4b. These include the road network of M1 and A-roads giving access to major cities, the nearness to East Midlands Airport, land on the urban fringe of Derby …. Accept other valid non-map offerings e.g. area's engineering tradition ..	
Level	Mark	Descriptor
Level 1	1-2	Expect either a short list of relevant factors identified or one factor developed/expanded e.g. nearby city so large population providing workforce
Level 2	3-4	Expect either a long list of relevant factors identified or some development of two factors or one factor very well developed.
Level 3	5-6	Expect at least two well-developed/expanded factors with clear expression of a decision-making process and of locational advantage.

Question Number	Answer	Mark
4(b)(ii) **Type 2 item**	Award full marks for accurate and comprehensive definition e.g. use of advanced skills and technology to produce high-value products. Part definitions e.g. electronics / IT(1); lots of highly skilled workers (1) R&D (1) use of robotics (1) Characteristics not named e.gs to be credited.	**2**

Question Number	Answer	Mark
4(c)(i) **Type 1 item**	B. plot of 30 accurately = 1 mark C. plot of 5 accurately = 1 mark	**2(1+1)**

Question Number	Indicative content
4(c)(ii) **Type 1 item**	Three pieces of information are available to the candidate i.e. Figures 4c, 4d and 4e. Better candidates will do more than merely read this information and delve into "why" i.e. suggest reasons to explain views expressed; they will also look at all three settlements. The conclusions that can be reached include the following: impacts expected by locals; distance affects view; exposure important; opposed at nearby A; in favour at "sheltered" C; fear of dangers at A; economic benefits recognised at 12-15 km away C …

Level	Mark	Descriptor
Level 1	1-2	Expect simple and few conclusions based on data reading only e.g. most opposed at A … Basic pattern identified. May offer data from Figures 4d and 4e.
Level 2	3-4	Expect reasonable conclusions recognising strong views held and impacts of location decision realised by people. Full pattern recognised and some data support for conclusions stated. Some attempt to give reasons behind views by using Figure 4c.
Level 3	5-6	Expect clear and coherent conclusions based on views expressed. Likely impacts of location decision e.g. jobs; health & safety issues .. to be explicit. Reasons behind views stated in all three settlements with reference to all three Figures 4c,4d and 4e for these three settlements.

Question Number		Indicative content
4(d) **Type 1 item**		Candidates should be familiar with a range of arguments favouring renewables (e.g. less greenhouse gas pollution; supply not finite) and those highlighting their limitations (e.g. inefficient; visually intrusive …). Good candidates will explain the key arguments, illustrate them with examples (e.g. inefficient wind farms) and present their answer as a discussion (e.g. on the one hand …; on the other hand ….)
Level	Mark	Descriptor
Level 1	1-3	Expect a limited range of broad and generic points for and/or against. One-sided answers i.e. for or against only limited to this level.
Level 2	4-6	Expect some development of a number of key arguments. Must be both pro & con points unless a good case for or against offered in an unbalanced response. (max 5)
Level 3	7-9	Expect a genuine attempt to discuss and offer a balanced answer in which there is some evaluation and pro & con points are developed and related to each other in a coherent argument. Expect examples of energy source and / or location

Question 5 – Ecosystems and rural environments

Question Number	Answer	Mark
5(a)(i) **Type 3 item**	Long Riston – 1 Church(1) Leven – 1 Post office(1)	**2(1+1)**

Question Number	Answer	Mark
5(a)(ii) **Type 2 item**	Expect: larger the population size the more services. Accept equivalence or positive correlation.	**1**

Question Number	Answer	Mark
5(a)(iii) **Type 2 item**	Credit any up to any two valid and distinctive characteristics e.g. limited employment prospects (1); importance of recreation/tourism (1); accessibility issue (1); farming land use (1)… Candidates will respond across a wide range of themes from employment, landscape, transport, rural idyll… but do not accept population and service provision answers.	**2(1+1)**

