

A-LEVEL GEOGRAPHY

GEOG3 Contemporary Geographical Issues
Mark scheme

2030
June 2014

Version/Stage: Final

Mark schemes are prepared by the Lead Assessment Writer and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation events which all associates participate in and is the scheme which was used by them in this examination. The standardisation process ensures that the mark scheme covers the students' responses to questions and that every associate understands and applies it in the same correct way. As preparation for standardisation each associate analyses a number of students' scripts: alternative answers not already covered by the mark scheme are discussed and legislated for. If, after the standardisation process, associates encounter unusual answers which have not been raised they are required to refer these to the Lead Assessment Writer.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of students' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

Further copies of this Mark Scheme are available from aqa.org.uk

GEOG3 General Guidance for GCE Geography Assistant Examiners

The mark scheme for this unit includes an overall assessment of quality of written communication. There are no discrete marks for the assessment of written communication but where questions are 'Level' marked, written communication will be assessed as one of the criteria within each level.

Level 1: Language is basic, descriptions and explanations are over simplified and lack clarity.

Level 2: Generally accurate use of language; descriptions and explanations can be easily followed, but are not clearly expressed throughout.

Level 3: Accurate and appropriate use of language; descriptions and explanations are expressed with clarity throughout.

Level 4: Accurate and mature use of language; descriptions and explanations are expressed coherently and confidently

Marking – the philosophy

Marking is positive and not negative.

Mark schemes – layout and style

The mark scheme for each question will have the following format:

- a) Notes for answers (nfa) – exemplars of the material that might be offered by candidates
- b) Mark scheme containing advice on the awarding of credit and levels indicators.

Point marking and levels marking

- a) Questions with a mark range of 1-4 marks will be point marked.
- b) Levels will be used for all questions with a tariff of 5 marks and over.
- c) Two levels only for questions with a tariff of 5 to 8 marks.
- d) Three levels to be used for questions of 9 to 15 marks.
- e) Four levels to be used for questions of 40 marks.

Levels Marking – General Criteria

Everyone involved in the levels marking process (examiners, teachers, students) should understand the criteria for moving from one level to the next – the 'triggers'. The following general criteria are designed to assist all involved in determining into which band the quality of response should be placed. It is anticipated that candidates' performances under the various elements will be broadly inter-related. Further development of these principles will be discussed during the standardisation process. In broad terms the levels will operate as follows:

Level 1: attempts the question to some extent (basic)

An answer at this level is likely to:

- display a basic understanding of the topic
- make one or two points without support of appropriate exemplification or application of principle
- give a basic list of characteristics, reasons and attitudes
- provide a basic account of a case study, or provide no case study evidence
- give a response to one command of a question where two (or more) commands are stated e.g. “describe and suggest reasons”
- demonstrate a simplistic style of writing perhaps lacking close relation to the terms of the question and unlikely to communicate complexity of subject matter
- lack organisation, relevance and specialist vocabulary
- demonstrate deficiencies in legibility, spelling, grammar and punctuation which detract from the clarity of meaning.

Level 2: answers the question (well/clearly)

An answer at this level is likely to:

- display a clear understanding of the topic
- make one or two points with support of appropriate exemplification and/or application of principle
- give a number of characteristics, reasons, attitudes
- provide clear use of case studies
- give responses to more than one command e.g. “describe and explain...”
- demonstrate a style of writing which matches the requirements of the question and acknowledges the potential complexity of the subject matter
- demonstrate relevance and coherence with appropriate use of specialist vocabulary
- demonstrate legibility of text, and qualities of spelling, grammar and punctuation which do not detract from the clarity of meaning.

Level 3: answers the question very well (detailed)

An answer at this level is likely to:

- display a detailed understanding of the topic
- make several points with support of appropriate exemplification and/or application of principle
- give a wide range of characteristics, reasons, attitudes
- provide detailed accounts of a range of case studies
- respond well to more than one command
- demonstrate evidence of discussion, evaluation, assessment and synthesis depending on the requirements of the assessment
- demonstrate a sophisticated style of writing incorporating measured and qualified explanation and comment as required by the question and reflecting awareness of the complexity of subject matter and incompleteness/ tentativeness of explanation
- demonstrate a clear sense of purpose so that the responses are seen to closely relate to the requirements of the question with confident use of specialist vocabulary
- demonstrate legibility of text, and qualities of spelling, grammar and punctuation which contribute to complete clarity of meaning.

Level 4: answers the question with depth, flair, creativity and insight

In addition to the requirements of Level 3, an answer at this level is likely to:

- provide strong evidence of thorough, detailed and accurate knowledge and critical understanding of concepts and principles and of specialist vocabulary.
- give explanations, arguments and assessments or evaluations that are direct, logical, perceptive, purposeful, and show both balance and flair.
- demonstrate a high level of insight, and an ability to identify, interpret and synthesise a wide range of material with creativity.
- demonstrate evidence of maturity in understanding the role of values, attitudes and decision-making processes.

Annotation of Scripts

It is most important that examiners mark clearly, according to the procedures set out below.

- All marking should be done in red (except online marking).
- The right hand margin should be used for marks only.
- The overall mark for a question must be ringed at the end of the answer.
- The total mark for the question must be transferred to the front of the script.
- Where an answer is marked using a levels response scheme, the examiner should annotate the scripts with 'L1', 'L2', 'L3' or 'L4' at the point where that level has been reached in the left hand margin. In addition, examiners may want to indicate strong material by annotating the script as 'Good Level...'. Further commentary may also be given at the end of the answer. The consequent mark should then appear in the right-hand column. Where an answer fails to achieve Level 1, zero marks should be given.

Other mechanics of marking

- All errors and contradictions should be underlined.
- Various codes may be used such as: 'rep' (repeated material), 'va' (vague), 'NAQ' (not answering question), 'seen', etc.
- Use a wavy line to indicate weak dubious material (avoiding crossing out).
- If the rubric is contravened, then all answers should be marked, but with the best answer being counted and the mark transferred to the front of the script. Then cross out the material which has been discounted.
- Unless indicated otherwise, always mark text before marking maps and diagrams. Do not give double credit for the same point in text and diagrams.