Question Number	Answer	Mark
5(b)(i) **Type 1 item**	Adopt points marking approach with developed points worth 2 marks. Relevant points include poorest hardest hit (1); LIC importers cannot compete because of high world prices (1); malnutrition and not healthy (1); workers to use marginal land for domestic farming (1) less food (1) aid(1) greater vulnerability to extreme weather(1) basic technology (1) population growth(1) LICs(1)… Credit all valid and distinctive points. Three points with 1 developed = max	**4(4x1 or** 2+2 or 3+1)

Question Number	Answer	Mark
5(b)(ii) **Type 1 item**	Allocate up to 2 marks to each valid attempt with 1 mark for appropriate identification (e.g. irrigation (1); glasshouses (1); deforestation (1) GM(1); HYVs (1) ..). 2nd mark available in each case for outlining how production raised (e.g. more water > more plant growth) or brief description of located, specific attempt. Mark item in entirety i.e refer across	**4(2+2)**

Question Number	Answer	Mark
5(c)(i) Type 1 item	Award 1 mark to each of following : • accurate boundary line drawing 0,50% and 90% • labelling correctly all 3 segments	**2 (1+1)**

Question Number	Indicative content
5(c)(ii) **Type 1 item**	There are four 1980-2010 map changes (Figure 5c) shown i.e. new farm shop; use of cottages; farm buildings industrialised; campsite development. The three income sources (Figure 5d) have also changed their proportions, especially tourism replacing farming. Better candidates should link the changing income sources to the changes on the farm, and may also link this to prior knowledge of the decline of farming, rural diversification, and the rise of recreation and tourism in HICs, including UK.

Level	Mark	Descriptor
Level 1	1-2	Expect the basic physical changes on the farm identified e.g. farm worker cottages > holiday cottages; farm shop built ... or the basic changes in the income streams stated e.g. less from farming ...
Level 2	3-4	Expect all the basic changes, both physically and financially identified. Maybe some data support for financial changes and some attempt to link the physical and financial changes.
Level 3	5-6	Expect clear understanding of the overall pattern of change with responses linking physical and financial changes. Expect genuine summative conclusions explaining the change to the income streams in terms of physical changes. Top answers will look to explain the decline in income from farming and the greater reliance on new rural economic activities.

Question Number		Indicative content
5(d) **Type 1 item**		This is a case-study item. It calls for knowledge of a temperate grassland location e.g. Ukraine; the Steppes .., the biome's nature e.g. chernozems (black earths); continental climate; illuviated fertile soils; deep profile … and its agricultural use i.e. extensive, commercial cereal production .. Level 3 responses must name appropriate area.
Level	Mark	Descriptor
Level 1	1-3	Expect reference to basic features of the biome e.g. chernozems; dry … or its use e.g. wheat farming identified
Level 2	4-6	Expect some clear characteristics of both the biome itself and temperate grassland farming to be identified e.g. continental climate; wheat fields … with some appreciation of linkage between the two evident e.g. soil processes. Expect sense of ecosystem.
Level 3	7-9	Expect explanation of the workings of the biome as an ecosystem with its suitability for arable farming inherent. Ecological processes explained e.g. evapotranspiration and upward water/nutrient cycling within soil. Answers should have clear case study feel with clear match between named area and context of writing. Range of characteristics both ecological and agricultural.

Question 6 – Urban environments

Question Number	Answer	Mark
6(a)(i) **Type 3 item**	58 (accept 56-60) (1)	**1**

Question Number	Answer	Mark
6(a)(ii) **Type 4 item**	C – urbanisation	**1**

Question Number	Answer	Mark
6(a)(iii) **Type 3 item**	13 (accept 11-14) (1) Accept 12 - 5	**1**

Question Number	Answer	Mark
6(a)(iv) **Type 2 item**	Award 1 mark for each of : • LIC increased % • Decrease in % in HICs	**2(2x1)**

Question Number	Answer	Mark
6(b)(i) **Type 1 item**	Max of 2 marks for merely clarifying nature of shanty towns i.e. squatters; cheap D-I-Y housing … Access to full mark range i.e. 3-4 mark answers need to address their importance and why i.e. rural-to-urban migration (1); poor migrants needing place to live (1); peripheral spread (1); on unwanted land (1); lack of facilities /social housing as city councils lack funds (1); major consequence of increased population (1) Higher marks available without clarifying nature of shanty towns	**4**

Question Number	Answer	Mark
6(b)(ii) **Type 1 item**	Allow 1 mark for identification up to max of 3 for each basic and distinctive change e.g. electricity supply (1); running water (1); development of infrastructure (1)… Accept changes taken from photo (Figure 6b) e.g. availability of garden can result in owner building another property (shanty) in garden space (1) … up to max of 3. Max mark requires description e.g. two changes described. Credit shanty town management case study or generic improvement schemes e.g. self-help schemes including description up to max.	**4 (2x2 or 3+1)**

Question Number	Answer	Mark
6(c)(i) **Type 1 item**	Accurate plot of : • 6 for site 4 (1) • 8 for site 5 (1)	**2(1+1)**

Question Number	Indicative content
6(c)(ii) **Type 1 item**	There are four variables – location; building type; building height; environmental quality – from which conclusions can be drawn. Simple conclusions might look at the trend of one variable along the transect so linking location to, for instance, building height e.g. more multi-storey near centre… More complex conclusions will look to link all or most variables into a broad pattern e.g. the broad pattern of change along the transect is high EQ in the outer suburbs with its large detached houses with EQ falling towards and in the inner city with its smaller housing. Beyond the inner city approaching the city centre EQ rises being higher in CBD core than CBD periphery.

Level	Mark	Descriptor
Level 1	1-2	Expect more simple conclusions e.g. the broad trend of change per variable e.g.for either EQ or land use. Such simple statements as EQ falls then rises …; houses get smaller… will be typical.
Level 2	3-4	Expect more complex conclusions which present a broad pattern of change for most of the variables e.g. both EQ and land use and present them with some linkage e.g. tall, detached houses on edge… Candidates offering trend for all but unlinked variables.
Level 3	5-6	Expect the full pattern for all variables with good reference to specifics e.g. data support at each land use site e.g. multi-storey commercial buildings with EQ scores… in centre. Answer points out that way land used affects EQ score i.e. clear relationship between land use and EQ score to be made. Conclusions complex and comprehensive.

Question Number	Indicative content
6(d) **Type 1 item**	This is a case study item and can relate to a changing CBD (e.g. central Manchester), a redeveloping/regenerating inner city (e.g. Olympic Park, Stratford; Lower Don Valley, Sheffield) or an urban edge development (e.g. edge cities around Los Angeles; Oxford Science Park). Expect a vast range of acceptable answers, perhaps local to the candidate. Good answers will cover how the area is changing and why these changes are taking place and include illustrative information e.g. a better response on the Lower Don Valley changes would include: - recognition of de-industrialisation and the legacy of dereliction and urban deprivation - identification of the new economic activities, generically or better as specifics e.g. Meadowhall shopping centre; English Institute of Sport; Motorpoint Arena .. - rationale behind these changes, generically or better specifically e.g. close to M1 for travelling shopper; service sector jobs … Expect similar content coverage for those opting for changing CBDs and changing urban edges. Restrict non-HIC area responses but where comments have some generic merit to Level 1 marks.