Section A

<p>01</p> <p>AO2 – 5 AO3 – 2</p>	<p>Notes for answers</p> <p>The Japanese landmass sits on two continental plates – the northern part of the country lies on the North American plate, while the south lies on the Eurasian plate. To the east are two oceanic plates – in the north is the Pacific plate and to the south the Philippine plate. The two oceanic plates are both moving in a generally westward direction. The zones at which the plates collide lie on the seabed to the east of Japan – subduction is taking place along these faults.</p> <p>The earthquake in Tohoku originated on the fault that marks the boundary between the Pacific plate to the east and the North American plate to the west. The epicentre lies to the east of Sendai, and the greatest impact (measured by MMI) took place on the north-east coast of Japan. The intensity declines fairly uniformly to the west and south west. The greatest intensity covers a narrow coastal area; the lowest intensities being to the south west and north. There is a strong relation to the proximity of the Pacific/North American margin; some could argue that the section of Japan on the Eurasian plate was unaffected.</p> <p>Mark scheme</p> <p>Level 1 Basic (1-4 marks) (mid-point 3) Simple statements arising from the data, with basic or general statements of the tectonic setting and/or relationships. Or only one element of the question is addressed.</p> <p>Level 2 Clear (5-7 marks) (mid-point 6) Some sophistication of description and statement of relationship. Clear interpretation and/or description/reasoning, together with evidence of geographical thinking.</p>	<p>(7 marks)</p>
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<p>02</p> <p>AO1 – 8</p>	<p>Notes for answers</p> <p>When two oceanic plates converge, one usually sinks (subducts) under the other and in the process a trench is formed e.g. the Marianas Trench marks where the fast-moving Pacific Plate converges against the slower moving Philippine Plate. The Challenger Deep, at the southern end of the Marianas Trench is the deepest part of the ocean at nearly 11000m.</p> <p>Trenches can also be produced at oceanic/continental convergence points, such as along the west coast of South America where the Nazca plate is subducting under the South American plate, forming the Peru-Chile trench.</p> <p>Subduction processes in plate convergence also result in the formation of volcanoes which over millions of years pile up lava on the ocean floor until a submarine volcano rises above sea level to form an island volcano. Such volcanoes are typically strung out in curved chains called island arcs. Magmas that form island arcs are produced by the partial melting of the descending plate and/or the overlying oceanic lithosphere. The descending plate also provides a source of stress as the two plates interact, leading to frequent, moderate to strong, earthquakes. Examples occur in the West Indies and the Pacific–Guam and the Marianas, and the Aleutian islands.</p> <p>No credit available for hotspots or island chains.</p> <p>Mark scheme</p> <p>Level 1 Basic (1-4 marks) (mid-point 3) Simple statements of characteristics/causes, lacking detail or sophistication of either features or processes. Consideration of one landform only.</p> <p>Level 2 Clear (5-8 marks) (mid-point 6) More detailed statements of characteristics and reasoning, possibly with some use of supportive material. Full mark answers show breadth of knowledge though there may be still some imbalance between landforms or description/explanation.</p>	<p>(8 marks)</p>
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<p>03 AO2 – 8 AO3 – 2</p>	<p>Notes for answers</p> <p>Early evidence (of continental drift) claimed by Wegener includes:</p> <ul style="list-style-type: none"> • the ‘fit’ of the coastlines of Africa and South America • evidence for a late-Carboniferous glaciation exists in deposits in India, South America and Antarctica. These deposits must have been formed together and subsequently moved • rock sequences in northern Scotland agree closely with those found in eastern Canada, indicating that they were laid down in the same position • fossil brachiopods found in some Indian limestones are comparable with similar fossils found in Australia • fossil remains of the reptile mesosaurus are found in both southern Africa and South America • the fossilised remains of a plant that existed when coal was being formed are found in both India and Antarctica. <p>In the second half of the twentieth century, more evidence came to light:</p> <ul style="list-style-type: none"> • the discovery of mid-oceanic ridges resulting from ocean floor mapping • palaeomagnetism - evidence of sea-floor spreading is gained from an examination of the polarity of the rocks that make up the ocean floor. Iron particles in lava are aligned with the Earth’s magnetic field. At regular intervals the polarity of the Earth reverses; this results in a series of magnetic stripes with the sea-floor rocks aligned alternately towards north and south poles. This striped pattern, which is mirrored exactly on either side of a mid-oceanic ridge, suggests that the ocean crust is slowly spreading away from the boundary. Also, the ocean crust gets older with distance from the mid-ocean ridge • the discovery of ocean trenches where large areas of ocean floor are pulled downwards and destroyed • investigation of the causes of earthquakes has enhanced understanding <p>Mark scheme</p> <p>Level 1 Basic (1-4 marks) (mid-point 3) Simple statements of evidence such as statements of ‘jigsaw fit’, mesosaurus, etc. Limited depth of understanding. No attempt at discussion.</p> <p>Level 2 Clear (5-8 marks) (mid-point 6) More detailed statements of evidence – some development of how they support plate tectonics. Elements of discussion.</p> <p>Level 3 Detailed (9-10 marks) (mid-point 9) A fully developed answer, with detail of a range of pieces of evidence (N.B. approaches may include breadth and/or depth – both are valid). Clear sense of discussion.</p>	<p>(10 marks)</p>