Level	Mark	Descriptor
Level 1	1-3	Expect either an outline account of how a named HIC city area has recently changed or a response offering generic changes to either an urban edge (retail complex/business park/industrial estate),CBD or inner city.
Level 2	4-6	Expect either an unbalanced response where either the "how" or "why" well done and the other less so e.g. strong account of "how" (i.e. the changes themselves) or a reasonable and balanced answer with some reference to both "how" and "why" (i.e. reasons for the changes taking place e.g. accessibility and space in edge city areas).
Level 3	7-9	Expect a sound and comprehensive case study-style account with some depth of explanation of both the "how" and "why" of the changes taking place in the named area. Named examples of specific changes may be offered at this level.

Section C   Global issues

Question 7 – Fragile environments

Question Number	Answer	Mark
7(a)(i) **Type 3 item**	China (1)	**1**

Question Number	Answer	Mark
7(a)(ii) **Type 3 item**	India (1)	**1**

Question Number	Answer	Mark
7(a)(iii) **Type 2 item**	Award 1 mark to any of following up to max of 2 : • More need for transport in USA (1) • USA extra extravagant (e.g. big cars) (1) • more efficient energy and production systems in Germany / more green energy there(1) • different attitudes to pollution and environmental issues (1) • USA less import - dependant	**2(2x1)**

Question Number	Answer	Mark
7(a)(iv) **Type 4 item**	C. industrialisation	**1**

Question Number	Answer	Mark
7(b)(i) **Type 2 item**	Expect full and accurate definition for 2 marks i.e. reference to "world average/long-term average" temperature and to either time period (e.g. since 1980) or in relation to date (e.g. 1900). Broad but valid statements e.g. warmer recently; temperatures rising worldwide … = 1 mark.	**2**

Question Number	Answer	Mark
7(b)(ii) Type 1 item	Adopt points marking approach up to max of 3 reserving max mark for those offering some explanation. Max of 1 mark for merely naming conferences e.g. Kyoto, Copenhagen, Cancun, Qatar or saying many or annual conferences or series IPCC reports. Credit points such as human activity/greenhouse gas as cause (1); carbon emission targets (1); 2 degree C. warming limit (1); compensation funds for NICs/LICS (1); HICs cut first (1); getting India and China to cut (1); carbon trading schemes (1) …	**4**

Question Number	Answer	Mark
7(b)(iii) Type 1 item	Adopt a points marking approach reserving 1 mark for basic point that countries have different self / national interests/perspectives (1). Allow a further 3 marks for illustrating this basic point e.g. different levels of economic development (1); curbing emissions may hit economic growth in NICs (1); HICs reluctance to pay compensation (1); fight to conquer poverty more important than environment in NICs/LICS (1); role of oil companies and government legislation/regulation in USA (1); HIC industrialisation to blame/they should take most action (1) … Allow up to 3 marks for the climate change sceptic argument i.e. global warming not or not just anthropogenic (1); due entirely/partly to natural variation (1).	**4**

Question Number		Indicative content
7(c) **Type 1 item**		Candidates may read and interpret the extent of the desertification risk expressed in Figure 7b e.g. 40% of Africa at great risk; 70% of Australia at some risk ... which should then be developed into either a case study-style knowledge/understanding of the threats and challenges (latter is secondary and suitable for higher credit) posed by desertification in a chosen continent e.g. the African Sahel or developed into a slightly more generic answer about reduced agricultural output, malnutrition, famine, migration and refugees. Accept for higher credit notion that consequences so threatening that challenge is to manage the issue. Both approaches can access up to Level 3 marks.
Level	Mark	Descriptor
Level 1	1-2	May offer basic data reading from Figure 7b and/or generic comments on desertification, not particularly structured on the extent (e.g. great risk; real threat ...) and nature of the issue (e.g. hungry people). Lists consequences.
Level 2	3-4	Expect some explanation of key consequences esp. threats to agriculture and food supply, especially in the case of a generic response. Case study description without an attempt to explain consequences. Good answers lacking initial data support.
Level 3	5-6	Expect a wide-ranging account of consequences (e.g. food shortage; refugees; case for soil erosion management ..). Consequences illustrated and explained in context of chosen continents, perhaps by means of a case study. May offer a cyclical explanation.

Question Number		Indicative content
7(d) **Type 1 item**		Better responses should address both regional consequences (e.g. limiting economic development; disturbing lifestyles …) and global ones (e.g. loss of biodiversity; contribution to global warming …). It is also valid to regard the need for sustainable forest management and international cooperation to slow down the rate of deforestation as a secondary consequence (though detailed answers on management are not worthy of extra credit). Candidates may call on case study knowledge/understanding of a threatened TRF (e.g. the Amazon, West Africa, Indonesia). Examples are requested but these can be in the form of a case study or by illustration in a more generic answer. Good responses will offer the answer as a discussion with both good (e.g. regional economic development…) and bad (e.g. global loss of biodiversity ..) consequences with perhaps, a concluding evaluation.
Level	Mark	Descriptor
Level 1	1-3	Expect either some consequences identified or a single consequence well developed but minimal if any, discussion.
Level 2	4-6	Expect some explanation of a range of consequences. Response limited by either balance and range (i.e. good and bad; regional and global) or depth of explanation e.g. wide-ranging but superficial.
Level 3	7-9	Expect range of regional and global consequences clearly distinguished and maybe well explained supported either by case-study material or named place examples. Top answers discuss consequences in terms of positive and negative impacts and may evaluate the overall issue of deforestation.

Question 8 – Globalisation and migration

Question Number	Answer	Mark
8(a)(i) **Type 4 items**	C. UK (1)	**1**

Question Number	Answer	Mark
8(a)(ii) **Type 2 item**	For max mark expect both international (i.e. country to country) and migration (i.e. moving home) defined. Award 1 mark for where international ignored or migration clarified loosely e.g. moving only.	**2**

Question Number	Answer	Mark
8(a)(iii) **Type 2 item**	Credit each valid and distinctive reason adequately clarified e.g. • Economic migration or equivalent (e.g. higher standard of living) from Asia to HIC Australia (1) • Proximity (1) • Career opportunity in bigger country for New Zealand born Australians(1) • Similar life style for New Zealanders (1)	**2(1+1)**

Question Number	Answer	Mark
8(b)(i) **Type 2 item**	Award 2 marks for full and accurate definition i.e. the balance of immigration & emigration. 1 mark available for mentioning both movements but not the difference between them	**2**

Question Number	Answer	Mark
8(b)(ii) **Type 1 item**	Award 1 mark for identifying each explicit and distinctive push factor e.g. unemployment (1); hunger (1); persecution (1); natural disaster (1) … up to max of 2. A 2nd mark in each case available for outlining i.e. clarifying how this negative aspect of the migrant's origin forces their out-migration.	**4(2+2)**

Question Number	Answer	Mark
8(b)(iii) **Type 1** **item**	Accept responses that look at both countries of origin and/or destination i.e. immigration control and emigration influence (influencing leavers). Expect more responses focussing on immigration/host countries. Credit each valid reason with up to 2 marks. 1st mark for identification e.g. volume of immigrants (1); need to identify refugees (1); need to vet asylum-seekers(1); losses from brain-drain emigration (1); need to prevent foreign criminal activity (1) … For full developed reasons e.g. need to identify refugees (1) and distinguish them other immigrants such as economic migrants (1) award a 2nd mark.	**4 (2+2)**

Question Number	Indicative content
8(c) **Type 1 item**	Viewing the photograph (Figure 8b) may be data-response (e.g. building on "green" land; jobs for builders, in hotels, bars …) and/or data-stimulus (i.e. tourist earnings; multiplier effects; bad habits of tourists; loss of natural beauty; economic diversion to tourist-dependency; loss of traditional local culture …) experience for candidates. Good answers may clarify term, mass tourism and cover all three types of impact – environmental, economic and social – in both a positive and negative sense. Better candidates will recognise these impacts as good or bad and perhaps, evaluate the overall impact on such destinations as Benidorm.