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<p>04</p> <p>AO2 – 5 AO3 – 2</p>	<p>Notes for answers</p> <p>Figure 2 shows annual ACE for the North Atlantic basin since 1940.</p> <p>Description:</p> <ul style="list-style-type: none"> • ACE varies from a high of almost 250 in 2005 to a low of around 15 in 1983 • from the late 1940s to the late 1960s, ACE was frequently high but during the period 1970 to the late 1990s it was lower • there is also evidence of a decade's long cycle between periods of above and below average accumulated cyclone energy. • from 1985 – 2005 ACE appears to be increasing but even that pattern is erratic. <p>Comments could include:</p> <ul style="list-style-type: none"> • the great variability over the time period. • conversely, global warming enthusiasts might see evidence of unusually high activity since 2000, especially if they use the running average. • there is some evidence of a cyclical (regular ups and downs) trend, but is the time period long enough to substantiate this? • other valid comment may offer reasons for variability. <p>Mark scheme</p> <p>Level 1 Basic (1-4 marks) (mid-point 3) Simple statements of description – e.g. highs/lows, and ups/downs without overall pattern. If no description given, then credit comment within this level.</p> <p>Level 2 Clear (5-7 marks) (mid-point 6) Good description of overall trends which may use data to support; manipulate data; show awareness of anomalies. Appropriate comment.</p>	<p>(7 marks)</p>
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<p>05</p> <p>AO1 – 8</p>	<p>Notes for answers</p> <p>The impacts of tropical storms include:</p> <ul style="list-style-type: none"> • winds exceeding 150km per hour which cause structural damage and the collapse of buildings, damage to bridges and road infrastructure and loss of agricultural land • heavy rainfall, often over 100mm per day, which causes severe flooding and sometimes landslides; high relief may exaggerate rainfall totals causing them to be far higher in amounts • storm surges result from the piling up of water by wind-driven waves and the ocean rising up under reduced atmospheric pressure. Flooding may extend inland if the area near the coast is flat and unprotected. <p>Mark scheme</p> <p>Level 1 Basic (1-4 marks) (mid-point 3) Simple or generalised statements of impacts, lacking detail or sophistication.</p> <p>Level 2 Clear (5-8 marks) (mid-point 6) More detailed and specific statements of impacts, with some use of supportive material. A clear sense of place is generated. Full-mark answers will examine a range of impacts.</p>	<p>(8 marks)</p>
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<p>06</p> <p>AO2 – 8 AO3 – 2</p>	<p>Notes for answers</p> <p>E.g. storm events resulting in the Cockermouth floods (November 2009)</p> <p><u>Short-term:</u> Emergency rescue and emergency relief centres. Local services had to be relocated e.g. the GP surgery. Emergency footbridges were constructed. Temporary communication strategies were put in place – e.g. rail station and extra bus services.</p> <p><u>Longer-term:</u> 12 months after the floods Cumbria had made a remarkable recovery. The county's damaged infrastructure had been largely restored. 17 of the 20 bridges closed by the floods were open to traffic. A temporary bridge has replaced the Northside Bridge at Workington with a permanent bridge planned for 2012. Workington's other main river crossing – the Calva Bridge – reopened in spring 2011. Footbridges at Cockermouth were repaired, and a new footbridge completed at Northside.</p> <p>The EA completed flood defence works at Keswick and Cockermouth. Farmers received government financial assistance to remove sand, gravel and other debris left by the floods. Private contractors also removed thousands of tonnes of gravel for use as aggregate in construction.</p> <p>The government's Flood Recovery Grant Scheme paid out over £1 million to local businesses. By January 2010, 78 of Cockermouth's 225 businesses were trading from their original premises and a year after the floods, only 30 remained closed. In September 2010, the Derwent House GP surgery re-opened after moving to temporary accommodation.</p> <p>Fears that the floods would bring about a serious downturn in tourism proved unfounded. Although initially bookings were down tourism quickly bounced back. In 2010, occupancy levels in local hotels and guest houses were near to normal.</p> <p>Considerable progress has also been made in repairing flood-damaged homes. The Cumbria Recovery Fund provided significant financial help (£774 per household) to hundreds of homeowners faced with costly repairs to flood-damaged properties. By November 2010, 85 - 90% of residents from Cockermouth's 691 flood-damaged homes had returned permanently.</p> <p>Other examples given may have a 'strong wind' focus.</p>	<p>(10 marks)</p>
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	<p>Mark scheme</p> <p>Level 1 Basic (1-4 marks) (mid-point 3) Simple statements of responses which drift into impacts which could apply to any storm event. No specific detail provided. No attempt at discussion. Predominately descriptive of the event.</p> <p>Level 2 Clear (5-8 marks) (mid-point 6) Specific statements of responses which can be clearly attributed to named areas access this level. Elements of discussion.</p> <p>Level 3 Detailed (9-10 marks) (mid-point 9) A fully developed answer, with good discussion and elaboration of responses. May categorise or assess effectiveness.</p>	
<p>07</p> <p>AO2 – 5</p> <p>AO3 – 2</p>	<p>Notes for answers</p> <p>Roundhay Park is found to the north-east of the city of Leeds. It is an area of parkland, lakes, woodland and gardens, created into a park in Victorian times. It contains a mixture of land-uses and activities directed towards leisure e.g:</p> <ul style="list-style-type: none"> • Woodland areas throughout for secluded walks • Areas of open space – for games, and quiet relaxing – some of which are specialised e.g. the golf course • Variety of more active pursuits – bowling green, tennis, skateboarding <p>Consideration of physical management of the ecological systems and potential effects.</p> <p>Comment may take a variety of forms.</p> <p>Mark scheme</p> <p>Level 1 Basic (1-4 marks) (mid-point 3) Simple statements of description. Limited or basic statements of comment on the activities. If no description given, then credit one valid comment within this level.</p> <p>Level 2 Clear (5-7 marks) (mid-point 6) Comments which go beyond the information in the figure – evidence of intellectual processing. May include some attempt to categorise.</p>	<p>(7 marks)</p>

<p>08</p> <p>AO1 – 8</p>	<p>Notes for answers</p> <p>An example of an ecological conservation area: Chilworth, Southampton</p> <p>This conservation area is managed by Chilworth Conservation Limited (CCL). The purpose of this newly formed company is to retain the educational and recreational functions of the site with minimal disturbance to its unique habitats and rare species.</p> <p>Chilworth is on the northern fringe of Southampton close to the M3/M27 junction. It is a small part of what was once a country estate. The area consists of three distinct sections.</p> <ul style="list-style-type: none"> • Some may consider a large scale conservation area such as a national park. This is valid provided it is supported with appropriate detail. • Buxey Wood is ancient woodland with a rich biodiversity. There are distinctive areas of birch-oak wood, hazel-oak wood and alder wood. They each have their own native plants such as bluebells, wood anemone, etc. There are some outstanding mature specimens of beech and yew. Three species of bats can be found here. • The ecology meadow was once grazed by cattle but is now mown each year to maintain low fertility. The meadow has a large, recently restored pond in the middle that will provide a habitat for amphibians. • The Arboretum, dating from 1900, contains trees and shrubs from around the world. It also has an orchard and fragments of heathland. The orchard used to be grazed by sheep in late summer, but now it is mown after the orchids have finished flowering. <p>Mark scheme</p> <p>Level 1 Basic (1-4 marks) (mid-point 3) Statements of general features of EC areas, with no sense of location to the named area. Basic or limited statements of the named area only. No depth of understanding.</p> <p>Level 2 Clear (5-8 marks) (mid-point 6) More detailed statements of the characteristics of the chosen EC area. There is a clear sense of place, and a sense of individuality. Depth is apparent.</p>	<p>(8 marks)</p>
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<p>09 AO2 – 8 AO3 – 2</p>	<p>Notes for answers</p> <p>The planned introduction of new species and the impact of these on ecosystems</p> <p>Urban areas contain a wide variety of planned habitats from urban forests (e.g. the Mersey Forest) to playing fields; from formal municipal flowerbeds and gardens to decorative plants alongside roadsides and roundabouts. The influence of human activity can make these habitats subject to change or can conserve them for the future.</p> <p>Students may have studied a breadth of such activities, or one in depth. Both approaches are acceptable.</p> <p>The unplanned introduction of new species and the impact of this on ecosystems</p> <p>A good example of this is the Japanese knotweed. This spreads easily via rhizomes and cut stems or crowns. It is now listed under the Wildlife and Countryside Act 1981 as a plant that is not to be planted or otherwise introduced into the wild.</p> <p>Specific problems caused by Japanese knotweed are:</p> <ul style="list-style-type: none"> • damage to paving and tarmac areas • reduction of biodiversity by out-shading native vegetation • restriction of access to river banks • increased flood risk by damaging flood defence structures and dead stems blocking streams • increased erosion when the bare ground is exposed in the winter • accumulation of litter in well-established stands • aesthetically unsightly • expensive to treat (£1 per m² for a spraying regime over three years not including re-landscaping). <p>Note: fauna allowed</p> <p>Mark scheme</p> <p>Level 1 Basic (1-4 marks) (mid-point 3) Simple statements of description/impact of planned and unplanned introduction of new species. No specific detail or elaboration is provided; or discussion of one aspect only.</p> <p>Level 2 Clear (5-8 marks) (mid-point 6) More detailed specific statements of description/impact of planned and unplanned introduction of new species; may be still an imbalance of aspects. Both elements of the question covered.</p> <p>Level 3 Detailed (9-10 marks) (mid-point 9) A fully developed answer, with good discussion of a range of impacts on ecosystems, with both elements reaching a Level 2 response. The answer demonstrates both breadth and depth of understanding.</p>	<p>(10 marks)</p>
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Section B