Level	Mark	Descriptor
Level 1	1-2	Expect basic comments about impact, perhaps based largely or entirely on the data-response to the photograph e.g. crowded high-rise ..; brought jobs …
Level 2	3-4	Expect either a balanced and wider-ranging response in which impacts outlined or some attempt to describe a number of skewed impacts e.g. two or three negative categories, perhaps economic and environmental; concentration on one category with negative impacts (e.g. environmental - unspoilt land with native vegetation lost for clean but crowded beach).
Level 3	5-6	Expect a range of well developed impacts well described with some reference to at least two categories of impact and some negative impacts and some positive impacts. A balanced response with perhaps, some evaluation of overall impact. The term, mass tourism needs to be at least implicitly understood and there should be clear evidence of developed description.

Question Number		Indicative content
8(d) **Type 1 item**		This item requires candidates to know about TNCs, the rise of the global economy, the global operations of a TNC and their role as key players/drivers in the rise of the global economy. Candidates should write about : - TNC's foreign investment initiatives, - their business organisation with head office, research and development centres, production and sales/marketing in different locations (spatial division of labour), - their commodity chains, - their least-cost location decisions, - their role in the global shift . Good answers will use case-study knowledge/understanding of a named TNC's operations and be able to discuss their global economic role e.g. assess the extent of their role viz-a-viz other factors (e.g. UN; national governments; NGOs; foreign aid flows; advances in transport/IT/communications) Reference might be made to their key role in globalisation e.g. more economically important than many LIC governments; tax avoidance in HICs
Level	Mark	Descriptor
Level 1	1-3	Expect relevant but loose comments about TNC organisation and operations (e.g. operate in many countries; move around globe; reference to their cost-saving, especially labour…) identified.
Level 2	4-6	Expect a sound attempt to clarify globalisation/the global economy and some explanation how this interdependence has been driven by the operations and organisation of TNCs (e.g. spatial division of labour) or of a named TNC.
Level 3	7-9	Expect clear evidence of role explanation, including discussion in the context of other influences on the rise of the global economy, and some case-study knowledge of the operations of at least one named TNC. Better responses will include a range of ways in which their operations further economic globalisation (e.g. the global shift of manufacturing to East Asia) and offer an assessment of how crucial this has been in development of the modern global economy.

Question 9 – Development and human welfare

Question Number	Answer	Mark
9(a)(i) Type 4 item	C	1

Question Number	Answer	Mark
9(a)(ii) Type 3 item	A	1

Question Number	Answer	Mark
9(a)(iii) Type 3 item	B	1

Question Number	Answer	Mark
9(a)(iv) Type 2 item	Award 1 mark to any of two following points : • GDP measures economic production (goods and services) only (1) • quality of life measures well-being/welfare not production (1) • economic production benefits not necessarily shared with all population (1) • GDP can be spent on non-welfare raising programmes (1) • Human rights absent (1)	2(2x1)

Question Number	Answer	Mark
9(b)(i) Type 2 item	Credit full and accurate definition e.g. difference in level of economic development between "North" and "South"/between HICs and LICs ie worldwide. Full mark responses should deal with both global (world-wide) and gap (i.e. ideas of difference / divide / contrast). Addressing only one = 1 mark. Accept rich developed and poor less developed.	2

Question Number	Answer	Mark
9(b)(ii) **Type 1 item**	Award 1 mark to identification of each piece of valid and distinctive evidence from the changing pattern of global development e.g. HICs in recession (1); emerging economies (NICs now MICs) e.g. BRICS (1); economic growth in some LICs e.g. minerals in Africa (1); the EU and the rise of eastern European countries (1); continuing development of Middle East oil and gas-based economies e.g. UAE (1)… Where evidence is well developed and makes gap narrowing self-evident award 2nd mark in each case.	**4 (2+2)**