<p>10</p> <p>AO2 – 5 AO3 – 2</p>	<p>Notes for answers</p> <p>Comments on the Lower Marsh Regeneration Project could include:</p> <ul style="list-style-type: none"> • The partners involved include local non-governmental organisations, e.g. the Waterloo Community Development Group, as well as local government (Lambeth Council) and national organisations (Network Rail) – therefore, a wide range. • Some of the improvements are aimed at small businesses (economic) – the market area; some at residents (seating areas): hence a variety of aims. • There are also environmental improvements, e.g. the Cubana Gateway. • Social aspects include better street lighting and safety issues on the main road through the area. • Some may suggest that an area so close to a major railway station (Waterloo) may be run-down (as is often the case) and, therefore, in need of regeneration. <p>Mark scheme</p> <p>Level 1 Basic (1-4 marks) (mid-point 3) Simple description or lifting of material from the figure with no basis of comment.</p> <p>Level 2 Clear (5-7 marks) (mid-point 6) Comments that go beyond the information in the figure, i.e. there is some intellectual processing on what lies behind, or can be extrapolated from, the information given, or some attempt to categorise.</p>	<p>(7 marks)</p>
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<p>11</p> <p>AO1 – 8</p>	<p>Notes for answers</p> <p>Exemplar case study: Trafford Centre, Manchester</p> <ul style="list-style-type: none"> • Highly accessible – located adjacent to junctions 9/10 of the M60 with convenient access to the M602 and an excellent dual carriageway link to the city centre. • 10 000 free parking spaces. Car users entering the site encounter a vehicle messaging system that communicates messages about car park availability on site. • The X50 service is a new express bus link to Manchester Piccadilly, offering journey times of just 25 minutes. • Latest additions include Barton Square, a unique home retailing section including Next Home and LEGOLAND. • The catchment area is larger and more populous than any other regional shopping centre in the UK, comprises 5.3 million people within a 45-minute drive, with a total potential retail expenditure of £13 billion. <p>The centre has: 230 stores, including six nationally renowned anchor stores, such as John Lewis and Selfridges; a 20 screen cinema; Laser Quest; an 18 lane bowling alley; Europe’s largest food court with seating for 1600, and 60 restaurants, cafes and bars; three Premier Inns ring the area, making it an attractive option for mini-breaks. The Trafford Centre’s interior and exterior architecture is mock Rococo/late Baroque in design, and decorated primarily in shades of white, pink and gold, with ivory, jade and caramel-coloured marble throughout.</p> <p>Mark scheme</p> <p>Level 1 Basic (1-4 marks) (mid-point 3) Statements of general features of OOTC areas, with no sense of location to the named area. Basic or limited statements of the named area only. Lacking detail in relation to characteristics.</p> <p>Level 2 Clear (5-8 marks) (mid-point 6) More detailed statements of the characteristics of the chosen OOTC area. There is a clear sense of place, and a sense of individuality. Depth is apparent.</p>	<p>(8 marks)</p>
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<p>12</p> <p>AO2 – 8 AO3 – 2</p>	<p>Notes for answers</p> <p>Waste management (thematic approach)</p> <p><u>Reduction:</u> Businesses can be encouraged to reduce the amount of packaging used and to encourage consumers not to use plastic bags. Tesco's Bag for Life (or Emma Bridgewater's 'Take an Old Bag Shopping') scheme is one example. Designing products that use less material to achieve the same purpose would also reduce waste – for example, the 'lightweighting' of beverage cans.</p> <p><u>Re-use:</u> There is some re-use of milk bottles, glass drinks bottles and even jam jars, but again, the 'bags for life' schemes are the most successful.</p> <p><u>Recycling:</u> Although there are costs involved here (in the start-up of schemes, transport of materials and the energy needed for re-processing), this is a practical alternative for paper, glass, cans, plastics and clothes. On a small-scale, composting can also be included under recycling – waste materials that are organic in nature, such as paper products, plant material and food scraps can be recycled as mulch or compost for agricultural or landscaping purposes.</p> <p><u>Energy Recovery:</u></p> <ul style="list-style-type: none"> • Incineration: modern incinerators can convert waste material into energy generating electricity or powering neighbourhood heating schemes, so this could be regarded as sustainable. • Composting: on a large scale, anaerobic digestion can be accomplished in enclosed reactors to produce biogas to provide an energy supply. <p><u>Disposal:</u> In the UK, disposal equates with landfill. Waste is dumped in old quarries or hollows where it is unsightly and a threat to groundwater supplies and river quality as toxic chemicals are leached out. Decomposing waste also emits methane, the most toxic of the greenhouse gases and potentially explosive.</p>	<p>(10 marks)</p>
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	<p>Transport management (Case study approach)</p> <p>Curitiba is said to be the envy of the world following the work of the IPPUC, Curitiba's urban planning and research institute. The IPPUC architects and engineers perceive the necessity for an integrated transport system and believe that this is far easier to achieve through this single organisation than if the city had a variety of independent firms and contractors. Curitiba has five structural arteries that run east to west and development along these has been encouraged, diverting traffic from the city centre, allowing it to become a pedestrian friendly area. The bus service has been designed to function like a subway system, transporting large numbers of people along numerous routes and has proved more reliable and easier to use than a private car. The old, noisy, and polluting buses have been replaced with cleaner and more efficient versions. These are locally assembled by Volvo, reducing transport costs for the city that would have been vastly inflated had the buses been imported. Passengers board and alight via a special tube on Curitiba's central transit routes so that boarding is not delayed by fare collection. The glass tube stations provide citizens with a clean, protected area in which to wait for the bus. The platform of the tube station is parallel to the platforms of the buses, so there are no awkward steps to climb and the bus is 'handicap accessible'. The alternative might have been excavation for a subway, but this can take years if not decades and the money that Curitiba has saved has been allocated to other social causes. For example, in 1976, the city adopted a Slum Relocation Plan to assist low-income families, building low-income housing near the centre of the city. This has created socially integrated neighbourhoods that provide public health, education, day care centres, and recreational services. By meeting the needs of the poorest, the city has also saved money and energy because low-income neighbourhoods, with all the necessary amenities, reduce the need for travel.</p> <p>Mark scheme</p> <p>Level 1 Basic (1-4 marks) (mid-point 3) Simple descriptive statements. Limited detail provided and no attempt to assess success.</p> <p>Level 2 Clear (5-8 marks) (mid-point 6) Specific descriptive statements some of which are detailed or can be clearly attributed to a named example. Assessment may be basic. Max L2 if only one strategy.</p> <p>Level 3 Detailed (9-10 marks) (mid-point 9) A fully developed answer, with good elaboration and clear depth of detail of the chosen strategies and assessment is detailed.</p>	
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<p>13</p> <p>AO2 – 5 AO3 – 2</p>	<p>Notes for answers</p> <p>The two largest trading partners for India are China and the USA. For the former it has a large trade deficit, whereas for the latter, it has a large trade surplus. These two nations are the other two leading global economies, and hence, trade between the ‘top three’ is going to be great. India also has significant trade with nearby Asian countries – Singapore, Hong Kong (regarded as a separate entity in trade terms) and Malaysia. India has a huge trade deficit with Saudi Arabia – import of oil? – yet a surplus with the UAE, also an oil producing nation. India only has significant trade with two European countries – UK and Switzerland. The former may be due to colonial links. There is a large trade deficit with Australia – due to the import of raw materials, e.g. iron ore?</p> <p>Mark scheme</p> <p>Level 1 Basic (1-4 marks) (mid-point 3) Simple statements of description – e.g. highs/lows, and ins/outs. If no description given, then credit one valid comment within this level.</p> <p>Level 2 Clear (5-7 marks) (mid-point 6) Clear description with appropriate comment. May use/manipulate data.</p>	<p>(7 marks)</p>
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<p>14</p> <p>AO1 – 8</p>	<p>Notes for answers</p> <p>China is now the world's second largest economy after the United States in terms of GDP (\$4.99 trillion in 2009) and the world's fastest-growing major economy, with an average growth rate of 10% for the past 30 years. China is also the second largest trading nation in the world and the largest exporter and second largest importer of goods. How has this been achieved?</p> <ul style="list-style-type: none"> • 1978 was a pivotal year, marked by a change in government attitude and a decision to move from a centrally-planned to a more market orientated economy under the leadership of Deng Xiaoping. This opened China to TNCs wishing to use the country as an export platform and has made it a major competitor to other Asian NICs such as South Korea. • Initially, FDI was encouraged in several small 'special economic zones' (SEZs) along the coast, but the country lacked the legal infrastructure and knowledge of international practices to make this prospect sufficiently attractive. • However, in the early 1980s steps were taken to expand the number of areas that could accept FDI with a minimum of red tape, accompanied by significant improvements in infrastructure. 14 coastal cities (including Shanghai and Shenzhen), and three coastal regions were designated 'open areas' for foreign investment, providing tax and other advantages. It became the 'factory of the world'. • A further significant stimulus to growth was provided by China's entry to the WTO in 2001 allowing better access to global markets. China has subsequently developed a huge current account surplus with which it can invest both within and elsewhere. • Other preconditions for growth include cheap labour, stable political system, increasingly skilled and educated workforce etc. <p>Mark scheme</p> <p>Level 1 Basic (1-4 marks) (mid-point 3) Generalised statements of description and reasons which are either basic, simplistic or lacking in a sense of place for China.</p> <p>Level 2 Clear (5-8 marks) (mid-point 6) Detailed, specific and/or sophisticated description/reasons that clearly apply to China. As more such statements are made, the answer moves up the level.</p>	<p>(8 marks)</p>
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<p>15</p> <p>AO2 – 8 AO3 – 2</p>	<p>Notes for answers</p> <p>There are a variety of ways of approaching this question:</p> <p>‘New markets’ is open to interpretation by candidates. Some will consider the emerging markets and explore how these new markets have become a source of labour and also a location for sales of manufactured goods. Positive impacts are felt in both the host country and the trading partner.</p> <p>New technologies have facilitated the globalisation of manufacturing services. Expect to see reference to transport and communication technologies.</p> <p>Other responses may explain how technological advancements have meant that ‘new markets’ have opened up for countries great distances apart, trading in goods such as perishable foodstuffs. This is valid.</p> <p>Whatever the approach there should be clear emphasis on how the new markets and the technologies have aided economic growth and financial gain for the countries involved and/or global economy. Weaker responses may be implicit in this regard.</p> <p>Mark scheme</p> <p>Level 1 Basic (1-4 marks) (mid-point 3) Simple statements of impact, which are generalised and non-specific, e.g. new markets create jobs, make cars, have call-centres, have undercut western countries, etc.</p> <p>Level 2 Clear (5-8 marks) (mid-point 6) More detailed statements of impact with some recognition of the importance of the role of at least one new market or technological advancement. The answer comments on global impact. Evidence of discussion is limited. Max L2 for consideration of only one aspect.</p> <p>Level 3 Detailed (9-10 marks) (mid-point 9) A fully-developed answer, with good discussion and clear depth of understanding. Recognition of the complexity of global impact/s. Recognition of the changing importance and influence of new markets/technologies on global economic growth.</p>	<p>(10 marks)</p>
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<p>16</p> <p>AO2 – 5 AO3 – 2</p>	<p>Notes for answers</p> <p>Background:</p> <p>The photograph was taken in the southern Sudan – the area known as Darfur.</p> <p>The photograph shows a rural village surrounded by trees and a barren landscape. The village appears to consist of straw-based buildings arranged in a series of compounds. One of these compounds has been set on fire. This will have destroyed homes and also possibly storage areas – mostly food. The flames and smoke are being blown to the right by winds, and therefore, there is the risk that other homes could become alight. There are no people in sight – it looks deserted – people seem to have fled – a sign of a lack of security. It is reasonable to suggest that the land beyond the village limits will no longer be tended, nor any animals in the area looked after. It seems as if the area has been abandoned. It is possible that the compound on fire was selected rather than the whole community destroyed – was it the home of the leader of the settlement, or was it to act as a deterrent to the rest of the community? Reasonable and appropriate comment regarding links to conflict should be accepted.</p> <p>Mark scheme</p> <p>Level 1 Basic (1-4 marks) (mid-point 3) Simple statements of description. Limited or basic statements of comment on the photograph. If no description given, then credit comment within this level.</p> <p>Level 2 Clear (5-7 marks) (mid-point 6) More detailed comment with appropriate description which may be more basic at the lower end.</p>	<p>(7 marks)</p>
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<p>17</p> <p>AO1 – 8</p>	<p>Notes for answers</p> <p>Origins of conflict:</p> <p>e.g.</p> <p>Identity – this refers to a sense of belonging to a particular group or geographical area, characterised by its ethnicity, language and/or religion. People can be fiercely protective of their identity and this itself can provoke conflict. Within this category are several sub-categories:</p> <p>Nationalism – loyalty and devotion to a nation.</p> <p>Regionalism – loyalty to a distinct region.</p> <p>Localism – affection for a particular place. This again may generate conflict, usually on a smaller scale such as the Lune Valley residents who are objecting to proposals to build one of the North West’s tallest wind farms two miles outside Kirkby Lonsdale. Such objections are sometimes seen as ‘nimbyism’ (not in my back yard syndrome).</p> <p>Ethnicity – this is the grouping of people according to their ethnic origins or characteristics and is therefore closely related to identity. An example of a conflict based on ethnicity is the Russian – Chechen conflict.</p> <p>Culture – again, closely related to identity, this refers to the customary beliefs, social norms and traits of a racial, religious or social group. Such cultural variations can certainly enrich an area, but they can also give rise to conflict. The Basque conflict is based on both ethnic and strong cultural differences.</p> <p>Resources – vital and/or economically valuable resources such as water and oil could trigger conflict. There are water issues in the West Bank between Israelis and Palestinians. Oil exploration may cause disagreement in the areas around the Falkland Islands.</p> <p>Territory – this is a geographical area belonging to, or under the jurisdiction of, a governmental authority. Conflict can occur when there is dispute about who has authority over a particular area as in the case of the Western Sahara which has been on the United Nations list of non-self-governing territories since 1963. Morocco and the Sahrawi Arab Democratic Republic (SADR) dispute control of the territory.</p> <p>Ideology – An ideology is a set of ideas that constitute an individual’s or a group’s goals, expectations and related actions. For example, there is a huge difference between the Western democratic style of government, and the single-party state of North Korea which conforms to the Juche ideology of self-reliance, developed by the country’s former President, Kim Il-Sung.</p>	<p>(10 marks)</p>
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	<p>Mark scheme</p> <p>Level 1 Basic (1-4 marks) (mid-point 3) Generalised statements of description/explanation which are either simplistic or lacking in a sense of place or exemplification; or one developed example.</p> <p>Level 2 Clear (5-8 marks) (mid-point 6) More detailed, specific and/or sophisticated statements of description/explanation that clearly apply to the origin of conflict. A greater range of ideas and themes will move the answer up the level, as will recognition of the complexity of the topic.</p>	
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<p>18</p> <p>AO2 – 8 AO3 – 2</p>	<p>Notes for answers</p> <p>Expression of Conflict:</p> <p>Non-violent: this type of conflict is generally expressed through debate or perhaps some form of protest such as a march or a petition. Non-violent protests can be very successful such as the Orange Revolution in Ukraine between November 2004 and January 2005. On the other hand, the Tiananmen Square protests of 1989, started peacefully led mainly by students and intellectuals, were ultimately quelled by the Chinese military leaving more than 2500 dead and attracting international criticism, a very violent outcome.</p> <p>Political activity: the UK has a wide range of political parties (e.g. Labour, Conservative), including national parties in Scotland, Wales and Northern Ireland. These ‘parties’ have their own policies and ideologies and compete for the support of the public to win power. Some, such as the Scottish National party and the Welsh Nationalists, campaign to establish their own independent government.</p> <p>Terrorism: terrorism has been described as both a crime and a holy duty – depending on one’s point of view. Certainly, it has proved an effective tactic for the weaker side in some conflicts offering a frightening degree of coercive power at a fraction of the cost of military force. Due to the secretive nature and small size of terrorist organizations, they often offer opponents no clear organisation to defend against or to deter. Suicide attacks are an increasing form of terrorism.</p> <p>Insurrection: those engaged in insurrection are called insurgents and typically use guerrilla tactics against the armed forces of an established regime.</p> <p>War: war is a phenomenon of organised violent conflict between or sometimes within nations (as in the case of civil war) and is characterised by extreme aggression, serious disruption to societies and economies and high rates of mortality. The ‘Arab Spring’ of 2011 illustrated many of the above ‘expressions of conflict’ varying from country to country within the region. Hence, this example illustrates the complexity of the topic.</p>	<p>(10 marks)</p>
	<p>Mark scheme</p> <p>Level 1 Basic (1-4 marks) (mid-point 3) Simple statements of expression, which are generalised and non-specific e.g. there can be war, political argument, terrorism etc. without any sense of development.</p> <p>Level 2 Clear (5-8 marks) (mid-point 6) More detailed statements of the expression of conflict with some clear</p>	