Question Number	Answer	Mark
9(b)(iii) **Type 1 item**	This item explores the idea that development is complex, has many strands i.e. numerous development indicators, and involves quality of life considerations. Award up to 2 marks for characterising the level of economic development of HICs e.g. high GDP per person; long life expectancy; good healthcare; high GDP p.p.; political freedom; tertiarisation … Reserve 1 mark for indicating where MICs have reached on development pathway e.g. low GDP p.p.; widespread poverty; .. Credit valid reasons for "time it will take" e.g. many years of infrastructure spending needed; remove government corruption; tax to redistribute from wealthy elites; spatial disparities within MIC	**4**

Question Number	Indicative content	
9(c) **Type 1 item**	Reading of Figure 9b indicates that population size can have quality of life consequences e.g. higher birth rates and more rapid population growth are associated with poverty, famine and disaster. The graph is associated with the Chinese governments' efforts since the 1970's to reduce the country's birth rate. Candidates may develop the likely data-stimulus consequences provided into their answer. The rationale for government policies to reduce population growth revolve around the need to avoid the quality of life consequences of poverty, unemployment and inadequate housing and physical infrastructure from overpopulation, and the desire to improve living standards that a more appropriate population size might help to facilitate. Some good answers might offer reasons based on their case study of either Chinese or Indian population policy. Accept some reference to large-scale immigration and labour market pressures. Credit Malthusion – type responses on resource pressures.	
Level	Mark	Descriptor
Level 1	1-2	Expect either a graph-based response recognising that the upward trend in total population has serious implications for development and living standards and/or some outline comments about jobs and poverty.
Level 2	3-4	Expect some explanation of the likely consequences of rapid population growth e.g. increasing poverty; mass unemployment; decreasing quality of life and standard of living … Evidence of clear reasoning limited either by range or depth of treatment.
Level 3	5-6	Expect genuine explanation of a range of likely socio-economic consequences facing countries with high or rapidly growing populations. Reasons might be expressed negatively i.e. eradicate poverty or positively i.e. aid future development. Credit illustration and exemplification, perhaps Chinese or Indian population policies case study.

Question Number	Indicative content	
9(d) **Type 1 item**	Candidates will need to clarify the nature of aid whether bilateral, multilateral, voluntary or emergency i.e. the transfer of money, goods and expertise to assist the development in LICs to improve their people's quality of life. Any evaluation of aid programmes needs to be in terms of this basic nature and purpose. Aid needs to be appropriate perhaps by using intermediate technology. The advantages to recipient countries include improving education and skill levels; increasing crop yields and food supply; encouraging small-scale industries; improved healthcare and water supplies. However, recipient countries do experience disadvantages/problems as receivers of aid; these include – aid-dependency; poor planning and distribution; inappropriate aid; tied aid; corruption Accept references to effects on donor e.g. good image; alternatives money could be spent on.. These advantages and disadvantages are to be explained with better candidates discussing them by evaluating their impacts. Examples of aid types and impact from a named aid agency, either UN (e.g. WHO, FAO) or NGO (e.g. Oxfam, Red Cross) should be offered, especially in better answers.	
Level	Mark	Descriptor
Level 1	1-3	Expect the nature of aid to be known by candidate and some advantages and/or disadvantages identified.
Level 2	4-6	Expect either a range of advantages and disadvantages covered superficially or an unbalanced coverage i.e. advantages or disadvantages well developed, perhaps using exemplification. Some attempt to discuss in terms of importance and effectiveness and offer case study material of the work of an aid agency.
Level 3	7-9	Expect a balanced explanation of a range of both developed advantages and developed disadvantages. A genuine discussion in which aid work/projects, perhaps those of a named aid agency are evaluated e.g. was beneficial in terms of purpose of aid; is a problem; advantages outweigh disadvantages… Aid agency work i.e. development projects should be referred to.

Ofqual

Llywodraeth Cynulliad Cymru
Welsh Assembly Government

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