	<p>recognition of the variety. The answer makes sophisticated comment at the top end. Evidence of discussion.</p> <p>Level 3 Detailed (9-10 marks) (mid-point 9) A fully developed answer, with good discussion and depth of understanding. Recognition of the complexity of the topic which might include the changing nature of expression of conflict over time.</p>	
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Section C - Mark scheme for the essay questions

Assessment criteria	Level 1 1-10 (midpoint 6)	Level 2 11-20 (midpoint 16)	Level 3 21-30 (midpoint 26)	Level 4 31-40 (midpoint 36)
Knowledge of content, ideas and concepts	Basic grasp of concepts and ideas; points lack development or depth.	The answer is relevant and accurate. Reasonable knowledge. Imbalanced theories	Sound and frequent evidence of thorough, detailed and accurate knowledge	Strong evidence of thorough, detailed and accurate knowledge
Critical understanding of the above	Incomplete, basic.	Reasonable critical understanding of concepts and principles with some use of specialist vocabulary.	Sound and frequent evidence of critical understanding of concepts and principles, and of specialist vocabulary.	Strong evidence of critical understanding of concepts and principles and of specialist vocabulary.
Use of examples/case studies to support argument	Superficial	Examples show imbalances and/or lack detail and depth	Examples are developed, balanced and support the argument	Examples are well developed and integrated.
Maps/Diagrams (where used)	Ineffective	Some relevance	Effective	Fully integrated
Evidence of synopticity:	No evidence	Limited.	Strong	Full
Connections between different aspects of the subject		Some ability to identify, interpret and synthesise some of the material.	Some ability to identify, interpret and synthesise a range of material.	There is a high level of insight, and an ability to identify, interpret and synthesise a wide range of material with creativity.
'Thinking like a geographer'		Limited ability to understand the roles of values, attitudes and decision-making processes.	Some ability to understand the roles of values, attitudes and decision-making processes.	Evidence of maturity in understanding the role of values, attitudes and decision-making processes.
Quality of argument – the degree to which an argument is constructed, developed and concluded	Language is basic; arguments are partial, over simplified and lacking clarity. Little or no sense of focus of task.	Arguments are not fully developed nor expressed clearly, and the organisation of ideas is simple and shows imbalances. Some sense of focus of task.	Explanations, arguments and assessments or evaluations are accurate, direct, logical, purposeful, expressed with clarity and generally balanced. Clear sense of focus of task.	Explanations, arguments and assessments or evaluations are direct, focused, logical, perceptive, mature, purposeful, and are expressed coherently and confidently, and show both balance and flair.

<p>19</p> <p>AO1 – 14 AO2 – 16 AO3 – 10</p>	<p>Notes for answers</p> <p>Appropriate content for a response to this question might include:</p> <ul style="list-style-type: none"> • the concept of an earthquake hazard • the distinction between physical and human factors, which include technology. • an understanding of human factors: population density; urbanisation of the population; poverty; earthquake mitigation involving technology, education of population in how to respond to earthquakes, disaster prediction and planning • an understanding of physical factors: earthquake magnitude; local geology and liquefaction; relief and its effect on landslides and barrier lakes; proximity to lowland coasts exposed to tsunamis • variations in the capacity to adapt to manage impacts • different impacts on different groups within the same population • use of case study material/exemplars. <p>Synopticity emerges with the following:</p> <ul style="list-style-type: none"> • a critical understanding of the processes that produce earthquake hazard events and the context in which they are produced • understanding the context of varying timescales (frequency, etc.) • An understanding of the impact of earthquake events • A critical understanding of the role of technologies in prediction and prevention • An understanding of the vulnerability and resilience of different populations to these hazards • A critical understanding of the vulnerability of different regions, particularly an understanding of the differences between richer and poorer areas and the contrast between urban, rural and remote environments. <p>The question requires a discursive approach and the response should come to an overall view. Any conclusion can be credited as long as it is measured and reasonable, and related to the content of the answer given.</p>	<p>(40 marks)</p>
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<p>20</p> <p>AO1 – 14 AO2 – 16 AO3 – 10</p>	<p>Notes for answers</p> <p>Appropriate content for a response to this answer might include:</p> <ul style="list-style-type: none"> • knowledge and understanding of the role of air masses on the climate of the British Isles • knowledge understanding of the role of depressions and anticyclones on the climate of the British Isles • detailed knowledge of the climate characteristics (temperature, precipitation and wind) of the British Isles • understanding of other factors that may influence the climate of the British Isles, such as altitude and ocean currents. <p>Synopticity emerges with the following:</p> <ul style="list-style-type: none"> • a critical understanding of the relative importance of air masses. • use of detailed case study support (breadth/depth), possibly from differing areas within the British Isles, which may illustrate the role of other factors (as given above) or otherwise • understanding that urban areas can have an influence on climate in the British Isles <p>This question requires a discursive approach together with an overall judgement to be expressed. Any conclusion is creditable as long as it is reasonable and related to the preceding content and argument. Case studies may not be a strong feature and this should not hold candidates back.</p>	<p>(40 marks)</p>
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<p>21</p> <p>AO1 – 14 AO2 – 16 AO3 – 10</p>	<p>Notes for answers</p> <p>Appropriate content for a response to this answer might include:</p> <ul style="list-style-type: none"> • natural processes causing succession towards climatic climax of a range of plant communities found in the British Isles, including at least one of lithosere, psammosere, hydrosere or halosere • characteristics of the climatic climax community, the temperate deciduous woodland biome, and the extent to which this has been modified. There might be some understanding of regional differences in the biome, e.g. the types of location where ash is the dominant species rather than oak • human factors affecting plant successions: secondary succession and plagioclimax • changes to ecosystems resulting from urbanisation, colonisation of wasteland; the development of distinctive ecologies along routeways and in the urban-rural fringe • the impact of conservation in a variety of settings: urban and rural, and natural environments, such as sand dunes. <p>Synopticity emerges with the following:</p> <ul style="list-style-type: none"> • a critical understanding of both physical and human factors in relation to changes in plant communities over time, either short or long-term • an awareness of the inter-relationships between physical and human processes • the use of detailed case study support (breadth/depth) from contrasting ecosystems within the British Isles, human influenced and natural • evaluative comments relating to the relative importance of physical and human factors over the short and long term. <p>This question requires a discursive approach together with an overall judgement to be expressed. Any conclusion is creditable as long as it is reasonable and related to the preceding content and argument.</p>	<p>(40 marks)</p>
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<p>22</p> <p>AO1 – 14 AO2 – 16 AO3 – 10</p>	<p>Notes for answers</p> <p>Appropriate content for a response to this question should cover the urban problems themselves, and their solutions with an emphasis on contrasts between the developed and developing world. Common urban problems include the following areas:</p> <ul style="list-style-type: none"> • social - poverty, housing issues, social stress, crime, equality issues • economic - unemployment, under-employment and associated poverty • political - distribution of income and equality issues, conflict • environmental - atmospheric pollution, watercourse and groundwater pollution. <p>The distribution of these problems and their impact should be a feature of any response. The relative importance of each could be considered in terms of the impact on the lives of people, on different sections of the community and on the effective functioning of cities.</p> <p>An obvious contrast is between cities in the developed and the developing world, but contrasts can also be made within one of these, between 'effective' cities (e.g. Seattle) and 'ineffective' cities (e.g. Detroit). Similar contrasts exist in, for example Brazil – Sao Paulo v Curitiba.</p> <p>Solutions could be set out in terms of:</p> <ul style="list-style-type: none"> • governmental economic intervention – redevelopment, regeneration, planning controls • governmental social programmes and policies – e.g. partnerships • environmental planning and pollution controls, including curbing the use of motor vehicles, public transport policies, etc. • the role of voluntary action, including urban self-help schemes. <p>Synopticity emerges with the following:</p> <ul style="list-style-type: none"> • evidence in the breadth/depth of case-study material • detailed critical understanding and comparison of at least one urban problem • detailed critical understanding and comparison of at least one solution • awareness of the interrelationships of the various aspects covered in the question • awareness of the role of decision-makers (at all levels) in recognising and dealing with urban problems. 	<p>(40 marks)</p>
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	<p>The question should be fully addressed and the synoptic element is achieved when there is a more critical view of problems, coupled with some discussion of solutions, so that the two strands of the question are covered explicitly. The question requires a discussion and the response should come to a view. Any reasonable conclusion can be credited as long as it is measured and reasonable, and related to the preceding content.</p>	
<p>23</p> <p>AO1 – 14 AO2 – 16 AO3 – 10</p>	<p>Notes for answers</p> <p>Appropriate content for a response to this question might include:</p> <ul style="list-style-type: none"> • definition of the terms TNC and globalisation • recognition of the variation in the nature and growth of TNCs over time – the chronology of their growth • knowledge and understanding of the range of impacts of TNCs on the global economy • knowledge and understanding of the factors causing globalisation, possibly recognising the roles of NICs in this process • knowledge and understanding of the consequences of globalisation, and the role that TNCs play in these consequences. <p>Synopticity is therefore achieved by:</p> <ul style="list-style-type: none"> • evidence in the breadth/depth of case-study material • critical understanding of characteristics, factors, and impacts (e.g. social, economic, environmental, political) • critical understanding of issues resulting from the impacts of TNCs • awareness of the complexity of this topic, and of the importance of the role of decision makers, such as managers and governments (local and national). <p>The question requires a discursive approach and the response should cover all elements and the answer may come to an overall view. Any conclusion can be credited as long as it is measured and reasonable, and related to the preceding content and argument.</p>	<p>(40 marks)</p>

<p>24</p> <p>AO1 – 14 AO2 – 16 AO3 – 10</p>	<p>Notes for answers</p> <p>Appropriate content for a response to this question might include:</p> <ul style="list-style-type: none"> • discussion of the concepts ‘development’ and ‘security’ • application of these concepts to at least one context and/or location where the two are critical and interrelated • detailed knowledge and understanding of the area and the issues arising • knowledge and understanding of the role of decision makers in deciding priorities • Knowledge and understanding of the application of these concepts and their relevance to people at a range of scales. <p>Synopticity is therefore achieved by:</p> <ul style="list-style-type: none"> • evidence in the depth/breadth of case study material • critical understanding of the interpretation of these concepts – e.g. for security: food, energy, military, water, etc. • critical understanding of the context/s within which the argument is set • critical understanding of the balance of viewpoints as expressed in the quotation • ability to extend understanding of geographical themes, and ideas into a real world context • awareness of the complexity of this topic, and of the importance of the role of decision makers at a range of scales. <p>This question requires a discursive approach. The answer should be broken down into its constituent parts, with an in-depth discussion given of both elements, together with a bringing together of interrelationships. Any conclusion can be credited as long as it is reasonable and related to the preceding content and argument.</p>	<p>(40 marks)</p>
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